

Early Karangahake



Waitawheta River
Karangahake Gorge 495. Auckland Library 7307. JD Richardson.
1886+

Eric Lens 2023

Funding assistance from the Department of Conservation is gratefully acknowledged.

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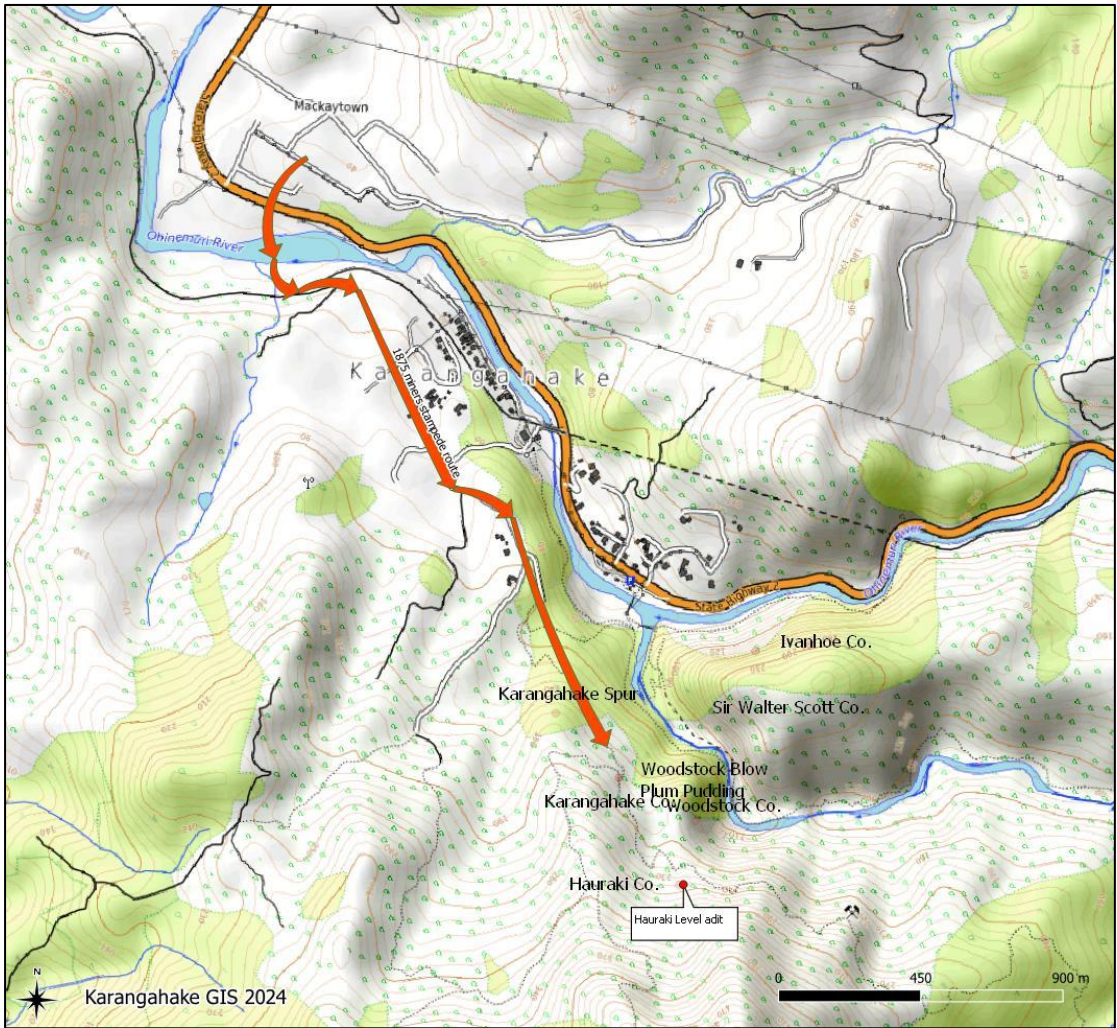
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A suggested route followed by the stampeding miners. The destination was around the Karangahake Spur. The route roughly cleared before the stampede became the early County Road?

1875

3 March.

Ohinemuri opened to mining with stampede from Mackaytown.

Mackaytown was named after James Mackay Junior. Why did he pronounce his name as Macky? It seems likely that his father changed their surname from Mackie when arriving in New Zealand. Did the young James resent the change, and so rebel by retaining the original pronunciation?¹

For details of the opening, see **Ohinemuri Gold Rush** in the **Appendices**, page 941, and **Ohinemuri Opened** (Thames Advertiser 4 March 1875), page 947

The **Warden's Report**, W. Fraser, 31st March, 1875, can also be viewed in the **Appendices**, page 938

A road of sorts was soon formed between Paeroa and Mackaytown but it had to cross the Ohinemuri River twice, just before reaching Mackaytown. To avoid these crossings, a deviation over the hill (subsequently known as Turner's Hill) was formed in 1875 by a section of the army under the command of Captain Turner.²

Flora MacDonald battery?

3 April

It will be seen that Mr John Gibbons calls for tenders for the removal of the Flora Macdonald battery, Tararu, to the Gorge, at Ohinemuri. This looks like business. We presume that the battery is for the Prospectors' claim, and will be erected on the machine site secured by them beneath the Karangahake Spur. As this battery has thirty stampers, it will get through a considerable quantity of stuff, and as it will be driven by water power, it can be worked cheaply.³

Nothing further is heard of the Flora MacDonald battery.

3 May

On the Karangahake, work is progressing; not however in all the mines so satisfactorily as could be wished; probably from want of that very necessary article—dubbed, funds. The prospectors at last I hear are about to have a battery erected. It is now getting along for three months since this ground was opened, and the stamps ought to have been at work or nearly so by this time; now that the rain has set in there will be some difficulty in carting machinery to the Gorge. The All Nations are in good country, and have found gold; and the Home Rule may be expected to cut one of the Prospectors' reefs very shortly, but without batteries to crush the stuff the mines as they now stand are of little value.⁴

“Without batteries to crush the stuff, the mines... are of little value” says it all.

¹ <https://collections.tepapa.govt.nz/object/39550>

² <https://www.ohinemuri.org.nz/journals/journal-44-september-2000/karangahake-roads-and-bridges>
Karangahake Roads and Bridges. Ohinemuri Regional History Journal 44, September 2000

³ <https://paperspast.natlib.govt.nz/newspapers/THA18750403.2.7>

Thames Advertiser, Volume VIII, Issue 2010, 3 April 1875, Page 2

⁴ <https://paperspast.natlib.govt.nz/newspapers/AS18750503.2.13>

Auckland Star, Volume VI, Issue 1626, 3 May 1875, Page 2

13 May

The manager and principal shareholders of the Karangahake claim, Ohinemuri (the prospectors), have been for some time past engaged in negotiating for a battery, to be erected on their machine site. This has not yet been accomplished, and it is now intended to form the claim into a company. From the large number of shareholders interested, we cannot see how the business can be otherwise carried on with satisfaction, and certainly the want of progress hitherto seems to require some alteration.⁵

14 June

Karangahake Spur. It is stated that the prospectors are unable to get machinery on their ground, owing to its not being sufficiently developed, and that present prospects are not sufficiently good to induce the Banks to advance money for the purpose.⁶

This is the Karangahake/The Prospectors' Claim/company?

“Karangahake Spur”. This appears to describe the area behind Battery Flat and upstream to the Plum Pudding/Woodstock Blow (the area between the valleys of the Hauraki Stream (Scotchman’s Gully. The contemporary literature consistently has “Scotchman’s”, only one instance of Scotsman’s found) and the valley on the west of the Woodstock Blow). Where was the claim?⁷ The NZGS No16_1913_Karangahake mines map shows a Karangahake Company adit in the gully to the west of the Woodstock Blow. However, this may be the workings of a later Karangahake Company circa 1908, “near the Comstock ground”⁸.

No map has been found that definitively locates the early Karangahake claim.

Somerville's Six stamper**18 June**

KARANGAHAKE (OHINEMURI).

The prospectors on the Karangahake have made a definite step in the direction of progress, though from what I have learned it would appear to be owing rather to the energy of a few of the party than to the combined purpose of the whole. For a long time the great draw back to this claim, which should have given better results before now, has been the want of machinery with which to treat the stone taken from the mine, and a great deal of talk has occurred without much appearance of practical issue. Although it was perfectly obvious that the great desideratum was to obtain crushing power, there happened to be

⁵ <https://paperspast.natlib.govt.nz/newspapers/THA18750513.2.9>

Thames Advertiser, Volume VIII, Issue 2043, 13 May 1875, Page 2

⁶ <https://paperspast.natlib.govt.nz/newspapers/THS18750614.2.14>

Thames Star, Volume VII, Issue 2010, 14 June 1875, Page 2

⁷ There is a hint in the AJHRs I think.1888:

AJHR 88. Mammoth Mine. —This is owned by an English syndicate, who sent out a gentleman from England—Mr. Argill—to carry on prospecting operations to test the mine, previous to erecting machinery. The ground belonging to this syndicate is situated on the face of the range, on the westward side of the Woodstock Mine, and prospecting operations were being carried on at the time of my visit. This is the same ground where a rush took place in 1875.

⁸ <https://paperspast.natlib.govt.nz/newspapers/NZH19090511.2.8>

New Zealand Herald, Volume XLVI, Issue 14057, 11 May 1909, Page 3

a friendly contention amongst them as to the extent of the power it would be desirable to secure.

The obvious conclusion to most men would have been that a battery of any sort whatever would be better than nothing; but, there was a difference of opinion, some of the prospectors wishing to get an extensive plant, the getting of which, however, not one of them could see their way to. It is satisfactory to find, now, that arrangements have been made for getting machinery on the ground.

Messrs Thorpe and Verral are now in town, and have completed negotiations for the battery (of six head of stamps) known as Somerville's [may be Sommerville], which will be erected on the ground as soon as possible. There appears to be no abatement in the confidence of most as to the payable nature of the quartz being taken from the mine, and we may therefore look for a speedy return, as the present action of the company indicates a determination to set to work in real earnest, and thoroughly prove the ground, which at one time was the source of so much excitement and hope.⁹

This battery came from Mitchelltown.¹⁰ Presumably this is Karaka in Thames (see below).

19 June

Ohinemuri, Thursday. The shareholders of the Karangahake claim have made arrangements for the purchase of a six stamper battery, with tables, &c, and intend to have it removed from its present site on the Karaka to their own on the Waitawheta, without delay. As the motive power will be water, the necessary fluming and wheel will be constructed immediately. It is proposed to procure two new berdans to work in connection with the mill.¹¹

2 July

In the Ohinemuri Prospector's, some small stringers containing gold were cut yesterday. Their battery has arrived at Paeroa, and will be sledged to Mackaytown and immediately erected.¹²

5 August

The Prospectors' Claim, at Karangahake, have made a start in putting up a small mill. This may serve as a substitute till they can arrange with adjoining claims, and make the area large enough to induce money to be laid out advantageously and securely.¹³

⁹ <https://paperspast.natlib.govt.nz/newspapers/THS18750618.2.13.1>

Thames Star, Volume VII, Issue 2014, 18 June 1875, Page 2

¹⁰ <https://paperspast.natlib.govt.nz/newspapers/THS18750702.2.10>

Thames Star, Volume VII, Issue 2026, 2 July 1875, Page 2

¹¹ <https://paperspast.natlib.govt.nz/newspapers/NZH18750619.2.18>

New Zealand Herald, Volume XII, Issue 4243, 19 June 1875, Page 3

¹² <https://paperspast.natlib.govt.nz/newspapers/AS18750702.2.18>

Auckland Star, Volume VI, Issue 1675, 2 July 1875, Page 2

¹³ <https://paperspast.natlib.govt.nz/newspapers/NZH18750805.2.33>

New Zealand Herald, Volume XII, Issue 4283, 5 August 1875, Page 6

Clarkson's Battery, Shellback Creek**3 November**

Thames Advertiser

We are informed on reliable authority that arrangements for the erection of a 20-stamper battery at the foot of the Karangahake Spur, Ohinemuri, in connection with the Karangahake prospectors' claim, have been completed, and that no time will now be lost in starting to work.¹⁴

So Karangahake Spur is indeed the area behind Battery Flat, true left bank of the Waitawheta, up towards the Plum Pudding. It may include the area downstream on the Ohinemuri towards Mackaytown.

Joshua Jackson, reporter on the day of the goldfield opening, says he can see Mackaytown.

"I sat down at one of the pegs of the Prospectors' Claim, where there was a small board labelled "Government Reserve" and here I wrote my pigeonram. "9.20 a.m.

From this spur the Warden's Marquee can be seen and the crowd around".¹⁵

The Thames Advertiser continues:

Clarkson's battery of twelve head, formerly erected in the Shellback Creek, is to form the principal portion of the plant. There is a six-head battery already on the ground, and an additional two-head will be procured to complete the number. The terms arranged between the shareholders and the capitalists who have agreed to erect the battery are the same as those agreed to by the Waitekauri Company, the shareholders are to get a third of the mine, or rather shares to that amount in the company. It is expected that the mill will be erected and working a little more than three months from the present.¹⁶

Shellback Creek (Pukehinau Stream) is north Thames. Who are the capitalists? Messrs Thorpe and Verral? Or Messrs. Stewart, Darrow and Co? (see below: 22 June 1876 - Stewart, Darrow and Co).

22 November

NZ Herald

Ohinemuri, Saturday. Karangahake Spur.—The contract for removing Clarkson's battery, Shellback Creek, to its destination and re-erection on the Prospectors' battery site, Karangahake, has been taken by Messrs. Fitzpatrick and Cullen, Grahamstown, for the sum of £322 2s.¹⁷

¹⁴ <https://paperspast.natlib.govt.nz/newspapers/THA18751103.2.9>

Thames Advertiser, Volume VIII, Issue 2189, 3 November 1875, Page 2

¹⁵ <https://www.ohinemuri.org.nz/historic-texts/karangahake-the-years-of-the-gold-1875-1935/opening-of-the-goldfield-1875>

KARANGAHAKE the years of the gold 1875 -1935 By N. S.Climie & G.Staples

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¹⁶ <https://paperspast.natlib.govt.nz/newspapers/THA18751103.2.9>

Thames Advertiser, Volume VIII, Issue 2189, 3 November 1875, Page 2

¹⁷ <https://paperspast.natlib.govt.nz/newspapers/NZH18751122.2.13>

New Zealand Herald, Volume XII, Issue 4376, 22 November 1875, Page 3

Thames Advertiser

The contract for the removal of, Clarkson's battery from its present site in Wiseman's Gully to Ohinemuri, and its re-erection on the machine site of the Karangahake G.M.C. was let on Saturday, and Messrs Fitzpatrick and Cullenell were the successful tenderers and the contract time is, we understand, limited to three months.¹⁸

The battery machinery was sledged to Mackaytown¹⁹, but how did they get the machinery to Battery Flat? This was before the incline down off the County Rd (1885). The image "Karangahake 483" (after 1886, before c1889) shows a gash on the hillside near the incline. This looks like an earlier sled track. So probably they dragged/lowered the equipment and materials by sled.

This also suggests a road of sorts at the top. It came from the ford on the Ohinemuri River, and became part of the "County Road" up and around the mountain.

Appendix to the Journals of the House of Representatives, 1876 Session I, H-03

So mainly for the year 1875

General Report on the Southern portion of the Hauraki Gold Mining District, for the year ending 31st March, 1876.

In Ohinemuri good payable reefs are found in the Karangahake Spur. In the Waitekauri Creek successful sluicing has led to the discovery and prospecting of reefs showing gold freely. Litigation, however, has greatly retarded the progress of this portion of the field. The evils resulting from the adoption of "The Gold Fields Act, 1866," soon developed themselves, showing that this part of the field should be joined to the South Hauraki District under "The Gold Mining Districts Act, 1873"²⁰, which has subsequently been accomplished with happy result. In Ohinemuri, Prospectors' Claim, two trial tons gave 4 oz. 1 dwt.

In November, at Ohinemuri, little done lately, also owing to want of roads capable of carrying machinery, which is now waiting transport: the framing and timberwork of a 40-head battery being in readiness and fixed in situ [Waitekauri]. Also in Karangahake, the woodwork, with building, of a 20-head battery have been erected; when the roads are completed, the machinery and ironwork for the two aforesaid batteries will be at once conveyed to their respective sites, and the batteries set to work.²¹

The following is an article by Gary Staples in:-

KARANGAHAKE the years of the gold 1875 -1935

Opening of the Goldfield, 1875

¹⁸ <https://paperspast.natlib.govt.nz/newspapers/THA18751122.2.7>

Thames Advertiser, Volume VIII, Issue 2205, 22 November 1875, Page 2

¹⁹ <https://paperspast.natlib.govt.nz/newspapers/AS18750702.2.18>

Auckland Star, Volume VI, Issue 1675, 2 July 1875, Page 2

²⁰ http://www.nzlii.org/nz/legis/hist_act/gmda187337v1873n48347/

Gold Mining Districts Act 1873 (37 Victoriae 1873 No 48)

²¹ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1876-I.2.2.4.4/1>

THE GOLD FIELDS OF NEW ZEALAND, (REPORT ON)., Appendix to the Journals of the House of Representatives, 1876 Session I, H-03

In preparation for the opening of the field, James Mackay, Captain Fraser, Mr Allom, Receiver of Gold Revenue, proceeded to Ohinemuri to organise the issue of Miners' Rights.

In the last week of February 1875, the various regulations were drawn up and other documents required, were printed. Notices were placed in the two Thames newspapers, Thames Advertiser and Evening Star, stating that the Ohinemuri Goldfield was to be opened on 3 March 1875, at Te Kahakaha (later called Mackaytown).

Mackay arrived at Ohinemuri on 1 March, and reports:

"Some people had given me money and lists of applications for rights before my arrival at Ohinemuri. I found, on my arrival, that no provision had been made for doing anything, and I managed to get a large tent finished, to carry out the arrangement. Mr McKenzie, the Clerk to the Warden, took upon himself the duty of receiving applications and I was very busy with the road works and the surveys. On the night of 2 March. Mr Allom and Captain Fraser arrived. Mr Allom then took charge of the books of Miners' Rights. They were engaged in making out Miners' Rights till nearly 3 o'clock in the morning of the 3rd of March."

The tent referred to in Mackay's statement was 50 ft in length and 20 ft wide. A long counter to serve as a desk, was along the whole front, with the spaces between the upright poles to regulate numbers. In front of the building, and within 2 ft of the counter, was a strong fence to prevent pressure on the Clerks. About 800 Miners' Rights were issued.

At 10 a.m. Mr Mackay mounted the counter and wished the miners well. He said that he stood there as agent for the Government to hand over to Captain Fraser, the position of Warden and the proclamation of the goldfield and the control of it. Captain Fraser then addressed the assembled miners. He announced that Reserve B, formerly known as Te Kahakaha, was to be known as Mackaytown and was reserved for residence and for business sites. A gun was fired and the race to peg out claims on the Karangahake Mountain was on. The following reports best describe the scene.

JOHN McCOMBIE:

"Imagine 600 men starting out together from one place, at a given signal, the track leading down a steep hillside, across a mountain torrent and thence up an abrupt incline, the goal being the prospectors' claim at Karangahake. The distance between the two points is about one and a half miles. In a few minutes the track was lined with a struggling mass of horsemen and footmen. Soon after the breathless diggers reached the ground, a forest of pegs reared their heads around the prospectors' claim which had already been surveyed and the boundaries defined."

THAMES ADVERTISER: (Reporter Joshua Jackson)

"To see the best of the fun I started this morning for the Prospectors' Claim, carrying my precious pigeon. He was the only hope of satisfying the burning curiosity of the people of Thames. Along the route I saw familiar faces. Hunt and Copley were there and groups of men were sitting all over the hills with pegs in their hands, waiting for their mates to arrive with the official "Rights". I sat down at one of the pegs of the Prospectors' Claim, where there was a small board labelled "Government Reserve" and here I wrote my pigeongram.

"9.20 a.m.

From this spur the Warden's Marquee can be seen and the crowd around.

"9.50 a.m.

Sergt Elliott and four constables have just arrived. About 200 men are now on the hill.

"10.07a.m.

We can see clouds of dust - horsemen riding here - Edward Howard has just pegged out - horsemen are flying over the ranges - men are running to meet them — Payne and Cashel have pegged out - there is a cloud of dust all the way to the camp - behind the horses are men on foot in relays - a Maori has won the race and is first on the ground with his "Rights"; John Riordan and Pat Donnelly are here.

"10.20 a.m.

Men pegging — a few quarrels - a man arrived naked - Mr Adam Porter was the first man up to where I am."

The whole of the claims marked out on that particular day were located along the foothills of the mountain and here developments soon proved that the rock was disturbed to such an extent as to make mining both difficult and hazardous. (The details of some of the longer established claims are recorded elsewhere).

The goldfield proved a disappointment and by 8 March 1875 over 300 miners had left the district. Two hundred men's ground was registered by 12 March 1875, but only a few parties were at work, notably Dan Leahy and McLiver, whose claims were situated just below the Prospectors' Claim.

Gold was discovered at Tairua in April and this resulted in most miners leaving Karangahake. By 24 April, Mackaytown was nearly deserted and most parts of the mountain had been completely abandoned. It was reported that the shopkeepers and hotel keepers who had gone to the expense of erecting permanent buildings, were "looking blue". In May the reporter for the Thames Advertiser stated:

"The digging at present being done here, is scarcely worthy of the name 'digging', mostly just digging near the surface."

On 9 July 1875 only two or three claims were being worked, and by September, only one. During 1876 various claims were pegged from time to time but little gold was obtained. One newspaper, on 14 September 1876, described the district as "very sick", and in October 1876, almost all the remaining miners moved south to the Kumara field. This was the end of the first goldrush, and some years were to pass before the goldfield became productive.

CLAIMS OF 1875—76²²

All Nations

Adam Porter's Claim

Totara

Treaty O' Waitangi

Scramble

Main Lead

²² This list not verified. There were more, eg Hercules, Owaharoa claims are also quoted for "Ohinemuri".

Star of Ohinemuri	No. 1 South
Radical	Mazeppa
Smile of Fortune	Banyan
Pride of Ohinemuri	McGregor's Claim
Golden Spur	Democrat
Cornes and Party	Mormon City
Pride of the Gorge	Barclay and Party
Home Rule	Hatch and Party

PROSPECTORS CLAIM

Reserved was a piece of land on the Karangahake Mountain measuring 500 ft x 300 ft. The intention was to award this reserve to the person or party who had originally discovered gold in the district. The Wardens Court sat on 12 March 1875 for the purpose of deciding who should have the right to mine this reserve which was situated on what was thought to be a good mining claim. The following men and parties made claim to be the first discoverers of gold: Thorp and Party 1868; Charles P. O'Neill 1869-70; Thomas Baird 1868; Logan 1865; Smyth and Party 1869. Very lengthy evidence was given by these men, and after hearing the various claimants, the Warden, James Mackay, decided on the following morning, in favour of John Thorp and party. Smyth and Coleman amalgamated with Thorp's party and Mr Corbett was appointed Manager. Shift work began and driving adits and sinking winzes commenced. On 24 March 1875, 80 lb of ore was obtained, which was sent to Thames for treatment. By 16 June 1875, the main adit was in 150 ft and this was continued for some time.

Although this claim was the only one to work continuously during 1875-76, it met with little success and work had ceased by 1877.

THE FIRST BATTERY

Soon after the goldfield was opened, the possibility of erecting a battery at Karangahake was given consideration. On 25 July 1875 a meeting of delegates from All Nations, Prospectors and Mazeppa²³ Companies, was held in Thames to discuss amalgamation and erection of a battery. For this purpose, the Karangahake Goldmining and Quartz Crushing Company was formed, the Managers being Cornes, and Coutts.

[The Karangahake Gold Mining and Quartz Crushing Company was formed February 1876. It replaced the Karangahake Gold Mining Company²⁴.]

The Battery was built and started up on 5 July 1876, but only ran half an hour before the stamper shoes fell off. After repairs and alterations, crushing commenced in August 1876, but it was then realised that it could not deal with the type of ore being obtained at Karangahake. The Battery was used only in a small way, and generally resulted in a very poor recovery rate of the gold and silver.

²³ A probable reference to the narrative poem written by the English Romantic poet Lord Byron in 1819. [https://en.wikipedia.org/wiki/Mazeppa_\(poem\)](https://en.wikipedia.org/wiki/Mazeppa_(poem))

²⁴ <https://paperspast.natlib.govt.nz/newspapers/NZH18760208.2.11>

New Zealand Herald, Volume XIII, Issue 4442, 8 February 1876, Page 2

Some years later in the 1880s the Battery, then known as Hauraki Battery, was remodelled and used, once again with many troubles and poor results. It ceased to be used at all by 1886.²⁵

Also by Staples:-

A road of sorts was soon formed between Paeroa and Mackaytown but it had to cross the Ohinemuri River twice, just before reaching Mackaytown. To avoid these crossings, a deviation over the hill (subsequently known as Turner's Hill) was formed in 1875 by a section of the army under the command of Captain Turner.²⁶

²⁵ <https://www.ohinemuri.org.nz/historic-texts/karangahake-the-years-of-the-gold-1875-1935/opening-of-the-goldfield-1875>

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²⁶ <https://www.ohinemuri.org.nz/journals/journal-44-september-2000/karangahake-roads-and-bridges>

Karangahake Roads and Bridges. Ohinemuri Regional History Journal 44, September 2000

1876

Karangahake Battery to be erected on Battery Flat, close to the junction of the Ohinemuri and Waitawheta Rivers. A press report of 6 September states that the “Karangahake Gold Mining Company [had] agreed with Messrs Pouter and others to erect a crushing mill of 16 head of stampers and construct a water race”.²⁷

So how do we get 16 stamps?

Somerville’s battery of 6 stamps. Could that be a mortar box of 5 stamps, plus a single sample stamp? Clarkson’s battery of 12 stamps. Could that be 2 mortar boxes of 5 stamps, and a two stamp sample stamper? Assemble it all in 3 x5 stamps, and a single sample stamp? Or were the mortar boxes 4 stamps each? See entry for August 10 1876, which suggests 4 stamp mortar boxes.

1 February

January 28. The contractors who are driving in the Karangahake G.M. Co.'s mine have got into first-class country, and expect to cut the reef very soon. The battery shed has been erected, and everything is being done to push on the work as quickly as possible, so as to get the battery finished within contract time. The punt 'Skate' has brought up a second instalment of the machinery... The 'Effort' towed up another punt to-day—this time with a load of timber for a new hotel for Miss Ratcliffe, at Mackaytown. This shows what people here think of the prospects of the district, and a number of Thames gentlemen who have been here lately all agree that the machinery necessary for crushing the quartz is the only thing wanted to send the field ahead.²⁸

21 February

At the Karangahake Company's mine the intermediate level is being pushed in The battery building is complete, and the machinery is on the ground and in course of erection, and will probably be completed without further stoppage. A contract for the continuation of fluming has also been let.²⁹

This confirms that they were working a claim, and the only company bold enough to erect a battery.

18 April

Reporting on the Karangahake Company:-

Mr. Cornes mine manager...

The millhouse is erected—framing, logs, stamper-boxes and tables, with berdans, in position. The stamper-rods and other items require to go up, but all are on the spot. The motive power is water driven by turbine. The erection of this part has been let to Mr. Coote, who proceeds at once with his job. The water race is in hand, partially done, and will comprise 1700 feet [518m] of

²⁷ <https://paperspast.natlib.govt.nz/newspapers/THA18760906.2.17>

Thames Advertiser, Volume IX, Issue 2412, 6 September 1876, Page 3

²⁸ <https://paperspast.natlib.govt.nz/newspapers/THA18760201.2.11>

Thames Advertiser, Volume IX, Issue 2265, 1 February 1876, Page 3

²⁹ <https://paperspast.natlib.govt.nz/newspapers/NZH18760221.2.16>

New Zealand Herald, Volume XIII, Issue 4453, 21 February 1876, Page 3

fluming. The completion of the mill and the first crushing from the mine will probably be six weeks hence.³⁰

The wooden water race can be seen in the lithograph No.1, and dam in No.2³¹ (see entry for end 1885 for more discussion of these images). This is the Waitawheta River. The water race length strongly suggests the dam is at the location of the later Talisman dam (probably the same dam).

The remains to be seen today are the wooden bed log with some planking, the tunnel in the cliff, concrete by-wash and gate structure, and steel pipe. Other than the steel pipe erected by the Talisman Company 1896, how much of this dates to this time is unclear (but see below).

The rise from the lower level has been completed to the upper one, secured, and well timbered... The drive on No. 2 level has been continued 20 feet beyond the pass, and the reef is now to hand in the drive. The course of the lode will now be followed, the stone tipped down the pass to hopper on bottom level, from thence it is trucked to the shoot and hopper, now being erected. From this point the stone will have to be sleighed down hill a short distance, and re-tipped to shoot and hopper No. 2, where it is again trucked and shot into the battery. As the mine is gradually opened, it is probable that the irksome method of having to sledge the quartz will be avoided.³²

This strongly resembles the infrastructure visible in lithograph 1 and 3 (early 1885), on the Waitawheta River side of Taukani Hill. The Sir Walter Scott is reported to put in a shoot and tramway, April 1884¹, and this is included in the captioning of these 1885 lithographs.

But the description in the above report matches so well with what is shown in the lithographs; could the Karangahake Company be working not on the Karangahake Spur, but Taukani?

These lithographs depict scenes no later than early 1885 (Karangahake suspension bridge completed 4 June, and does not show in these images). The infrastructure visible on the Ohinemuri side of Taukani came later, 1884.

Pictorial Christmas Supplement to the New Zealand Herald, December 1885.

These lithographs are art works, possibly based on photographs.

Well-executed Views of New Zealand scenery, and drawn by local artists and engraved at the Herald office. Views embrace a large variety of subjects... The sketches will be accompanied by a letter-press description. (New Zealand Herald, Volume XXII, Issue 7518, 23 December 1885, Page 4)

In the absence of further evidence, the above similarities must be considered as coincidence. However, this writer cannot picture how the above description would fit into the landscape, mine to battery.

³⁰ <https://paperspast.natlib.govt.nz/newspapers/NZH18760418.2.25>

New Zealand Herald, Volume XIII, Issue 4502, 18 April 1876, Page 3

³¹ <https://paperspast.natlib.govt.nz/newspapers/new-zealand-herald/1885/12/24/19>

New Zealand Herald, Supplement, 24 December 1885

³² <https://paperspast.natlib.govt.nz/newspapers/NZH18760418.2.25>

New Zealand Herald, Volume XIII, Issue 4502, 18 April 1876, Page 3

Where was this claim? In the low hills west of the gated County Road entrance to the mountain? Then the report may make more sense. See report 17 July 1878.

Is there any current evidence of these workings?

Crossing the Ohinemuri

The usual convenience of crossing the Ohinemuri river by paying for it threepence, or sixpence after sunset, was denied the Karangahake people this week, owing to the ferryman declining to launch his boat as the Government had not given him a subsidy as he expected. This induced the miners to interview Mr. Allom on the subject, it being a very dangerous passage to ford, especially for youngsters. The evils were so forcibly depicted by Mr. Cornes, that Mr Allom said he would give a punt lying in another part of the river, and would ask the engineer to see if he would provide hauling tackle. No sooner said than done, for eight stout men went and carried the punt up, fixed her up with running rope so that any one may ferry themselves across. This may do as a capital makeshift, but a bridge will have to be erected at no distant date.³³

9 May

A slightly longer length is given for the water race by the Thames Advertiser.

Mr Cullen has also the contract for the water race, and it is now in a very forward state. The length is about 1,800 feet [549m], and one portion of it required some heavy rock cutting on an almost perpendicular face. There is a good deal of trestle work in it, and the whole is being done in a most substantial manner, which reflects great credit on the contractor. The contract for fixing the turbine and cutting the tail race is being rapidly carried out by Mr Coutts...³⁴

The heavy rock cutting is presumably where the water race collects its water from the dam via a tunnel in the cliff (can be seen today), in which case, this at least would be an original feature. The photograph Waitawheta Gorge 485 shows the dam and wooden flume. Note no Crown tramway in cliff on right.

First Infrastructure at Karangahake

The dam on the Waitawheta, wooden flume, hoppers, chutes, tramways, trestle bridges across the river, and of course the battery, are the first infrastructure constructed at Karangahake for mining. The reports don't mention if a tramway crossed the river with the flume.

If the Karangahake Company are working on Karangahake Spur, then the infrastructure "the stone tipped down the pass to hopper on bottom level, from thence it is trucked to the shoot and hopper, now being erected. From this point the stone will have to be sleighed down hill a short distance, and re-tipped to shoot and hopper No. 2, where it is again trucked and shot into the battery"³⁵, must be on the Karangahake Spur. Without further evidence, this must be the assumed situation.

³³ <https://paperspast.natlib.govt.nz/newspapers/NZH18760418.2.12>

New Zealand Herald, Volume XIII, Issue 4502, 18 April 1876, Page 2

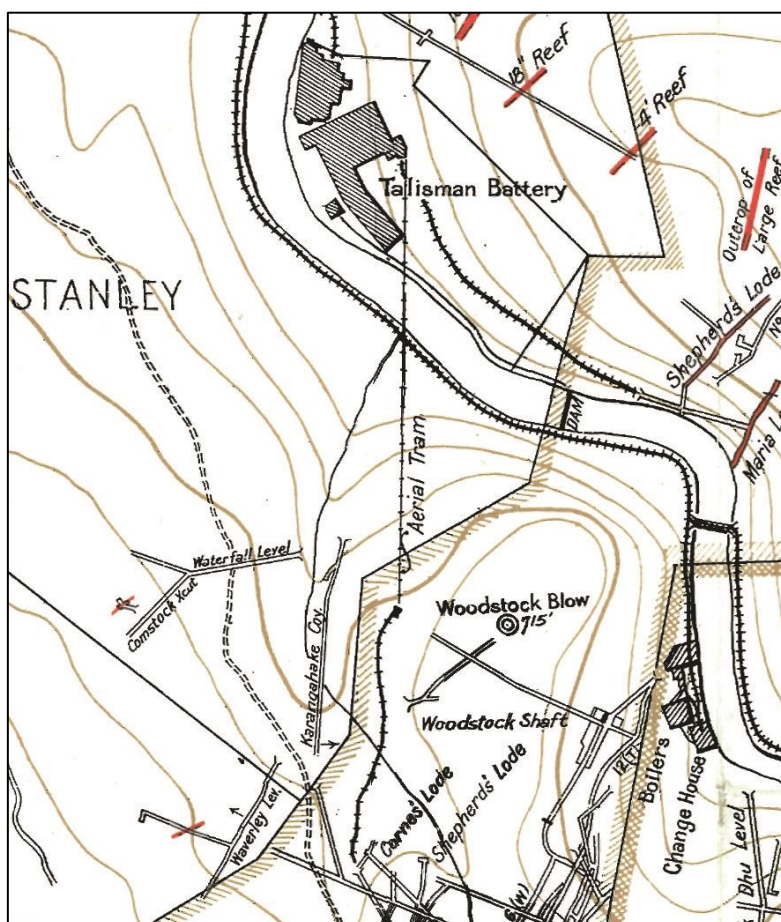
³⁴ <https://paperspast.natlib.govt.nz/newspapers/THA18760509.2.15>

Thames Advertiser, Volume IX, Issue 2352, 9 May 1876, Page 3

³⁵ <https://paperspast.natlib.govt.nz/newspapers/NZH18760418.2.25>

New Zealand Herald, Volume XIII, Issue 4502, 18 April 1876, Page 3

In which case, maybe the sled track used to bring in the battery is being used. Otherwise, no evidence of this route has been found.



NZGS Bulletin 16 map, cropped

The map of the Karangahake area presented in the New Zealand Geological Survey Bulletin 16, 1913, shows a tunnel labelled “Karangahake Coy.” in the gully west of the Woodstock Blow (Plum Pudding). However, it seems likely that this tunnel belongs to a much later Karangahake Company, 1908-9. In which case we still don’t know where the early mine was. (See entry for 11 May 1909)

The report by the Thames Advertiser 9 May continues:

The new punt to connect Mackaytown with the Karangahake district is not yet ready, but gearing has been attached to the small punt now in use. Everything is of course very stiff at present, and it is very much like hard work getting across. Mr McLaren has also had new planking put on Mitchell's bridge, which will now serve some time longer.³⁶

A Mr C F Mitchell was a prominent Paeroa citizen. "He was the proprietor of Paeroa's first newspaper, the "Hauraki Tribune" and was the Coroner and a J.P."³⁷ He lived in the Reservoir Road area.

³⁶ <https://paperspast.natlib.govt.nz/newspapers/THA18760509.2.15>

Thames Advertiser, Volume IX, Issue 2352, 9 May 1876, Page 3

³⁷ <https://www.ohinemuri.org.nz/journals/journal-10-october-1968/reservoir-rd-paeroa>

Ohinemuri Regional History Journal 10, October 1968

Mitchell was present when the first bridge on the Te Aroha Road (crossing the Ohinemuri River at Paeroa, now Criterion Bridge) was started March 1879³⁸, but maybe there was an earlier one?

3 June

Karangahake.—The battery would have made a start by this time, but, unfortunately, the fluming was carried away for about 130 feet, and, as the timber will have to be supplied from Shortland, some short time must elapse before damages are repaired. Stone is being broken down from the intermediate level, and the large quantity in paddock will be sledged down to the mill this week.³⁹

6 June

At the Karangahake the manager and men are busy blasting the rocks near the dam to make a good channel for the flume.⁴⁰

13 June

The Karangahake mine is well opened out, and Mr. Cornes, the manager, has connected the mine with the battery [yes, but how/where?], so that a good supply of stone, and that of good character, will be ready for milling with 16 head of stampers in the course of a fortnight. The battery, fluming, and turbine are ready, the tail race being the only portion unfinished. The successful working of this mill will not only prove the value of the company's mine, but will enhance the adjoining properties, comprised in the All nations, Democrat, Mormon City, Banyan, and others.⁴¹

22 June

We understand that Mr. Dewar, of the firm of G. W. Owen and Co., has been appointed by the shareholders of the Karangahake mine to value the battery that has just been completed by Messrs. Stewart, Darrow and Co. The latter gentlemen undertook to erect the battery for a certain number of scrip and cash, the latter to be won from the mine, and paid under certain conditions, each party to appoint a valuer. The battery proprietors have made choice of Mr. John Brown, of Tararu, who will proceed today to Ohinemuri in company with Mr. Dewar.⁴²

So, battery erected by Messrs. Stewart, Darrow and Co., payment by song and prayer.

26 June

The Karangahake Battery, Ohinemuri, was successfully started on Saturday, for the satisfaction of directors and valuers. It was run up to 90 strokes a

³⁸ <https://www.ohinemuri.org.nz/journals/journal-37-september-1993/driving-first-pile-of-paeroa-bridge-1879>

Ohinemuri Regional History Journal 37, September 1993

³⁹ <https://paperspast.natlib.govt.nz/newspapers/NZH18760603.2.43>

New Zealand Herald, Volume XIII, Issue 4541, 3 June 1876, Page 6

⁴⁰ <https://paperspast.natlib.govt.nz/newspapers/DSC18760606.2.18.3>

Daily Southern Cross, Volume XXXII, Issue 5195, 6 June 1876, Page 3

⁴¹ <https://paperspast.natlib.govt.nz/newspapers/NZH18760613.2.17>

New Zealand Herald, Volume XIII, Issue 4549, 13 June 1876, Page 2

⁴² <https://paperspast.natlib.govt.nz/newspapers/NZH18760622.2.11>

New Zealand Herald, Volume XIII, Issue 4557, 22 June 1876, Page 2

minute with only a third of the water power available. It will be immediately taken over by the Company and started to crush quartz.⁴³

The 26th was a Monday, so the battery “started” June 24 1876, but not an official opening yet? See below: 11 July.

27 June

June 24. Messrs Dewar and Brown, accompanied by Messrs Stewart and Darrow, inspected the Karangahake battery to-day. The stampers were started, but no quartz was put through, wooden blocks being used to break the fall. Everything worked satisfactorily, and crushing can be commenced at any moment. There is plenty of quartz in the paddock, and the contract for its conveyance to the battery has already been let to Mr Marsh. As soon as the company's directors have considered the report of the inspectors, and have taken over the battery, operations will be started at once.

Mr Darrow has given the contractors, Messrs Cullen and Fitzpatrick, a receipt in writing for the battery, and has added that the work has been done in a workmanlike manner, and that it reflects great credit upon them. Anybody looking at the battery will fully endorse his certificate. I understand that Mr Cullen will not leave us, and that he has taken up an agricultural section close to the battery on the Banyan side of the river.⁴⁴

“Banyan side of the river”. Banyan is a claim name, and appears to relate to the Mackaytown area.⁴⁵

Dewar and Brown fixed the valuation of the Karangahake battery at £3,000, which was considered satisfactory to all parties.⁴⁶

29 June

...The water was laid on and the turbine set in motion upon the whole of the stampers at once (16 head), and proved that, with only half supply of water at present available, there was force enough to drive double the number of stampers. No quartz was put through, but blocks of wood were placed in the boxes to receive the fall of the stampers. The whole affair worked satisfactorily, and reflected credit upon the contractors, Messrs. Cullen and Fitzpatrick, who have reviewed a receipt for the due performance of their contract. A contract has been let for transit of quartz from the hopper to the company's shoot at the mill, and a large supply being to hand, no time need be lost after the battery has been officially received by the Karangahake G.M.Co., who may think themselves well off at having a first class battery of 16 head stampers, with two berdans, driven by water power, for the price fixed by the umpire chosen by the arbitrators (Mr. Price of Price Brothers, Grahamstown) £3000. The foundation and bed logs laid are sufficient for extra 8 head stampers.⁴⁷

⁴³ <https://paperspast.natlib.govt.nz/newspapers/AS18760626.2.21.1>

Auckland Star, Volume VII, Issue 1990, 26 June 1876, Page 3

⁴⁴ <https://paperspast.natlib.govt.nz/newspapers/THA18760627.2.13>

Thames Advertiser, Volume IX, Issue 2354, 27 June 1876, Page 3

⁴⁵ <http://www.ohinemuri.org.nz/journals/45-journal-19-june-1975/861-opening-of-the-goldfield>

⁴⁶ <https://paperspast.natlib.govt.nz/newspapers/DSC18760627.2.14.3>

Daily Southern Cross, Volume XXXII, Issue 5213, 27 June 1876, Page 3

⁴⁷ <https://paperspast.natlib.govt.nz/newspapers/NZH18760629.2.22.3>

1 July

At Karangahake there are several mines at work, but the chief interest is in the Karangahake Company, who have their mine opened out, a substantial battery of sixteen heads, with water power, and everything ready for crushing their quartz. Wednesday next being the opening day, and the original Prospector's claim [Karangahake Co?] will be the first to send down a veritable and substantial return from the Ohinemuri district. As a consequence to the gradual development of the mines, activity at the two townships is apparent, and the number of the population increases.⁴⁸

Two townships? Meaning Karangahake and Owharoa? Or Mackaytown and Karangahake (Battery Flat area)? Or?

The Ohinemuri District School Committee met to-day and resolved to recommend the establishment of two halftime, schools for the present—one at Paeroa and the other at Mackaytown. Mr C. F. Mitchell was appointed teacher, and the Chairman was requested to communicate with Messrs. Jackson and Russell, the lessees of the Paeroa estate, with a view to obtaining a large allotment for school site and playground.⁴⁹

7 July

July 5, The Karangahake battery was started on quartz for the first time to-day, but was only kept running for about half an hour, sufficiently long to shake off some of the old stamper shoes... Mr Marsh has started sledging down quartz from the paddock at the bottom of the shoot to the hopper near the battery...⁵⁰

11 July

We are requested to state that the official start of the Karangahake Company's battery, which was to take place to-morrow, has been postponed until further notice, and the reason is this: A portion of the fluming which conveys the water to the turbine wheel is too low. It is believed to have sunk, but at all events the fact remains that it is too low, and the water, which it should convey to the battery, is wasted over its side. In consequence of this there does not appear to be sufficient water conveyed to drive the full force of the battery at proper speed. Of course had there been timber available the sides of the flume could readily be raised to a sufficient height to prevent overflow, but unfortunately there was none available in Mackaytown. The manager had therefore to send to Shortland for some boards. Those will not leave the Thames until to-morrow, and it will be impossible therefore to have the necessary work done in time to effect a satisfactory start on the day originally named. We make the announcement so that there may be no disappointment, for a considerable number of people from the Thames had made arrangements to be present at the opening ceremonies.⁵¹

New Zealand Herald, Volume XIII, Issue 4563, 29 June 1876, Page 5 (Supplement)

⁴⁸ <https://paperspast.natlib.govt.nz/newspapers/NZH18760701.2.33>

New Zealand Herald, Volume XIII, Issue 4565, 1 July 1876, Page 6

⁴⁹ <https://paperspast.natlib.govt.nz/newspapers/THA18760701.2.6>

Thames Advertiser, Volume IX, Issue 2358, 1 July 1876, Page 3

⁵⁰ <https://paperspast.natlib.govt.nz/newspapers/THA18760707.2.15>

Thames Advertiser, Volume IX, Issue 2361, 7 July 1876, Page 3

⁵¹ <https://paperspast.natlib.govt.nz/newspapers/THA18760711.2.9>

Karangahake Battery opens

No timber to be had.

The battery, powered by a turbine, will use amalgamated mercury plates to recover the gold from the crushed ore (the “ordinary battery process”).

No date for the official opening of the battery, but on or before July 19?

19 July

The Karangahake battery, as I told you in my last, after crushing, a few tons of quarts had to knock off for want of power. Mr. Gibbons has during the last, few days been engaged in enlarging the race, and intends raising the height of the dam 18 inches, as in his opinion it is the want of water that is the cause of the want of power. This will be accomplished by the end of the week should the weather prove favourable, which is rather unlikely.

In the Democratic, Mormon City, and Banyan work is being pushed ahead, but there is nothing new to report.⁵²

9 August

The Karangahake battery is working full swing in capital order.⁵³

10 August

Ohinemuri, August 7. The Karangahake battery has made a start with 12 head stampers; it seems the driving belt is too light to serve the other four. A new belt has been sent for, and when it arrives, the whole force of the mill will be set and kept going. The race has been considerably enlarged, and there is water to spare.⁵⁴

12 head, four not operating; all suggests mortar boxes of four stamps each.

26 August

We regret that we cannot report a favourable issue to the start of the Karangahake Company's crushing, for although the stone undoubtedly contains gold in payable quantities, it cannot, in consequence of some mineral with which it is mixed and which prevents its amalgamation with mercury, be saved by the ordinary battery process. The crushing has, therefore, been stopped, and scientific men are now experimenting as to the best method of treating the stuff.⁵⁵

6 September

KARANGAHAKE GOLD MINING COMPANY.

HALF-YEARLY MEETING. The first general meeting of the Karangahake Gold Mining Company was held yesterday in the Mechanics' Institute. Mr Marshall was called to the chair, on the motion of Mr Bennett. The

Thames Advertiser, Volume IX, Issue 2364, 11 July 1876, Page 2

⁵² <https://paperspast.natlib.govt.nz/newspapers/NZH18760722.2.24>

New Zealand Herald, Volume XIII, Issue 4583, 22 July 1876, Page 3

⁵³ <https://paperspast.natlib.govt.nz/newspapers/NZH18760809.2.17>

New Zealand Herald, Volume XIII, Issue 4598, 9 August 1876, Page 3

⁵⁴ <https://paperspast.natlib.govt.nz/newspapers/NZH18760810.2.19>

New Zealand Herald, Volume XIII, Issue 4599, 10 August 1876, Page 1 (Supplement)

⁵⁵ <https://paperspast.natlib.govt.nz/newspapers/NZH18760826.2.32>

New Zealand Herald, Volume XIII, Issue 4613, 26 August 1876, Page 6

advertisement having been read, the legal manager, Mr MacDonnell, read the annual report and balance-sheet, also, the reports of the mine manager and surveyors.

The directors' report gave a history of the formation of the company and the agreement with Messrs Pouter and others to erect a crushing mill of 16 head of stampers and construct a water race, in consideration of receiving a third of the company's interest and subject to purchase at a valuation. The battery and race were valued at £3,000 by Messrs Dewar and Brown, with Mr. Price as umpire, and the directors took over the plant on the 28th of June. They then found that the water race was insufficient, and expended nearly £200 for the purpose of completing the battery and water race. The report alluded to the poor yield (23ozs from 300 tons), and expressed regret at its poverty, which was attributed to the presence of some mineral either in the stone or in the water which prevented the gold from amalgamating. The directors then stopped the battery, and paid off all hands except the mine manager and two men, until some means could be devised for saving the gold.⁵⁶

9 September

I had a conversation yesterday with some of the shareholders of the Main Lead claim, Karangahake... They purpose crushing about five tons as a test at the Karangahake Company's, battery. They have carried the stone part of the way *on their backs*, the road being too rough for horses.⁵⁷

⁵⁶ <https://paperspast.natlib.govt.nz/newspapers/THA18760906.2.17>

Thames Advertiser, Volume IX, Issue 2412, 6 September 1876, Page 3

⁵⁷ <https://paperspast.natlib.govt.nz/newspapers/THA18760909.2.18>

Thames Advertiser, Volume IX, Issue 2415, 9 September 1876, Page 3

1877**8 February**

A court case argued the ownership of some kauri trees. Of interest is that these trees were close to Battery Flat, with some across the Ohinemuri River, opposite the battery (the Banyan side of the river).⁵⁸

16 February

Coutt's and party of six have the Karangahake mine and battery on tribute. It is reported that they have met golden stone. The Mining Inspector is forfeiting claims for non-working at Ohinemuri, particularly in the Karangahake locality.⁵⁹

20 February

TO THE CLAIM HOLDERS OF THE KARANGAHAKE DISTRICT. The undersigned is prepared to CRUSH Large or Small PARCELS of QUARTZ at Lowest Rales, WILLIAM COUTTS, Karangahake Battery.⁶⁰

24 February

The much despised Karangahake mine is having another trial at the hands of a party of tributers.⁶¹

26 February

Karangahake District.—Number of miners, 12; women, 5; children, 19; battery — Karangahake Company's, of 16 stamps, water power, turbine; at present on tribute. At one time there was a large population here, but in consequent of the falling off in the gold return there was a general clearing out. But there is hope that the tributers will get something in the Karangahake mine, which will encourage miners to do some prospecting. There is a half-time school at this place; the attendance about 16.⁶²

9 March

Karangahake—A start has been made in the Karangahake mine by the tributers, Messrs Coutts and party. They have been engaged in clearing out some of the old workings and securing the main drive. They have started one shift to work a reef on the surface, out of which payable prospects have been

⁵⁸ <https://paperspast.natlib.govt.nz/newspapers/THS18770208.2.13>

Thames Star, Volume VII, Issue 2525, 8 February 1877, Page 2

<https://paperspast.natlib.govt.nz/newspapers/THA18770209.2.14>

Thames Advertiser, Volume XII, Issue 2543, 9 February 1877, Page 3

<https://paperspast.natlib.govt.nz/newspapers/THS18770209.2.7>

Thames Star, Issue 2526, 9 February 1877, Page 2

⁵⁹ <https://paperspast.natlib.govt.nz/newspapers/AS18770216.2.18>

Auckland Star, Volume VIII, Issue 2170, 16 February 1877, Page 3

⁶⁰ <https://paperspast.natlib.govt.nz/newspapers/THA18770220.2.9.5>

Thames Advertiser, Volume XII, Issue 2552, 20 February 1877, Page 2

⁶¹ <https://paperspast.natlib.govt.nz/newspapers/THS18770224.2.10.1>

Thames Star, Volume VII, Issue 2539, 24 February 1877, Page 2

⁶² <https://paperspast.natlib.govt.nz/newspapers/THA18770226.2.16>

Thames Advertiser, Volume XII, Issue 2557, 26 February 1877, Page 3

obtained. A very small return from this will pay for the working, as the tributers have the mine and mill for 10 per cent. on all gold obtained.⁶³

28 March

Karangahake.—The return on account of tributers, Coutts and party, after some 50 tons were crushed, is 26ozs 6dwts melted gold. The great difficulty appears to be,—although the water for tables was supplied from a different stream to that used in working the turbine,—in saving the fine gold after it is crushed out of the stone, the silver refusing to amalgamate with a large proportion, excepting when acids are used in connection with it. To overcome this loss, and save all the gold that even can be seen, would place this property in a flourishing position. For this purpose a sample of the Karangahake gold has been forwarded to Auckland, in order that the experts at the Bank of New Zealand may have an opportunity of displaying their skill, and render a great good.⁶⁴

9 April

The Thames Advertiser has a notice advertising 6 “Licensed Holdings declared forfeited by the Mining Inspector”.⁶⁵

11 April

Monthly Mining Summary

In the Ohinemuri district, mining interests have revived; the "duffer," Karangahake, in the hands of tributers, is proving that the quartz can be so treated that it will pay, and may lead to the adjoining grounds being reoccupied by better and more fortunate holders.⁶⁶

26 May

FLOODS IN OHINEMURI.

This district has been visited by one of the largest floods we have had for some considerable time. Part of the Karangahake fluming was carried away. The Owharoa bridge has stood the flood well, and has not been carried away as reported. Part of the foundation of the Morning Light⁶⁷ tramway has been washed away.⁶⁸

⁶³ <https://paperspast.natlib.govt.nz/newspapers/THA18770309.2.13>

Thames Advertiser, Volume XII, Issue 2567, 9 March 1877, Page 3

⁶⁴ <https://paperspast.natlib.govt.nz/newspapers/THA18770328.2.14>

Thames Advertiser, Volume XII, Issue 2583, 28 March 1877, Page 3

⁶⁵ <https://paperspast.natlib.govt.nz/newspapers/THA18770409.2.10.4>

Thames Advertiser, Volume XII, Issue 2593, 9 April 1877, Page 2

⁶⁶ <https://paperspast.natlib.govt.nz/newspapers/NZH18770411.2.52>

New Zealand Herald, Volume XIV, Issue 4805, 11 April 1877, Page 7

⁶⁷ Owharoa?

⁶⁸ <https://paperspast.natlib.govt.nz/newspapers/NZH18770526.2.19>

New Zealand Herald, Volume XIV, Issue 4844, 26 May 1877, Page 3

1878

3 March

Census returns 3 March 1878, Karangahake: 12 total, 5 males, 7 females.
Reported 22 October 1878.⁶⁹

17 July

The Tributers in the Karangahake mine are now crushing, and expect a payable return. The labour of conveying quartz to the mill is considerable, and, of course, adds to the cost of crushing.

Our present prospects are not so high as I could wish them. Our mines are not being worked with the vigour that the prospects warrant. To start with the Karangahake.

A party of tributers have taken that mine off the company's hands, but they are not in a position to give that part of the field a fair trial. Having very little capital they cannot do any dead work, and before anything good can be found on that hill, the broken country will have to be gone through, for there is no doubt but that all the workings in the mine have been carried on in what at one time has been a slip from the main range, and all the present workings are too shallow to try the payable nature of the reefs. [Where was this area? In the low hills west of the gated County Road entrance to the mountain?]

There is one thing quite certain, that payable stone exists somewhere in the immediate vicinity of the Karangahake, as large loose boulders on and around the hill all contain a large percentage of gold and silver, and some very fine specimens have been found on the Banyan at the foot of the spur. These indications all point out the probability of good reefs being found in this locality, if capital and labour could be combined to thoroughly prospect the district, instead of allowing some half-day hands to eke out a precarious living, when there is room for a large population, if only a systematic manner of prospecting were carried on, assisted by the Council and the General Government, who ought to assist the development of our mining industry more than they have done up to the present.

The nearest point to the Karangahake where work has been done is at the Rotokau [Rotokohu]. A large amount of surface prospecting has been done here, and the same kind of stone found as at the former place, and as it is on the west side of the same hill, it proves that the reefs exist in the main range, and must be looked for there, and not over the low-lying parts of the range. A few ounces of water-worn gold have been got at different times in the Rotokau Creek, but nothing payable in the shape of alluvial.⁷⁰

4 November

OHINEMURI GOLDFIELD.

⁶⁹ <https://paperspast.natlib.govt.nz/newspapers/THA18781022.2.11>

Thames Advertiser, Volume XI, Issue 3148, 22 October 1878, Page 3

⁷⁰ <https://paperspast.natlib.govt.nz/newspapers/THA18780717.2.17>

Thames Advertiser, Volume XI, Issue 2978, 17 July 1878, Page 3

Paeroa, Thursday. A meeting of the Ohinemuri Prospecting Association was held last evening in the Public Hall. Reports was received from the different parties out. Nothing payable has been found up to the present. There are 12 men out in the different parts of the district, and applications were sent in from seven others, but the committee were of opinion that the number already out were as many as could be put on at present, unless further funds were available, as some of the works in hand, it was pointed out, would in all probability take several months to finish....

At Karangahake and Owcharoa several hands have been put on lately.⁷¹

⁷¹ <https://paperspast.natlib.govt.nz/newspapers/THA18781104.2.13>

Thames Advertiser, Volume XI, Issue 3159, 4 November 1878, Page 3

1879**22 February**

Government Notices: Licensed Holding declared forfeited by the Mining Inspector.—Late License Holding No. 118, known as the Karangahake Claim. Late licensees, William Burns Souter, James Darrow, James Stewart, and Thomas Morrin; area, four acres three roods, and eighteen perches more or less; situated at Karangahake, Ohinemuri, bounded on all sides by ground supposed to be unoccupied.⁷²

30 August

NATIVE ATTACK AT OHINEMURI.

One surveyor wounded.⁷³

Daldy McWilliams.

⁷² <https://paperspast.natlib.govt.nz/newspapers/THS18790222.2.25.1>

Thames Star, Volume X, Issue 3125, 22 February 1879, Page 3

⁷³ <https://paperspast.natlib.govt.nz/newspapers/NZH18790830.2.20>

New Zealand Herald, Volume XVI, Issue 5550, 30 August 1879, Page 5

1880**25 November**

The opening day of the Te Aroha goldfield: 25 November 1880.⁷⁴

20 December

Some good stone has lately been found at the Karangahake, where one of the old hands has been spending some of his time. There is no doubt but that the rush to the Aroha will send some of the unlucky ones to other parts of the districts, where as good prospects are to be found as any part of the Thames goldfield.⁷⁵

⁷⁴ <https://hdl.handle.net/10289/10378>

<https://researchcommons.waikato.ac.nz/handle/10289/10378>

⁷⁵ <https://paperspast.natlib.govt.nz/newspapers/THA18801220.2.11>

Thames Advertiser, Volume XIII, Issue 3767, 20 December 1880, Page 3

1881

3 May

A rush to the Karangahake took place a few nights since. Young Daldy McWilliams, who had been prospecting in that district, found a fine leader, out of which he got good prospects; but the position of the leader makes it difficult of access, and is not considered of much value by some of those that have paid it a visit. There can be no doubt but that payable gold will be found there some day.

The Ohinemuri Prospecting Association's men are still out, and have been trenching and driving, but up to the present nothing payable has been found. They have shifted camp to another portion of the district. I think the mining prospects of the district may be considered better than at any time since the opening of this field for the miners.⁷⁶

4 May

TENDERS are invited for the Removal and re-Erection of the Karangahake Battery from its present site, to a site on the Ohinemuri River, at Waitete. Plans, &c, can be seen at; Mr. Bayldon's Office, on or after Saturday, 7th instant. Tenders will be received until Saturday, 14th inst. E. B. FRASER.⁷⁷

24 November

Tenders MARTHA GOLD MINING COMPANY (Limited). Tenders will be received up till noon of SATURDAY, the 26th day of November, for the REMOVAL and RE-ERECTION of the Karangahake Battery to Waihi. Plans and specifications can be seen at the Office of Mr D. H. Bayldon, Surveyor, Grahamstown, to whom Tenders will be addressed.⁷⁸

This was to be for the Martha Company in Waihi (William Nicholl and associates).⁷⁹ However, the battery did not leave Karangahake.

⁷⁶ <https://paperspast.natlib.govt.nz/newspapers/THS18810503.2.18>

Thames Star, Volume XII, Issue 3850, 3 May 1881, Page 3

⁷⁷ <https://paperspast.natlib.govt.nz/newspapers/THA18810504.2.9.3>

Thames Advertiser, Volume XIV, Issue 3905, 4 May 1881, Page 2

⁷⁸ <https://paperspast.natlib.govt.nz/newspapers/THS18811124.2.21.2>

Thames Star, Volume XII, Issue 4027, 24 November 1881, Page 3

⁷⁹ For a discussion of activities in Waihi at this time, see: A History of the Waihi/Martha/Silverton/Union Battery Waihi 1882 – 1915.
<http://www.ohinemuri.org.nz/research/silverton-battery-site>

1882**29 March**

The prospectors, Messrs McCombie and Liddell, have stone they consider will go fully 40zs to the ton, and the reef, I am informed, is 5 feet in thickness. Mr W. Nicholls, of Waihi, and Mr Smith, of the same place, were both going to Karangahake to test the prospect and to secure the ground.

At Owharoa the most striking feature is the new hotel recently built by Mr James Walsh, late of the Thames. The cost of the erection was £2000. In it there are 14 bedrooms, well-furnished, together with the other necessary accommodation of a first-class hotel, all beautifully finished. Several new houses have recently sprung up, and signs of progress and settlement are showing all about the place.⁸⁰

31 March

THE NEW FIND AT KARANGAHAKE.

(To the Editor of Thames Advertiser.)

Sir, in your issue of yesterday morning there appeared a letter from an "Upper Thames correspondent"....[see above]

In reply thereto permit us to state that we have not given any information to any person or persons whatever respecting the prospects obtained by our party at Karangahake; neither have we exhibited any specimen stone at Paeroa; nor, indeed, have we authorised any other persons to do so....

McCombie and Party, Thames⁸¹

Ouch!

25 April

MINING MATTERS.

Karangahake.—At the Hauraki claim, the prospectors are now building whares and cutting a track to enable them to get from the flat to the mine.

On our visiting the ground we observed four distinct reefs ranging in size from a foot to 8 feet in thickness. Of these, two have been operated upon, and in both gold is plainly visible to the naked eye. In one of these reefs gold has been traced along the outcrop for fully 250 feet; the other has been opened up for a distance of 60 feet, with similar prospect. Two others have been tested by pestle and mortar, and in panning off the show was very encouraging.

The reef from which the best stone is obtained is five feet in thickness, and carries gold from wall to wall, the precious metal being plainly visible in the blue seams that traverse it. The claim embraces an area of 15 acres, and is situated in most favourable country. Arrangements are now being made with a view to securing the Karangahake battery, a distance of half a mile from the claim, and which could be easily connected by self-acting or wire tramway.

⁸⁰ <https://paperspast.natlib.govt.nz/newspapers/THA18820329.2.12>

Thames Advertiser, Volume XIV, Issue 4195, 29 March 1882, Page 3

⁸¹ <https://paperspast.natlib.govt.nz/newspapers/THA18820331.2.17.1>

Thames Advertiser, Volume XIV, Issue 4197, 31 March 1882, Page 3

Several other claims have been pegged out adjoining the Prospectors', and the surveys are now being gone on with. We have no doubt that the active operations already commenced will lead to the proper development of this very promising part of the field.⁸²

26 April

The Hauraki claim embraces an area of 15 acres, and is situated midway between the old Karangahake workings and the Trig station. The country is admirably adapted for mining purposes, about 600 feet of backs being obtainable, and is within half a mile of the old Karangahake battery.⁸³

The Hauraki claim is also known as the Prospectors' claim.⁸⁴ This is an 1882 label given to the Hauraki claim, the prospectors were McCombie and Liddell. Not to be confused with the 1875 Prospectors Claim.

A map of the early claims is required. In its absence:-

- "the old Karangahake workings" are on the Karangahake Spur, true left bank Waitawheta River.
- "Hauraki claim ... is situated midway between the old Karangahake workings and the Trig station." This suggests a little beyond the Plum Pudding or Woodstock Blow area? A map kindly provided by Wayne Chowles shows a Hauraki adit to the south of the Woodstock Blow, south of the County Road.

29 April

Mining Notices. THE Application for Licenses for Gold Mining purposes, under "The Gold Mining Districts Act, 1873," specified in the Schedule hereunder, may be granted on Monday, the 29th day of May, 1882, unless valid objection thereto be in the meantime made in writing, and lodged at this office not later than seven clear days before that date. Plans and applications may be seen here. HARRY KENRICK, Warden.

SCHEDULE.

No. 9.-John McCombie and Daldy Mc Williams, Hauraki Claim. Area 15 acres, 2 roods, and 23 perches; situated at Karangahake, Bounded on all sides by supposed unoccupied ground. Pegs distinguished by the mark V on northern end, and || on southern end of claim.

No. 14,- Hugh Roberts Jones and Robert Noble, Hauraki No 2 claim. Area, 6 acres 2 roods and 30 perches; situated at Karangahake. Bounded north-west by Hauraki claim; on other sides by supposed unoccupied ground. Pegs distinguished by the mark t.

No. 15.- Jackson, for Francis Angus White, Adam Porter, John McCombie, and Daldy Mc Williams, Maria Claim. Area, 22 acres 3 roods and 15 perches; situated at Karangahake. Bounded southerly by the Hauraki Claim; on other sides by supposed unoccupied ground. Distinguishing mark on pegs X.⁸⁵

⁸² <https://paperspast.natlib.govt.nz/newspapers/THA18820425.2.17>

Thames Advertiser, Volume XIV, Issue 4308, 25 April 1882, Page 3

⁸³ <https://paperspast.natlib.govt.nz/newspapers/NZH18820426.2.44>

New Zealand Herald, Volume XIX, Issue 6377, 26 April 1882, Page 6

⁸⁴ <https://paperspast.natlib.govt.nz/newspapers/THS18830601.2.14>

Thames Star, Volume XIV, Issue 4495, 1 June 1883, Page 2

⁸⁵ <https://paperspast.natlib.govt.nz/newspapers/THA18820429.2.9.5>

2 May

Application has been made to register the following gold-mining companies :— The Hauraki Gold-mining Company: Place of operations, Karangahake in the Ohinemuri district; nominal capital. £10,000, in shares of 10s each; the manager's name is Mr. F. A. White.⁸⁶

2 June

HAURAKI G.M. CO. (LIMITED).

It was reported that the proprietors of the Karangahake battery had executed the deed to repair the battery, fluming, &c, and erect a tramway from the mine within four months, when crushing will be started. The appointment of Mr. James Liddle as mine manager was confirmed, and Mr. C. J. Stone elected a director of the company.

Karangahake, 29th May, 1882... The works which have already been completed are a blacksmith's shop and a bridle track, commencing at a point near to the old Karangahake workings, and terminating at a point immediately below the entrance to the main level in your company's ground. This track is four feet wide and fifteen chains long. It is now available for pack-horse traffic, and might be made practicable for sleigh or dray traffic at a comparatively trifling cost. Being desirous of avoiding confusion when speaking of the numerous reefs that have already been unearthed in your mine, I have deemed it advisable to number them as follows:—1, 2, 3, 4, and 5...

James Liddell, mine manager.⁸⁷

14 June

Arrangements have been completed [though the 7 August report below suggests not yet completed] to connect the Hauraki mine with the battery by means of a wire tram, as it has been found difficult to get a site for a ground tramway, there being 400 feet to rise in 30 chains. The prospects of the Hauraki mine are improving.⁸⁸

Karangahake Battery becomes Hauraki Battery**7 August**

These various claims are situated almost immediately behind the old battery, but are from 500 to 1000 feet above it, if not more. A tramway is in course of erection from the battery to the foot of the range, a distance of some 330 yards [302m]. This will be connected with the Hauraki mine by a wire tramway.

The Hauraki (or Prospector's) claim contains an area of 45 men's ground...

The shareholders of this claim have purchased the old Karangahake battery, which contains 16 head of stampers, and a contract has been let for repairing the same, and also for making the tramway, and bringing in the water-race

Thames Advertiser, Volume XIV, Issue 4312, 29 April 1882, Page 2

⁸⁶ <https://paperspast.natlib.govt.nz/newspapers/NZH18820502.2.19>

New Zealand Herald, Volume XIX, Issue 6382, 2 May 1882, Page 4

⁸⁷ <https://paperspast.natlib.govt.nz/newspapers/NZH18820602.2.5>

New Zealand Herald, Volume XIX, Issue 6409, 2 June 1882, Page 3

⁸⁸ <https://paperspast.natlib.govt.nz/newspapers/NZH18820614.2.45>

New Zealand Herald, Volume XIX, Issue 6419, 14 June 1882, Page 6

from the Waitawheta river. These works are in operation now, and are being pushed on as speedily as possible.⁸⁹

Hence now the battery is called the Hauraki Battery.

The tramway to the foot of the range sounds like the first version of the tramway along the Waitawheta, true left bank (the lowest section of what we now call the Crown track). This is the same tramway we encounter with Woodstock and furnace 1885.

302m from the battery along the tramway (current walkway) takes us to just beyond the first bend in the river. This matches one or two early photographs.

Then a cableway. Does this cableway connect to the area to the north/north east of the Plum Pudding, or the western flank? Where is the Hauraki mine? The tramway from the top of the Hauraki cable is not mentioned in the literature, nor mapped.

The contemporary reports and maps fail us in determining the sequence and location of the early aerial tramway/s. The Hauraki Level is well back from the Woodstock Blow, and upslope from the County Road. I suggest the cableway must have come from the western flank of the Blow. We don't get to see this in a photograph until 1889.

Several maps show a tramway and cableway on the eastern side of the Blow, the Woodstock No. 2 level (1886⁹⁰). Photographs show these cableways and tramways, but the dateable images are later than this period.

First section of tramway beside Waitawheta River, and first cable way⁹¹

12 August

Mining Leases, HAURAKI GOLD MINING DISTRICT. Warden's Office, Thames, 11th August, 1882. THE Applications for Licenses for Gold Mining purposes under "The Gold Mining Districts Act, 1873," specified in the schedule hereunder, may be granted on Wednesday, the 9th day of September, 1882...

No. 35.—Walter Davys, Golden Crown Claim, area 9 acres, situated at Karangahake. Bounded on all sides by supposed unoccupied ground, Pegs distinguished by the mark =.

It seems that the Golden Crown does not become the Crown later? (see entry 1 March 1884). Confusingly, there is a Golden Crown in Thames (with a battery), and a Crown at Waitekauri.

19 September

THE OHINEMURI GOLDFIELD.

A TRIP TO KARANGAHAKE.

Paeroa, Sept. 16th. The road from Paeroa to Mackaytown is now, thanks to old King Sol, in a much better condition for travelling than has been the case for some considerable time past. From Karangahake to Mackaytown there is but a mere pack track to answer the purpose of a road, and the approaches to the

⁸⁹ <https://paperspast.natlib.govt.nz/newspapers/NZH18820807.2.37>

New Zealand Herald, Volume XIX, Issue 6465, 7 August 1882, Page 6

⁹⁰ <https://paperspast.natlib.govt.nz/newspapers/NZH18860924.2.48>

New Zealand Herald, Volume XXIII, Issue 7751, 24 September 1886, Page 6

⁹¹ The writer is not positive about the location of the cableway ;(

crossing on the Ohinemuri River are positively dangerous to pedestrians. The bridges and culverts erected seven years ago are also in a very dilapidated condition, and unless some repairs be speedily effected accidents are inevitable.

Some months ago a petition praying for assistance in the matter of forming this road was presented to the Thames County Council, who voted the sum of £15 in aid of the work but, on the principle, I suppose, of "Devil help those who help themselves," the money so voted has never yet been paid over to the men who did the work, and they are somewhat wroth with our noble Council in consequence.

The first claim visited, upon reaching the scene of mining operations, was the Hauraki G.M. Co.'s, embracing an area of 15 acres. This claim was located about 5 months ago by Messrs Liddell, Mc Williams, and McCombie, who had been prospecting for several months in the neighbourhood. Since operations in the mine were started a large amount of prospecting as well as permanent work has been accomplished, and no less than five distinct gold-bearing lodes....

The proprietors of this mine have purchased the Karangahake battery, which is situate immediately below, and within easy distance of the mine. The battery, comprising 16 head of stampers, berdans, &c., complete, and driven by a turbine, is now undergoing a thorough renovation. The timber for a new water race is being cut, and a tram-way connecting the mine and battery is also in course of construction. The share-holders hope to be able to start crushing about the end of October next.⁹²

The new water race must surely be a repair/replacement of the old one beside the Waitawheta Stream.

The language here suggests these plans are not yet completed.

The article continues:

Upon the northern side of the Hauraki, and extending right away down to the Waitawheta river, is the Maria claim, 65 men's ground. In this claim two tunnels are in operation. One of these is being driven along the strike of a reef about 4 feet in thickness. This reef is very similar in character and appearance to that known as No. 3, in the Hauraki mine, and it undoubtedly is the northern continuation of the same lode. It is an exceedingly well defined body of stone carrying gold, from wall to wall—the precious metal being plainly visible to the naked eye in the blue seams that intersect the reef in every conceivable direction. The other tunnel is being driven through what was known in the early days of this field as the "Golden Knot," with a view to cutting any gold-bearing lodes that may tend in that direction.

The Maria claim is at the northern tip of the Blow. The Woodstock Company will take over the Maria claim in the future.⁹³

South of and adjoining to the Hauraki Company's ground, is the Annie claim; 19 men's ground. It was marked off by Noble and party, who discovered, near

⁹² <https://paperspast.natlib.govt.nz/newspapers/THA18820919.2.9>

Thames Advertiser, Volume XIV, Issue 4420, 19 September 1882, Page 2

⁹³ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1887-I.2.1.4.6>

GOLDFIELDS., Appendix to the Journals of the House of Representatives, 1887 Session I, C-06

to their northern boundary, a well-defined gold-bearing lode, about 3 feet in thickness. A tunnel some 60 feet in length has been driven along the footwall of this lode, which is composed partly of solid stone; and partly of decomposed quartz; and the loose prospects obtainable therefrom are simply astonishing.

The next claim visited was the Paeroa, 49 men's ground. It is situate on the western side of the Hauraki claim, and is being thoroughly prospected by the shareholders, who are, all, or nearly all, local men. A tunnel is now being-driven for the purpose of intersecting the dip of a reef exposed to view on the surface...

The Diana claim, 86 men's ground, is located south of and next to the Annie and Paeroa claims. Up to the present no work whatever has been done upon it...

Right over the trig station, and further south still is the Dubbo Claim, Shaw and party, proprietors...

There are several other claims marked off in the immediate neighbourhood of those that I have already enumerated, but time would not admit of a visit being paid to them...

There is an abundance of wood for mining purposes close at hand, and the conformation of the country affords facilities for mining that stand unrivalled throughout the Hauraki Peninsula.⁹⁴

20 September

Hauraki (Karangahake). —The manager reports:...

The hopper built near the entrance to the low level and the shoot connecting the hopper with the intermediate level were completed last week. This hopper is capable of holding 300 tons of quartz, and in future all crushing dirt broken out from the intermediate level will be shot into it, awaiting completion of tramway and repairs to battery. —John McCombie⁹⁵

25 October

A Voice from Auckland. SNOOKS, HIS SENTIMENTS:
SILVER AT KARANGAHAKE

During the past week a series of tests have been made of the value of the stone from the Karangahake district, and the results are such as to justify the belief that a new industry will soon be established in that district, to wit mining for silver, which is quite as, and generally more, profitable than gold mining. Some of the tests have yielded as much as 236 ozs of silver and 20ozs of gold to the ton. This, of course, is fire test, but when it is known that in the different mining centres of America this test is taken as the value of the areas, and mill owners purchase them at so much per cent., in some cases as high as 20 per cent, being given on the assay test, the balance being the profit to the mill owner, who, of course, has a direct benefit in saving as large a percentage as

⁹⁴ <https://paperspast.natlib.govt.nz/newspapers/THA18820919.2.9>

Thames Advertiser, Volume XIV, Issue 4420, 19 September 1882, Page 2

⁹⁵ <https://paperspast.natlib.govt.nz/newspapers/NZH18820920.2.40>

New Zealand Herald, Issue 6503, 20 September 1882, Page 6

possible, instead of getting so much per ton as is hitherto the case in Thames mining. Such is the faith in the future of the Karangahake districts by some of our Auckland capitalists that an offer has been made to erect powerful machinery for the extraction of the precious metals, provided certain work is done in opening up and further testing the value of the reefs already cut in that district, which your Grahamstown mining authorities have thought so little of and so long neglected; and the amount of apathy shown by the business men of the Thames in trying to develop the mineral resources of the district is something astonishing, seeing it is all they have to depend on.⁹⁶

AJHR

Published 1883, but largely reporting on 1882.

THE GOLD FIELDS OF NEW ZEALAND (REPORT ON)., Appendix to the Journals of the House of Representatives, 1883 Session I, H-05

Mr. H. A. Gordon, Inspecting Engineer, 25th May, 1883

The Thames County Council are at the present time constructing a road, which is subsidized by Government, to connect the mines with a small crushing battery at the junction of the Ohinemuri River and the Waitawheta Creek.⁹⁷

REPORT ON GOLD FIELDS, &c, VISITED, AND WORKS IN PROGRESS ON THE GOLD FIELDS.

No. 4 Mr. Mining Inspector McLaren

to the Under-Secretary for Gold Fields. Sir, — Mining Inspector's Office, Thames, 30th April, 1883.

Page 22. Karangahake District.—Since my last report a large amount of ground has been taken up in this district, and a considerable amount of working done in proving them. This district was first rushed at the opening of the Ohinemuri fields in 1875, but afterwards abandoned. The present finds prove the ground then taken up to be on the outside edge of the golden belt of country, which lies a little more to the eastward. There appear to be several lines of reef; the first discovered runs through the Maria, Hauraki, Diana, and other ground. Several small trial crushings have been made for good returns. In several of the reefs there is a large percentage of silver. An assay from the Maria went over 300 oz. to the ton, and by crushing in the ordinary way 40 oz. valued at 16s. per oz.

The Golden Crown, Hidden Treasure, Martha, and several other claims have opened on their reefs with good prospects —that of the Golden Crown is 4 feet thick, and shows gold freely in breaking down. A trial crushing of one ton was taken out of this mine by the men, who succeeded, after almost incredible hardships, in carrying it to the mill. The return was 14 oz. 8 dwt. gold valued at £2 7s. per oz.

⁹⁶ <https://paperspast.natlib.govt.nz/newspapers/THS18821025.2.17>

Thames Star, Volume XIII, Issue 4311, 25 October 1882, Page 2

⁹⁷ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1883-I.2.3.2.7>

THE GOLD FIELDS OF NEW ZEALAND (REPORT ON)., Appendix to the Journals of the House of Representatives, 1883 Session I, H-05

The country is extremely rugged and difficult of access, and it must take both time and capital to open up these mines. It is difficult to say at present what would be the best plan to open communication with the various mines to have the quartz conveyed to the mill, but it would appear to me that a line of road or tramway along the lowest possible level up the Waitawhetu Creek, to which tramways or shoots could be laid from the various claims, would be the best plan. I am the more confirmed in this as the claims have now extended to both sides of this creek; this plan would therefore be suitable for both sides.

The County Council is at present cutting a road to the mines. This will be suitable for conveyance of provisions, &c.; but it does not appear that it will be of much general use in carriage of quartz, though it will do good in allowing the district to be accessible and properly prospected. A wire tramway is at present being constructed by the Hauraki Company, which may assist a few mines to get their quartz crushed. The old Karangahake battery has been put in a state of repair, new fluming erected, &c.; it is expected a start may be made about the beginning of June.⁹⁸

⁹⁸ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1883-I.2.3.2.7>

THE GOLD FIELDS OF NEW ZEALAND (REPORT ON)., Appendix to the Journals of the House of Representatives, 1883 Session I, H-05

1883

17 January

KARANGAHAKE.

A large number of claims are now taken up, and work is proceeding on most of them. The country is rough and broken and difficult of access. The road for which tenders have been called will give most of the mines a chance to forward trial crushings to the Hauraki Company's battery when completed.⁹⁹

This must be the County Road?**14 February**

Karangahake.— The repairs to the battery tram and water race are slowly progressing. The contractor has thrown up the contract and left, and the work is now being carried on under the superintendence of Mr. E. M. Corbett. It will be some time before everything is in readiness to make a start, as timber is scarce, and has to be obtained from Waihi and carried up the Karangahake, 600 feet in height.¹⁰⁰

The 600 feet in height may refer to the hoppers required at the head of the cable way, which, as can be seen in the images, is near the top of the "Plum Pudding" or "Woodstock Blow". The "Woodstock Blow" is 715 ft [218m] at summit¹⁰¹.

24 February

In the Hauraki a large amount of stone is ready to be sent to the mill as soon as the tramway is finished, the timber for which is being cut at Waihi. This seems rather strange, as there is plenty of timber on the hill if sawyers could be found. There is a good opening for them at present, as a lot of timber will be wanted for rails for the mines, and for buildings.¹⁰²

The rails of the tramway are to be timber? The contractor, Mr. Edward Mann Corbett, was a well known mining engineer, and inaugural Ohinemuri County Councillor.

Our correspondent at Ohinemuri informs us that a great flood has occurred in that district, doing considerable damage. A number of bridges have been washed away, and the landing stores at Paeroa and the Paeroa wharf have gone. The tramway and water-race at Karangahake have been damaged. [this must be on the true right bank of the Waitawheta, ie the original water race] Such floods are not frequent at Ohinemuri, but when they do occur they are very formidable. A northeasterly wind discharges a large quantity of rain on the ranges in which the Ohinemuri and its feeders rise, and these rush down on to the flat land where the Ohinemuri joins the Thames. The Thames is itself in flood, and at full tide it is actually backed up by the sea at Shortland. The sea in the Firth of the Thames is greatly augmented at such time by the quantity of water driven up by the north-east wind. Thus there is no "get away" for this

⁹⁹ <https://paperspast.natlib.govt.nz/newspapers/THS18830117.2.17>

Thames Star, Volume XIV, Issue 4380, 17 January 1883, Page 2

¹⁰⁰ <https://paperspast.natlib.govt.nz/newspapers/NZH18830214.2.42>

New Zealand Herald, Volume XX, Issue 6628, 14 February 1883, Page 6

¹⁰¹ See map from Geological Bulletin 16

¹⁰² <https://paperspast.natlib.govt.nz/newspapers/THS18830224.2.45>

Thames Star, Volume XIV, Issue 4413, 24 February 1883, Page 2 (Supplement)

enormous extra quantity of water brought down by the rivers, and a large portion of the flat is covered. In former years, the damage done by such floods was not great, simply because there were no bridges or roads, and little property exposed to injury. ...

The district will always be subject to damage from floods.¹⁰³

21 April

KARANGAHAKE, April 10. Work on the tram is still being pushed on, but when it will be finished no man knoweth, and when finished will be of little use; it will be the most expensive line to work in the colony, and is in danger of being carried away by the first high flood.

A road is being surveyed round the bluff to connect with the battery [Is this Scotchman's Gully?]. If a good grade can be had in this direction it will be the main line for all the claims situated on the same spur, and would do away with the present proposed wire tramway, which will be found too expensive to maintain.¹⁰⁴

23 May

KARANGAHAKE. The battery works are now under the supervision of Mr Corbett, who has five or six hands employed. He reckons he will be finished in a month's time. The water-race is almost completed, and only the wire tramway has now got to be put up. The ground-sections [Plural!] of the tramway, connecting it with the mines at one end and the battery at the other, are finished. I do not know who is to blame in the matter of the long delayed repairing of the battery, but the way in which 12 months has been taken to do work which should not have occupied more than a quarter of the time, is a disgrace to all concerned, and more especially so as during that time the companies have been prevented from crushing, though they had quartz ready to put through...

The County contractors are making good progress with the construction of the road from Noble's up to the Hauraki mine, and from there on to the Golden Crown and Martha properties. When this work is completed, and some repairs effected to the road connecting it with the mill, the claims mentioned will be able to get their quartz treated.

I would like to know what the County Council are going to do with the Government grant of £2000 for the Gorge road? This road, if made, will greatly facilitate the carrying of things to the battery, but there is no sign of anything being done to it yet.¹⁰⁵

1 June

Karangahake may be approached, by two different routes, the one, when the Ohinemuri river is fordable, being by way of Mackaytown. The other is by

¹⁰³ <https://paperspast.natlib.govt.nz/newspapers/NZH18830224.2.17>

New Zealand Herald, Volume XX, Issue 6637, 24 February 1883, Page 4

¹⁰⁴ <https://paperspast.natlib.govt.nz/newspapers/THS18830421.2.23>

Thames Star, Volume XIV, Issue 4460, 21 April 1883, Page 4

¹⁰⁵ <https://paperspast.natlib.govt.nz/newspapers/THS18830523.2.11>

Thames Star, Volume XIV, Issue 4487, 23 May 1883, Page 2

crossing the bridge at Paeroa and following the Te Aroha road until you reach the base of Te Moananui's hill, and thence by following your nose—unless you are fortunate enough to be accompanied by some person practically acquainted with the locality.¹⁰⁶

There is not yet a road to Karangahake, true right bank. Access from Mackaytown to Karangahake, crossing Doherty's Creek, was made possible by cutting back the bluff near the present double decker bridge in 1886¹⁰⁷. The gorge road (SH 2 as we know it) opened 1890¹⁰⁸. The ford at Mackaytown is the one Samuel Marsden was carried over, 1820. The Te Aroha Road is the old road, now called Rotokohu Road. The cycleway Paeroa to Karangahake now approximates this route.

The report continues:-

Upon reaching the scene of operations, the first mine met with was that belonging to the Hauraki GM. and Q.C. Company, of which Mr P. Hansen is the manager. The Hauraki, which is better known as the Prospectors' claim, was located about 15 months ago, and the sum of £900 has already been expended in its development. Operations in this mine are at present confined to the low level, where stoping out upon No. 2 lode, averaging 3 feet in thickness, is being vigorously carried on...

Intermediate level: This level has been driven 80 feet along the course of No. 2 lode, which carried gold from wall to wall the whole of that distance. It is situate 150 feet—vertical measurement—above the low level, and is connected with the latter by means of a winze sunk upon the footwall of the No. 2 lode. From this lode stone shewing gold freely was broken out at various points in the winze, in the level, and in the rise - thirty feet in height—which connects the level with the surface...

The tramway connecting the mine with the battery will be in working order in a fortnight, by which time the mine will be in position to keep the battery, comprising 16 head of stampers, continuously employed. It will, therefore, be seen that this company has a grand future before it, and that there is every probability of the shareholders being handsomely rewarded for their pluck and perservance [perseverance].¹⁰⁹

The low level is the No. 2 level which becomes the Woodstock No. 2 level?

¹⁰⁶ <https://paperspast.natlib.govt.nz/newspapers/THS18830601.2.14>

Thames Star, Volume XIV, Issue 4495, 1 June 1883, Page 2

¹⁰⁷ <https://www.ohinemuri.org.nz/journals/journal-44-september-2000/karangahake-roads-and-bridges>

Karangahake Roads and Bridges. Ohinemuri Regional History Journal 44, September 2000

Also: <https://paperspast.natlib.govt.nz/parliamentary/AJHR1886-I.2.1.4.9>

GOLDFIELDS, ROADS, WATER-RACES, AND OTHER WORKS IN CONNECTION WITH MINING (REPORT ON)., Appendix to the Journals of the House of Representatives, 1886 Session I, C-04

¹⁰⁸ <https://paperspast.natlib.govt.nz/newspapers/WT18901113.2.19>

Waikato Times, Volume XXXV, Issue 2861, 13 November 1890, Page 2

¹⁰⁹ <https://paperspast.natlib.govt.nz/newspapers/THS18830601.2.14>

Thames Star, Volume XIV, Issue 4495, 1 June 1883, Page 2

24 July

Ivanhoe.—The contractors for cutting and forming the tram road connecting this mine with the Hauraki battery are making good progress, and the manager expects to have the whole line completed within two months from date.¹¹⁰

28 July

Karangahake. The long expected start of the Hauraki G.M. Co.'s. battery has not yet taken place, as it was found that the wire tramway constructed for bringing the quartz to the battery would not work. The weight and sag of the break [brake] line was so much that it caused the truck when emptied into the hopper to run back about 100 ft on the main line. Mr E. M. Corbett, the engineer-in charge, is now correcting the defect by stretching telegraph wires underneath and at right angles to the tram in order to support the weight of the wire, and expects to have everything to rights early next week. In the meantime the Hauraki Cos. mine is full of quartz ready for conveyance to the battery. Most of the other mines on the Karangahake Spur are at work prospecting and opening up their ground, and are anxiously awaiting the result of the first crushing from the "Hauraki."¹¹¹

The Hauraki Co must have some way of getting their ore to the cableway.

If the cableway is on the western flank of the Woodstock Blow, they must put in their own ground tramway, which would be 310 m to the Hauraki level, as per map/GIS.

6 August

Hauraki G.M.Co,—The tressilwork, which was blown down by the late heavy gale, has been re erected, and appears to be but little the worse for its mishap. Upon the wire section of this company's tramway the travelling wire was found to be by far too cumbrous for the work required of it, and a smaller and lighter wire is now being substituted, and a few other defects remedied which will render the tramway fit for service in a few days time. The country over which this tramway passes is admirably adapted for a series of self-acting grades of ground tramway, and why this system was not adopted in preference to the antiquated system now about to be used is a mystery to all beholders who cometh from afar.¹¹²

Despite that comment, aerial cableways will be used extensively at Karangahake. Few self-acting grades (inclines) will be built. The tressilwork; is that bridge/water race structure that crosses the Waitawheta River to the battery?

11 August

The battery was to have started last month, but a heavy storm blew down some tresselwork, which has caused a further delay.¹¹³

¹¹⁰ <https://paperspast.natlib.govt.nz/newspapers/THS18830724.2.18>

Thames Star, Volume XIV, Issue 4540, 24 July 1883, Page 2

¹¹¹ <https://paperspast.natlib.govt.nz/newspapers/TAN18830728.2.12>

Te Aroha News, Volume I, Issue 8, 28 July 1883, Page 3

¹¹² <https://paperspast.natlib.govt.nz/newspapers/THS18830806.2.14>

Thames Star, Volume XIV, Issue 4551, 6 August 1883, Page 2

¹¹³ <https://paperspast.natlib.govt.nz/newspapers/THS18830811.2.22>

Thames Star, Volume XIV, Issue 4556, 11 August 1883, Page 4

29 August

The construction of the Hauraki G.M.Co.'s tramway was completed yesterday, and a start was made this morning to forward quartz from the mine to the battery, which will start crushing as soon as there is a sufficiency of stuff available. The wire section, which is twelve hundred feet in length [366 m], was found to work admirably, and ought, to be capable of transmitting from fifteen to twenty tons per day, which will be quite sufficient to keep the battery fully employed.¹¹⁴

31 August

A preliminary trial of the Hauraki Company's battery, Karangahake, was made yesterday; everything worked smoothly, and the speed attained was 60 strokes per minute.¹¹⁵

It has taken 15 months for these works to be completed.

11 October

Hauraki (Karangahake).—The return, 106ozs. of gold from 300 tons quartz, is disappointing, but is capable of favourable explanation, namely, that owing to the presence of a great proportion of base minerals, much of the gold was not saved. That a large percentage of the gold was not amalgamated, is shown by the statement of my informant; that whenever a dishful of the tailings—all of which have been carefully saved—is washed, a good prospect is obtained...

Ivanhoe (Karangahake).—The return of 8oz. from 4 tons quartz is very satisfactory, as the lode is 5 feet wide. Connection with the Hauraki battery will soon be completed.¹¹⁶

The Ivanhoe is on the Ohinemuri River side of Taukani Hill.

8 November

Ivanhoe G. M. Co.-- The horse grade and self acting sections of tramway connecting this mine with the Hauraki battery are complete in every particular, and the manager is now engaged in preparing material for construction of break [brake], &c. The mishap to the Hauraki company's tramway will not interfere with the continuance of operations in this mine, because the manager completed yesterday a wire suspension foot bridge over the Waitawheta river, which will meet all present requirements...¹¹⁷

CROWN GOLD MINING COMPANY**21 December**

Mining Notices.

¹¹⁴ <https://paperspast.natlib.govt.nz/newspapers/THS18830829.2.20>

Thames Star, Volume XIV, Issue 4571, 29 August 1883, Page 3

¹¹⁵ <https://paperspast.natlib.govt.nz/newspapers/THS18830831.2.14>

Thames Star, Volume XIV, Issue 4573, 31 August 1883, Page 2

¹¹⁶ <https://paperspast.natlib.govt.nz/newspapers/NZH18831011.2.45>

New Zealand Herald, Volume XX, Issue 6833, 11 October 1883, Page 5

¹¹⁷ <https://paperspast.natlib.govt.nz/newspapers/THS18831108.2.15>

Thames Star, Volume XIV, Issue 4632, 8 November 1883, Page 2

I THE Undersigned, hereby make application to Register the "CROWN GOLD MINING COMPANY "as a Limited Company under the provisions of "The Mining Companies Act, 1872."

1. The name of the Company is to be " The Crown Gold Mining Company (Limited)."
2. The place of operations is to be at Karangahake, in the Provincial District of Auckland, and Colony of New Zealand.
3. The Registered Office of the Company will be situated at the New Zealand Insurance Company's Buildings, Auckland.
4. The nominal capital of the Company is ten thousand pounds (£10,000). in twenty thousand shares (20,000] of ten shillings (10s) each.
5. The number of shares subscribed for is twenty thousand, being the entire number of Shares in the Company.
6. The number of paid-up shares is nil.
7. The amount already paid-up is nil.
8. The name of the Manager is Tom Wrigley.
9. The names, addresses and occupations of the Shareholders, and the number of Shares held by each at this date, are as follow:—
Walter Davys, Ohinemuri, Miner....¹¹⁸

Quite a list of shareholders is included.

The Crown Company is underway, but without any shares paid up. This is the same Walter Davys of the Golden Crown Claim.

Tramway Hotel established

It soon became obvious that mining was going to boom so Alf Shepherd, who owned the Tramway Hotel at Waitekauri, decided to move his establishment to Karangahake. He commenced to erect a building at Battery Flat in October 1883. On 11 December 1883 the Ohinemuri Licencing Bench Commission approved transfer of his licence to Karangahake and the hotel, also named 'Tramway' opened 2 weeks later.¹¹⁹

AJHR 1884

Published 1884, but largely reporting on 1883.

THE GOLD FIELDS OF NEW ZEALAND (REPORT ON).

APPENDIX TO THE JOURNALS OF THE HOUSE OF REPRESENTATIVES, 1884 SESSION I, H-09¹²⁰

REPORT ON GOLD FIELDS, ETC., VISITED, AND WORKS IN PROGRESS ON GOLD FIELDS.

¹¹⁸ <https://paperspast.natlib.govt.nz/newspapers/NZH18831221.2.53.4>

New Zealand Herald, Volume XX, Issue 6894, 21 December 1883, Page 8

¹¹⁹ <https://www.ohinemuri.org.nz/journals/journal-32-september-1988/tramway-hotel-karangahake>

Ohinemuri Regional History Journal 32, September 1988

¹²⁰ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1884-I.2.2.6.10>

THE GOLD FIELDS OF NEW ZEALAND (REPORT ON)., Appendix to the Journals of the House of Representatives, 1884 Session I, H-09

Mr. H. A. Gordon, Inspecting Engineer,

to the Under-Secretary, Mines Department, Wellington. Mines Department, Wellington, 20th May, 1884

Page 2. Karangahake.—Very little work has been done on this field since my last visit. There are no new claims at work, and in those that are opened there is scarcely any work done, with the exception of the Hauraki Company's mine. There seems to be a great apathy displayed in prospecting, and probably may continue so until the various mines at Te Aroha are thoroughly tested. The claims on this field are badly held, so to speak. A large amount of money is required to develop the mines, and they are mostly held by working men, who have not sufficient capital to open them out properly, and they place too high a value on their shares to induce men of capital to join and assist them. It seems to be a country where quartz-reefs are likely to be found all the way along the range to Te Aroha; but it is questionable if the reefs here are a continuation of the Te Aroha reefs, although they are in the same line of country: both the quartz and the gold seem to be of slightly different character, and I did not observe the hard flinty substance in the Te Aroha reefs that is found alongside the quartz lode in the Hauraki Company's mine.

This mine is connected by a wire tramway with the crushing battery at the junction of the Ohinemuri River and the Waitawheta Creek, but the quartz yet obtained is of a poor quality. The Golden Crown Company have done very little work in their mine during the year: the stone is of a payable nature on the outcrop near the surface, and some very rich specimens have been found; but following their reef into the hill it gets more broken, and has the appearance of a slip from the main range, and until further prospecting is done and the reef traced into a solid country it cannot be said to have a permanent appearance. There is a quartz-lode extending from the Hauraki Company's mine, across the top of the mountain near the trig station, and can be traced for a considerable distance; but no prospecting is done here beyond what has been done by the Dubbo Company, which is very little.

The County Council has constructed a road, with subsidy from the Mines Department, from the crushing battery at Waitawheta Creek to the Martha Claim, a distance of about two and a half miles; it is 8 feet wide in the solid, and formed with grades not steeper than 1 in 10 up to the Hauraki Company's mine, and thence along the face of the range on a grade of 1 in 19. [County Road? And Scotchman's Gully? The grade of County Road can indeed be seen to change after ascending past the Hauraki mine turn-off. Check out the 3D GIS.] This will give facilities to the several claims to have their quartz tested at the battery, but, when, once they are proved to be payable, a crushing battery will have to be erected further up the Waitawheta Creek before the mines can be economically worked. The continuation of the road from the Martha Claim towards Te Aroha is now in course of construction, being likewise subsidized by the Mines Department. It was thought most advisable to construct this portion 4 feet wide in the solid on easy grades, so that it could be widened into a dray-road at a future time if required. By constructing a narrow horse-track it will afford facilities to get the whole of the field prospected, as provisions and tools, &c, can be easily brought on the ground.*

* Mr. Atkin has kindly forwarded me information that a fresh discovery of gold has been made in the Ohinemuri District, at Ratakuhu [Rotokohu], by

Mr. Hunt, the discoverer of the famous Shotover Claim at the Thames. It was supposed to be 4oz. to 5oz. stone, but on crushing five tons of it the yield was a little over 1oz. per ton. The quartz lode varies from 1ft. to 3ft. in thickness, and, as it is in a very rough and broken country, no idea can yet be formed of its extent or real value.

No. 2. Mr. Warden Kenrick

to the Under-Secretary for Gold Fields. Warden's Office, Thames, 18th May, 1884.

Page 19. At Karangahake, in spite of the promising aspect of the reefs, but little work has been carried on in many of the claims. A great deal of shepherding has been done, and the Mining Inspector has had to step in and forfeit a large number of claims for non-working. Six hundred and twenty tons of quartz have been crushed for the poor yield of 277oz. gold. The battery was stopped for some three months repairing damages caused by the floods. I am still of opinion that this locality will in the future form an important portion of the gold field, yielding considerable returns of gold. But work will require to be carried on in a somewhat different manner than at present.

At Rotokuhu, on the Karangahake Range, a find has recently been made that may yet prove both important and valuable. Many claims have been taken up in the locality, but too little work has been done to enable a reliable opinion to be given of the prospects. In the Prospector's Claim the country seems to be somewhat disturbed and broken, a clay slide at first cutting off the reef upon which the men were driving, but which was picked up again a few feet further on.

No. 4. Mr. Mining Inspector McLaren

to the Under-Secretary for Gold Fields. Mining Inspector's Office, Thames, 10th May, 1884.

Page 24. I should have mentioned that very little work has been done in the Karangahake portion of the Ohinemuri Gold Field, but in one of the mines there (the Sir Walter Scott) very encouraging returns have recently been obtained from a small crushing. The ground in the neighbourhood is now being energetically prospected.

County Council cutting mountain track

Mr H A Gordon states: "The County Council has constructed a road, with subsidy from the Mines Department, from the crushing battery at Waitawheta Creek to the Martha Claim, a distance of about two and a half miles".

This is the County Road, and it seems to include what we now call Scotchman's Gully. There is no other way of connecting the battery with the Martha and Hauraki claims.

The image 3 and accompanying caption in the 1885 Christmas Supplement shows "The road on the right leading to the buildings is the road from Paeroa"¹²¹. This looks like Scotchman's Gully.

¹²¹ <https://paperspast.natlib.govt.nz/newspapers/NZH18851224.2.77.2>

New Zealand Herald, Volume XXII, Issue 7519, 24 December 1885, Page 13 (Supplement)

However, an incline was deemed necessary behind the furnace house in 1885. Was the Scotchman's Gully route too sinuous for them? So not entirely clear!

Why "Scotchman's" Gully? (Virtually always spelt Scotchman's in the contemporary texts) Maybe this explains:

Soon after the opening of the Goldfield, the Thames County constructed Woodstock Road from the Ford towards the mountain. It passed through land that had a sunny aspect and was soon used for housing on Miners' Right sections. A fairly large house was built for Mr Alexander Hogg, a travelled and well—educated Scotsman who had been in business at Thames with the firm of "James Mackay, Taipari & Co.", Land Agents. He opened a store but was also interested in the "La Monte" treatment of ore and took up several claims. The "Monastery" and "Abbey Priory" were later merged with the Crown Mine. Mr Hogg retired in 1900 but his family contributed to the social life of Karangahake, particularly athletics. The Hill family lived nearby.¹²²

¹²² <http://www.ohinemuri.org.nz/historic-texts/karangahake-the-years-of-the-gold-1875-1935/249-routes-to-the-mines>

Routes to the Mines. KARANGAHAKE the years of the gold 1875 -1935

1884

9 January

Mr Shepherd, contractor for reconstruction of the Hauraki Company's water race and tramway started operations with a strong staff of hands on Thursday last, and hopes to be able to complete the whole of the work in hand before the end of the present month. The preliminary survey of the proposed bridle track between Karangahake and Te Aroha is progressing rapidly in the direction of the last mentioned place, and so far I believe no engineering difficulties of moment have been met with.¹²³

1 March

The Hauraki battery is working on company's dirt [ie Hauraki mine ore?], the Sir Walter Scott is erecting a shoot by which they will be able to tip their dirt into the mill, and the Golden Crown intend to erect a battery of their own should the reef prove good in a low level now being put in; a few other mines are also working.¹²⁴

There is no evidence that the Golden Crown ever erected a battery. This also suggests that it is not the same company as the Crown?

The Sir Walter Scott mine is on the side of Taukani Ridge, true right bank of the Waitawheta River. The shoot (chute) must be what can be seen in the 1885 lithographs.

29 March

A track connection between Karangahake and Te Aroha has been commenced.¹²⁵ Is this a continuation of the County Road around the back of the mountain?

3 April

Karangahake Bridge.—Mr G.B. Morris, M.H.R., wrote regretting that out of the grant in aid for opening up the goldfield in the vicinity of Karangahake no provision had been made to put a bridge over the river, so as to give the miners access to the mines. He had written to the Minister of Mines pointing out the absolute necessity of this bridge and in reply had received notice that £100 would be placed at the disposal of the Council towards the erection, and stating this was all that Government felt justified in doing at present. He asked that the matter be brought before the Council, and thought that under the circumstances Government had been liberal; he had also to thank the Council for their assistant in obtaining the promise.

Cr Brodie said that while he was in Ohinemuri, the other day, a gentleman there informed him that the people there did not want a wire suspension bridge in the position indicated.—Cr Porter believed that the information given to the Chairman was not of much value. If the Karangahake people could not have a cart bridge they would be very thankful to have a foot-passenger bridge. Government would pay up to £100.—Cr Thorburn objected to spending

¹²³ <https://paperspast.natlib.govt.nz/newspapers/THS18840109.2.18>

Thames Star, Volume XV, Issue 4682, 9 January 1884, Page 3

¹²⁴ <https://paperspast.natlib.govt.nz/newspapers/THS18840301.2.26>

Thames Star, Volume XV, Issue 4727, 1 March 1884, Page 4

¹²⁵ <https://paperspast.natlib.govt.nz/newspapers/TAN18840329.2.5>

Te Aroha News, Volume I, Issue 43, 29 March 1884, Page 2

money on work among people who were seeking separation [ie wishing to create a separate council; this occurs late 1885].—After some further discussion, Cr Porter moved that the Engineer bring up a report at the next meeting fixing the site and cost.¹²⁶

15 April

Sir Walter Scott.—The shoot, tramway, &c, connecting this mine with the Hauraki Co.'s battery is rapidly approaching completion, after which crushing operations, will at once be started.¹²⁷

Sir Walter Scott chute, tramway

10 May

The proprietors of the Sir Walter Scott claim, Karangahake, commenced sending quartz to the battery on Monday last, and a capital return is anticipated.¹²⁸

The 1885 lithographs suggest that ore was trammed across the top of the water race as it crossed the Waitawheta River.

13 May 1884

Tenders. THAMES COUNTY COUNCIL.
for— Cutting and Forming Portion of Thames-Tauranga Road, between Mackaytown and Rahu Crossing by Ohinemuri Gorge...¹²⁹

This will be Butler's Track.

5 June

G. M. Morris, M.H.R., advising the Council not to call tenders for the proposed suspension bridge over the Ohinemuri river till Government had been asked to contribute £100 towards making it passable for horse traffic, as he felt sure they would do.—In connection with this matter, Cr Fraser presented a petition signed by 20 miners at Karangahake asking the Council to place the proposed bridge close to the Hauraki battery, as it would greatly facilitate their work, and suit the requirements of the district, while the Council would [would] be a gainer by the fees for residence sites.—It was decided to comply with Mr Morris' request, and the petition was ordered to lie on the table.¹³⁰

5 July

Ivanhoe G.M.Co. The rope for the aerial tramway reached the mine yesterday, and I suppose that notwithstanding all the arguments that have been advanced against it, the powers that be will still persist in carrying out this very

¹²⁶ <https://paperspast.natlib.govt.nz/newspapers/THA18840403.2.7>

Thames Advertiser, Volume XV, Issue 4829, 3 April 1884, Page 3

¹²⁷ <https://paperspast.natlib.govt.nz/newspapers/THS18840415.2.18>

Thames Star, Volume XV, Issue 4763, 15 April 1884, Page 2

¹²⁸ <https://paperspast.natlib.govt.nz/newspapers/THA18840510.2.3>

Thames Advertiser, Volume XV, Issue 4859, 10 May 1884, Page 2

¹²⁹ <https://paperspast.natlib.govt.nz/newspapers/THA18840513.2.4.4>

Thames Advertiser, Volume XV, Issue 4861, 13 May 1884, Page 2

¹³⁰ <https://paperspast.natlib.govt.nz/newspapers/THS18840605.2.11.2>

Thames Star, Volume XV, Issue 4807, 5 June 1884, Page 2

questionable scheme. The late crushing from the Sir Walter Scott establishes, beyond the shadow of a doubt, the value of the reef that runs throughout the whole length of this claim.¹³¹

Ivanhoe, on the Ohinemuri side of Taukani, intend to erect a cableway. The above writer's discomfort may suggest that there was already a process for getting the ore to the ground tramway, and a cable was therefore not necessary. Perhaps a chute arrangement, hinted at in the lithograph 3.

Is this a cableway from mine atop Taukani to the head of the new tramway¹³² on true left bank of the Ohinemuri? There are remains of the head of a cableway on this north side of Taukani.

Was this cableway installed at this time? It appears to be mentioned 4 September **1885**: "The manager is at present engaged constructing an aerial wire tramway 800 feet [244 m] in length, to come north of the hoppers; thence to the battery is a ground tramway."¹³³

Is this the infrastructure we see in the 1885 Christmas Supplement image 3? The article below indicates that the tramway had been built. It's not clear if this included the cableway.

A length of railway iron remains on the tramway formation beside the walkway, a little upstream from the Woodstock battery.

21 July

The Ivanhoe wire tramway connecting the top of the Taukane hill with the Hauraki battery is fast approaching completion, and ought to be in working order early in the ensuing month.¹³⁴

1 August

The first annual meeting of the **Ivanhoe G. M. Co.** was held yesterday afternoon at the office of Mr. F. A. White, the legal manager. Mr. C. Alexander occupied the chair. From the directors' report, which was read, it appeared that a tramway had been constructed at a cost of about £600, and, when completed, a small crushing had taken place, which gave a return of 10ozs. 17dwts, melted gold.

In January Mr. Hansen was elected manager, and operations were resumed near the boundary of the Sir Walter Scott ground, and at the present time there is about 70 tons of quartz ready for crushing. The reef in No. 1 level was four feet thick, the reef going north from the wing, two feet thick, and both looking well. 520 feet had been driven on the two levels, and 75 feet sinking winzes,

¹³¹ <https://paperspast.natlib.govt.nz/newspapers/THS18840705.2.25>

Thames Star, Volume XV, Issue 4833, 5 July 1884, Page 2

¹³² <https://paperspast.natlib.govt.nz/newspapers/NZH18851224.2.77.2>

New Zealand Herald, Volume XXII, Issue 7519, 24 December 1885, Page 13 (Supplement)

"Down the face of the cliff on the Ohinemuri side of the river is seen the Ivanhoe Mine tramway"

¹³³ <https://paperspast.natlib.govt.nz/newspapers/NZH18850904.2.49>

New Zealand Herald, Volume XXII, Issue 7424, 4 September 1885, Page 6

¹³⁴ <https://paperspast.natlib.govt.nz/newspapers/THS18840721.2.12>

Thames Star, Volume XV, Issue 4845, 21 July 1884, Page 2

and it was the hope in a short time that sufficient gold would be obtained to pay off all liabilities and place the company in a good financial position.¹³⁵

2 August

The Karangahake deputation asked for a portion of the gold duty as a subsidy for a tramway from the **Sir Walter Scott** mine to the battery, the cost of which would be between £200 and £300. In this case the Committee took the Government policy as their basis, and recommended that goldfields revenue to the extent of two thirds of the cost of the tramway be allowed to the company, the tramway to be open to the use of other mines at a tariff approved of by the Council. The works in both instances are to be carried out in a manner approved by the Council's Engineer. The committee have treated both deputations in a liberal spirit, and the companies should lose no time in getting the works in hand.¹³⁶

Tramway costs could be subsidized, and tramways open to the use of other mines at a tariff. Sir Walter Scott is on the Waitawheta side of Taukani. Is this tramway showing on the 1885 images?

19 August

The County Council to-day resolved to purchase a boat to replace the one washed away on Saturday last from the Karangahake ferry, Ohinemuri.¹³⁷

1 September

Crown Gold-mining Company (Karangahake).—The mine manager reports that he has fixed windlas [windlass] and laid skids up to the road, and is only now waiting on the battery which is engaged crushing for Sir Walter Scott, when he will start upon the Company's stone in a few days.¹³⁸

So dragging ore up to the County Road, their only option. We should be able to see where this happened. Is this where the shaft is very close to the road? Yes. It shows on LiDAR, between the tramway at the top of the later incline, and the County Road. The No. 1 level (later re-numbered to No. 7a? level) is a little below the County Road. No. 2 Level (later No. 6a?) further down slope. The Crown Company effectively made their way down the hill over time. No. 6 Level is the River Level, established in 1892. When Railey's Battery was established, a self-acting incline was constructed (well, only half of the incline was built) to bring ore down from these upper levels to the battery. Although the incline was never used for Railey's Battery, it was later used when the Crown Company built their own battery on the Railey site.

5 September

Water race applications.

<https://paperspast.natlib.govt.nz/newspapers/THS18840905.2.22.1>

Thames Star, Volume XV, Issue 4885, 5 September 1884, Page 4

¹³⁵ <https://paperspast.natlib.govt.nz/newspapers/NZH18840801.2.38>

New Zealand Herald, Volume XXI, Issue 7085, 1 August 1884, Page 6

¹³⁶ <https://paperspast.natlib.govt.nz/newspapers/THS18840802.2.12>

Thames Star, Volume XV, Issue 4856, 2 August 1884, Page 2

¹³⁷ <https://paperspast.natlib.govt.nz/newspapers/THS18840819.2.8>

Thames Star, Volume XV, Issue 4870, 19 August 1884, Page 2

¹³⁸ <https://paperspast.natlib.govt.nz/newspapers/AS18840901.2.31>

Auckland Star, Volume XXVI, Issue 4461, 1 September 1884, Page 4

20 October

First mention of Woodstock.

There is great confidence in the Karangahake district, but capital and energy will be required to develop it. The return from the Woodstock, although the gold was only worth 35s an ounce, left the proprietors a handsome profit. Two or three mines seldom heard of are prospecting with encouraging results. The district will not go ahead until there are batteries close to other mines. Owing to the roughness of the country it would never pay to send average quartz to the Hauraki battery from several of the claims. The Sir Walter Scott and Ivanhoe have a very pretty quarrel fomenting, the latter complaining of encroachments by the former.¹³⁹

10 November

The Thames Advertiser says that the lawsuit between the Ivanhoe and the Sir Walter Scott companies—in which the former claimed £500 compensation for encroachment on their ground—has been amicably settled between the respective directorates, and will not, therefore, be submitted to the arbitrament of the Warden. We understand that the basis of settlement is that the defendants have agreed to pay £500 in satisfaction of the claim, the sum being arrived at according to the quantity of stuff alleged to have been removed, estimated to have been worth 3ozs. of gold per ton.¹⁴⁰

18 November

Karangahake is well spoken of. The new road from Owaharoa to Mackaytown will be finished about the middle of December, and that will reduce the distance between this and Tauranga, and provide a much easier road for travellers, as it will avoid the dreadful bush track.

This sounds like Butlers Track. It was completed June 1885.¹⁴¹

The Ohinemuri River is to be spanned by a suspension bridge from the new made road to Karangahake, and so do away with the existing arrangement of punt and wire rope. Sundry additions to houses in the neighbourhood are being proceeded with, showing some signs of activity in the building trade.¹⁴²

First mention of a suspension bridge.

Summary 1884

Ivanhoe on the Ohinemuri side of Taukani, Sir Walter Scott on Waitawheta side of Taukani, with Argentine near the confluence of the two rivers. The Karangahake above the Waitawheta true left bank, on the Karangahake Spur, with the Hauraki south of them. On the Plum Pudding (or Woodstock Blow) is Woodstock.

¹³⁹ <https://paperspast.natlib.govt.nz/newspapers/NZH18841020.2.29>

New Zealand Herald, Volume XXI, Issue 7153, 20 October 1884, Page 5

¹⁴⁰ <https://paperspast.natlib.govt.nz/newspapers/NZH18841110.2.16>

New Zealand Herald, Volume XXI, Issue 7171, 10 November 1884, Page 4

¹⁴¹ <https://paperspast.natlib.govt.nz/newspapers/THA18850604.2.10>

Thames Advertiser, Volume XVI, Issue 5185, 4 June 1885, Page 3

¹⁴² <https://paperspast.natlib.govt.nz/newspapers/BOPT18841118.2.16>

Bay of Plenty Times, Volume XIII, Issue 1765, 18 November 1884, Page 4

In August 1882 work starts to construct a ground tramway on the true left bank of the Waitawheta River from the Hauraki Battery, and from the end of this a cableway up to the Hauraki workings. This ground tramway is the start of the Crown walking track of today. By end August 1883 this is operational.

The County Road, and maybe Scotchman's Gully, are constructed.

By early May 1884 Sir Walter Scott have a chute and tramway on the Waitawheta side of Taukani Ridge. July 1884 the Ivanhoe Company intend erecting a cableway, but may already have a chute and ground tramway, on the Ohinemuri side of Taukani.

The Woodstock Company are operating on, or to the east of, the Woodstock Blow (Plum Pudding). In 1885 they will construct connections with the Hauraki wire tram, and hence to Battery Flat where they will commence construction of the La Monte furnace (opening in late 1885).

Before August. Ivanhoe G. M. C. construct a tramway and cableway at a cost of about £600, on true left bank of Ohinemuri River.¹⁴³

A bridge over the Ohinemuri River is proposed, it is completed mid 1885.

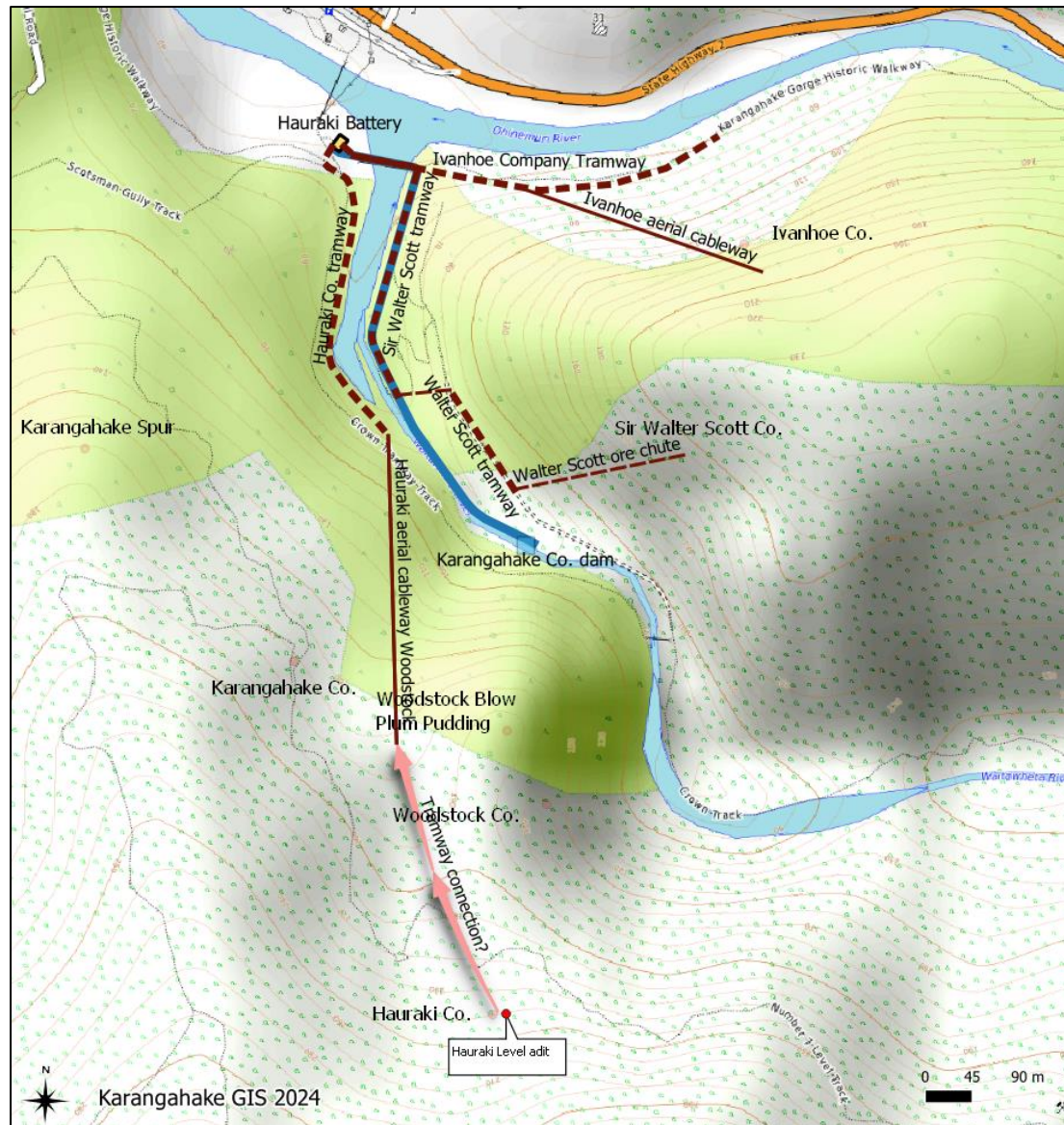
Tests as high as 800oz. of silver to the ton have been obtained from some ore.¹⁴⁴ A way to successfully treat this ore is urgently required.

¹⁴³ <https://paperspast.natlib.govt.nz/newspapers/NZH18840801.2.38>

New Zealand Herald, Volume XXI, Issue 7085, 1 August 1884, Page 6

¹⁴⁴ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1885-I.2.1.4.3>

THE GOLDFIELDS OF NEW ZEALAND (REPORT ON), Appendix to the Journals of the House of Representatives, 1885 Session I, C-02



This map attempts to show the infrastructure described so far (roughly end 1884).

Hauraki Battery (was Karangahake battery, same building) showing Hauraki Co. tramway (303m) and aerial cableway on true left bank of Waitawheta River, the Sir Walter Scott tramways and chutes on the true right bank, and the Ivanhoe tramway and cableway on the true left bank of the Ohinemuri River.

The Sir Walter Scott tramway is shown here, as it appears to be shown in the 1885 lithograph image, on top of the water race. Or maybe it is beside the flume?

The positioning of the Ivanhoe aerial cableway (244m), the Sir Walter Scott infrastructure and Hauraki aerial cable and tramway connection are all uncertain.

AJHR 1885

Published 1885, but largely reporting on 1884.

THE GOLDFIELDS OF NEW ZEALAND (REPORT ON).
APPENDIX TO THE JOURNALS OF THE HOUSE OF
REPRESENTATIVES, 1885 SESSION I, C-02¹⁴⁵

¹⁴⁵ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1885-I.2.1.4.3>

THE GOLDFIELDS OF NEW ZEALAND (REPORT ON)., Appendix to the Journals of the House of Representatives, 1885 Session I, C-02

REPORT ON GOLD FIELDS, ETC., VISITED, AND WORKS IN PROGRESS ON GOLD FIELDS.

Mr. H. A. Gordon, Inspecting Engineer,

to the Under-Secretary, Mines Department, Wellington. Sir, — Mines Department, Wellington, 30th May, 1885.

Page 1. Bridge over the Ohinemuri River, Karangahake. —This work is in course of construction. It was originally intended to construct a bridge for passengers; but, subsequently, it was deemed advisable to make it suitable for horse traffic, and a portion of the subsidy authorised for the Karangahake track was appropriated to do this. The estimated cost of the bridge with approaches is £416.

AUCKLAND GOLD FIELDS.

No. 1. Mr. Warden Kenrick

to the Under-Secretary for Gold Fields. Sir, — Warden's Office, Thames, 15th May, 1885.

Page 28. 10. At Karangahake, in the Ohinemuri District, some very important "finds" have been made and good, even rich, yields obtained. As yet it cannot be said that any of the reefs discovered and opened upon have been proved—the work, with two or three exceptions, having been confined to the surface levels here as elsewhere. The difficulty of transit from mine to battery adds much to the expense of crushing. I have no hesitation in saying that a good and extensive field exists in this locality, and that in the near future a considerable return of gold may be expected. To work this district profitably, I believe it will be found necessary to erect a battery or batteries in the Waitawheta Creek, where at all times a good supply of water may be depended upon. The quartz would then be conveyed from the various workings on the hill by means of wire tramways to the battery.

11. A curious feature of the gold won in this part of the district is the very large percentage of silver. A parcel of gold recently sold to the Bank of New Zealand was valued at £1 7s. per oz. only. It is certain that, to obtain the full value of the precious metals from this stone, —it must be treated as silver ore, —which, indeed, it may fairly be termed. This is now under consideration, and it is probable that steps will be taken before long to obtain the necessary machinery. Tests as high as 800oz. of silver to the ton have been obtained from some of this stone.

16. Both at the Aroha and Thames the falling-off in the yield of gold has directed attention to the necessity of employing some better gold-saving appliances than those now in use. The fineness of the gold and the presence of silver and base minerals in large quantities have, for years past, caused the loss of a large percentage of gold from the stone crushed. Hitherto it has been deemed impracticable to prevent this loss, but attention has recently been directed to certain gold-saving appliances used both in America and in Australia, by which it has been proved to be possible to save from 90 to 95 per cent, of the gold in the stone, at a cost which would leave a margin of profit more or less large.

17. The introduction of any such appliances to this field would revolutionize gold-mining. Even if the gold won did no more than pay the cost, it would

enable a very large extent of country at present idle to be worked. So long as a claim will pay working expenses, shareholders willingly wait for years in hopes of a dividend. If the claim has to be worked on calls, its existence is soon terminated. If 90 per cent, of the gold could be saved from the large reefs at Te Aroha and elsewhere on this goldfield, many hundreds of men would at once find employment. With this yield, and the known value of the stone, working expenses would be assured, and a large number of claims now idle would recommence work.

18. I believe that no better method of revivifying a languishing industry could be adopted than by offering a large bonus to the owners or patentees of any one of the new gold-saving appliances professing to save large percentages of fine gold for its successful introduction to the goldfields of New Zealand. I believe it to be admitted that Lamont's and other processes can save the gold; but it is doubtful if the cost leaves any margin of profit, at any rate on poor-grade stone.

Page 36. Karangahake District. —In my last report I mentioned that "very little work had been done in this portion of the field, but from one of the mines there, the Sir Walter Scott, very encouraging returns had been obtained from a small crushing." But this small crushing led to great results, and will lead to greater still —where there were only a few miners at that time there are now between 50 and 60. Without going too much into details, the Sir Walter Scott reef was followed down into the Ivanhoe. In both of these it averaged 5ft. thick, and went about 1½oz. to the ton. From thence it has been traced to the westward across the creek and again picked up on the ground now known as the Woodstock. Here the reef was about the same thickness, and went 2oz. to the ton, but the value was reduced about half the ordinary price as it contains about 62 per cent, of silver. In addition to this on the western side of the creek there have been two reefs found on the Golden Crown ground, averaging 4ft. in thickness, the crushings from which have varied from 2 to 7oz. per ton. The Hidden Treasure's reef is 18in. thick, the last crushing from which went 5oz. to the ton. The Martha reef is 3ft. 6in. thick and goes 3oz. to the ton. But the great difficulty in a mountainous country like this is to get a road, or ways and means of conveying quartz to the battery, but where quartz is payable these difficulties will, in time, be overcome here as elsewhere. The total quantity of quartz crushed in Hauraki South for the year is 31,495 tons 1,937lbs. for a return of 37,705oz. 1dwt. 7grs. melted gold.

I have, &c, James M. McLaren, Mining Inspector.

MINES STATEMENT BY THE MINISTER OF MINES, THE HON. W. J. M. LARNACH, C.M.G. 24th JULY, 1885.

APPENDIX TO THE JOURNALS OF THE HOUSE OF REPRESENTATIVES, 1885 SESSION I, C-06¹⁴⁶

Page 14. Karangahake. —I then rode to the reefs at Karangahake and inspected the works, battery, and water-supply. I met a number of miners,

¹⁴⁶ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1885-I.2.1.4.11>

MINES STATEMENT BY THE MINISTER OF MINES, THE HON. W. J. M. LARNACH, C.M.G. 24th JULY, 1885., Appendix to the Journals of the House of Representatives, 1885 Session I, C-06

who, with good reason, complained bitterly of the want of a road or tramway to carry their stone to the battery for crushing. They also asked that the mining laws under which they were governed should be assimilated to those in force in other parts of the colony, and that they should be charged a more moderate rental. They further asked that the freeholds of their agricultural sections should be granted to them for a small payment. Considering the quality of the chief portion of the land which I saw and examined, and the labour already expended by the occupiers upon their holdings, I think the freeholds ought to be granted to these worthy pioneers for a very small payment. I crossed over the hills to the main road to Te Aroha, and arrived there that evening.

1885

27 January

The Hauraki battery plant is now in first-class working order, having undergone thorough overhaul since the holidays. The dam, as well as the head of the water race, which have always been a source of trouble to the manager during flood time, have been considerably strengthened by means of a stone wall built right across, the face of the one and, both sides of the other, so that nothing short of a perfect deluge will ever effect either of those two points again.¹⁴⁷

More overhauling of the battery.

Stones have been placed in front of the dam, effectively to armour the wooden structure. Thus only the very top edge of the woodwork is vulnerable during flood. These stones can be seen in many of the photographs of this dam.

10 February

A sample of stone from a 3-feet reef in the Woodstock mine, Karangahake, was recently tested at the Government Assay Office, Melbourne, and yielded at the rate of 460ozs silver per ton. The proprietors of the Woodstock have now determined to send a few tons to Swansea, Wales, for treatment there, and should the result be satisfactory, other parcels will no doubt follow.¹⁴⁸

21 February

The next claim visited was the Woodstock, which is one of the few mines in the field where anything like permanent work is being done. The low level, affording 75 feet of backs on the reef, has now reached the point where it will be intersected by the winze, which will attain the required depth in about ten days' time. A new tramway, connecting the present face of the low level with the Hauraki company's wire tram, is now in course of construction, so that when stoping operations are in progress, there will be no difficulty attending the transmission of crushing dirt to the battery.¹⁴⁹

9 March

Woodstock.- The tramway and hopper connecting this mine with the Hauraki battery company's wire tramway will be complete in every particular about Wednesday next.¹⁵⁰

27 March

The whole of the claims, excepting the Golden Crown, located on the western side of the Waitawheta river are owned and worked by parties of men whose capital consists almost entirely of muscle, pluck, and perseverance. These qualities are all that could be desired for the development of the mines if the

¹⁴⁷ <https://paperspast.natlib.govt.nz/newspapers/THA18850127.2.7>

Thames Advertiser, Volume XVI, Issue 5084, 27 January 1885, Page 2

¹⁴⁸ <https://paperspast.natlib.govt.nz/newspapers/THS18850210.2.8>

Thames Star, Volume XVI, Issue 5017, 10 February 1885, Page 2

¹⁴⁹ <https://paperspast.natlib.govt.nz/newspapers/THA18850221.2.6>

Thames Advertiser, Volume XVI, Issue 5099, 21 February 1885, Page 3

¹⁵⁰ <https://paperspast.natlib.govt.nz/newspapers/THA18850309.2.5>

Thames Advertiser, Volume XVI, Issue 5112, 9 March 1885, Page 2

latter were situate within easy distance of, or connected by tramway with a battery where the quartz could be treated at a small cost. Under present circumstances, however, the energy and enterprise shown by the parties of men in question will be valueless alike to themselves and the district, unless prompt assistance be rendered in the matter of providing a cheap mode of transit for quartz to the battery. In order to do this it will be necessary to substitute iron rails for the present dilapidated wooden ones on the old Hauraki company's ground sections of tramway; furnish the aerial section of same with a new wire rope, and, from thence on through the mines, make the present County track practicable for dray traffic, or put a tramway down along its line, which could all be done for a comparatively small outlay. But where is the money to come from? The miners selves have not the means, nor can they get any capital to assist them in carrying out the work.¹⁵¹

“substitute iron rails for the present dilapidated wooden ones on the old Hauraki company's ground sections of tramway”. This confirms wooden rails.

The wire rope of the cableway needs to be replaced. It will be soon.

1 April

A bridge has been erected on the road to Karangahake [first suspension bridge?]; the track from the battery to the Ivanhoe mine requires widening and grading; it was originally made by the miners, and nothing at all done by the County [is this the track that angles up the side of Taukani, as first seen in the 1885 lithographs?]. The road between the Golden Crown and the Martha mines is too sharp at some of the bends to admit of a sledge being taken round, and as the Martha and Hidden Treasure people are taking out quartz, they ask that the road be improved, so that they can get their quartz to the battery [the County Road on Karangahake mountain?]. A sum of £15 would be sufficient for this purpose.¹⁵²

29 April

An accident which might have been attended by serious consequences happened at the Woodstock mine, Karangahake, on Saturday last. Messrs Liddell and Shepherd were at work getting timber for the mine, some 200 feet below the mullock tip, when one of the shareholders sent a truck of quartz boulders over the tip head. Owing to the precipitous nature of the country Liddell was unable to get out of the way, and a boulder striking him fair in the face knocked him senseless.

When picked up his face presented a horrible appearance, two deep gashes, one and one-and-a-half inches in length respectively, were inflicted on his forehead. Dr Cooper, of Te Aroha, reached Karangahake in less than four hours, and dressed the wounds, which he pronounced not to be dangerous, but Liddell, who is still suffering from the shock to the system, will be confined to his bed for some time to come.¹⁵³

¹⁵¹ <https://paperspast.natlib.govt.nz/newspapers/THA18850327.2.9>

Thames Advertiser, Volume XVI, Issue 5128, 27 March 1885, Page 3

¹⁵² <https://paperspast.natlib.govt.nz/newspapers/THS18850401.2.20>

Thames Star, Volume XVI, Issue 5060, 1 April 1885, Page 3

¹⁵³ <https://paperspast.natlib.govt.nz/newspapers/THA18850429.2.19>

Thames Advertiser, Volume XVI, Issue 5156, 29 April 1885, Page 3

4 May

Ivanhoe. At the battery eight head of stampers are employed sixteen hours per day, and the crushing is shaping for an average return.¹⁵⁴

Two times four stampers per mortar.

19 May

Woodstock — The excavations for the tramway to connect the new low level with the Hauraki wire tram will be complete in a few days¹⁵⁵

This up near the top of the Plum Pudding, presumably on the western side. Where is their Low Level? They intend to use the Hauraki wire tram. It is not clear whether they ever do, or make a new wire.

23 May

Mr John D. La Monte, patentee of "The Water Jacket Air Blast Smelting Furnace," is about to visit this goldfield. The quartz, by this process, is reduced to a fluid state, and the gold melted out under conditions which prevent its loss. The fuel required is comparatively limited, the sulphur, &c, in the quartz supplying much of the reducing heat required. Upon an average, it is stated, about 95 per cent of gold in the stone is saved by this process, and the cost of working comparatively small.

Hmm. Later we'll see how that goes.

The quartz which has been sent to Sydney for treatment taken from the Ivanhoe, Woodstock, Crown (Karangahake), and Moa mines (Te Aroha), will be tested by the furnace process at present being established by Messrs Hudson Brothers, at Piermont. The stuff is said to be much richer in silver than in gold, and the silver cannot be saved by any of the processes here. A local gentleman who takes a deep interest in mining is prepared to wager a new hat that one of the samples will give 50 ounces of bullion to the ton.¹⁵⁶

30 May**MR LAMONTE'S GOLD SAVING PROCESS.**

An important meeting was held at the Chamber of Commerce, in Auckland, on Thursday evening to take into consideration the best means of bringing to a practical issue the results of Mr LaMonte's enquiries, and of the proposals he was willing to submit to them for introducing his process into the goldfields of this and adjoining districts. There was a large attendance of those interested in mining present, and Mr J. Reid, President of the Chamber, took the chair.

Mr Saunders read the following draft: - "Form a company of say 60,000 shares, of £1 each. I will deed to such company my Nevada Water Jacket Smelter (open jackets), and my Nevada Copper Smelter (open jacket). The Pacific Galena Smelter and the Pacific Copper Smelter also, my process for separating the gold and silver from the base bullion, and all plans and specifications for the same. Same as is in use in New South Wales. I will-

¹⁵⁴ <https://paperspast.natlib.govt.nz/newspapers/THA18850504.2.8>

Thames Advertiser, Volume XVI, Issue 5160, 4 May 1885, Page 3

¹⁵⁵ <https://paperspast.natlib.govt.nz/newspapers/THA18850519.2.6>

Thames Advertiser, Volume XXIII, Issue 5173, 19 May 1885, Page 3

¹⁵⁶ <https://paperspast.natlib.govt.nz/newspapers/TAN18850523.2.3>

Te Aroha News, Volume II, Issue 103, 23 May 1885, Page 2

furnish and deliver—at Auckland one 30 ton of smelting plant complete—ready to set up, one double refinery, also ready to set up, in fact all of the machinery complete for the plant, and will furnish skilled labour to erect and start the same, running it say 30 days successfully; then the skilled labourers to remain, if wanted, with the company to erect and start other works. Such patents and such plant to be delivered to the company at Auckland; provided that a cash consideration of £10,000 is paid in three instalments of like amounts, extending over a period of six years from signing the same —£1000 cash down, and 8000 shares of the company's stock fully paid up. This would give us for the patents a net sum of about; £6000 only, with success guaranteed by us. - Yours truly, John D. LaMonte."¹⁵⁷

Success guaranteed!

3 June

Arrangements have at last been concluded between Mr La Monte, of gold-saving fame, and a syndicate composed of Messrs H. Campbell, D. J. McLeod, J. Reid, Alex Saunders, A. Porter, Wilsons and Horton, W. Fraser, J. M. Lennox, R. K. Davis, G. Aickin, O. C. McMillan, and LaMonte. The agreement is that a furnace is to be erected at Thames within four months, and run for sixty days at the expense of the inventor. The terms fixed are a sum of £10,000, to be paid to Mr LaMonte as follows:—£1000 to be paid down, and if results prove successful, the balance of £9000 to be paid; in addition to this, if the anticipations of those interested prove correct, a company will be formed, and the patentee is to receive one-fifteenth of the number of shares in it in paid-up scrip and one-fifteenth in contributing shares. The syndicate become possessed of the whole of the rights in the colony. Mr R. K. Davis, one of the syndicate, undertook, with the owners of the Woodstock mine, Karangahake, to expend £4000 in erecting a furnace and connecting it with the mine; in consideration of this one half the mine is given, and if the results are profitable, the £4000 is to be made a first charge on proceeds. A royalty of 4s per ton is to be paid to the syndicate for the use of the patent.¹⁵⁸

Improved Crushing Appliances.- The proprietors of the Sutro claim, Karangahake, have erected a Baxter stone-crusher, Mackay amalgamating paw [pan], and a settler in connection with the Hauraki battery, and by these means they expect to save 20 per cent. more gold and silver than is extracted by the ordinary crushing process.¹⁵⁹

4 June

The proprietors of the Woodstock claim, Karangahake, have lost no time in setting in motion the arrangements for the erection of the LaMonte smelting furnace. Application was made at the Warden's office yesterday for a machine site on the flat near the Hauraki company's battery, and also for the right to the necessary water-race, from which power will be taken for driving the blast

¹⁵⁷ <https://paperspast.natlib.govt.nz/newspapers/THA18850530.2.10>

Thames Advertiser, Volume XVI, Issue 5181, 30 May 1885, Page 3

¹⁵⁸ <https://paperspast.natlib.govt.nz/newspapers/THS18850603.2.7>

Thames Star, Volume XVI, Issue 5110, 3 June 1885, Page 2

¹⁵⁹ <https://paperspast.natlib.govt.nz/newspapers/AS18850603.2.19>

Auckland Star, Volume XXVI, Issue 124, 3 June 1885, Page 2

connected with the furnace. It may be mentioned that Mr Davis, who has undertaken the erection of the plant, receives one-half the ownership of the mine, and in the event of the venture proving successful, his expenditure of £4000 will be recouped from the profits, he, however, accepting the full risk of failure.¹⁶⁰

With reference to Butler's Mackaytown-Owharoa road deviation contract, the Engineer reported that the work had been fairly carried out, and as the contractor had lost largely, he recommended that it be taken over as it now stands.¹⁶¹

This is Butler's track.



“Karangahake before settlement” Staples collection.

This is a view looking up the Ohinemuri River from the Mackaytown area. On the left is the newly completed Butler's Track, and in the right foreground the river flat where the school of mines and bowling greens will be established in the future. The trees in the middle distance obscure any view of buildings at Battery Flat, and these trees will soon disappear. No Irishtown or River Road settlement yet.

Taukani Ridge and the Woodstock Blow are devoid of trees, and there is some evidence of mining activity.

Date 1885-6?

Karangahake suspension bridge

Karangahake suspension bridge completed.¹⁶² This does not show in the lithographs, therefore they are earlier.

¹⁶⁰ <https://paperspast.natlib.govt.nz/newspapers/THA18850604.2.6>

Thames Advertiser, Volume XVI, Issue 5185, 4 June 1885, Page 2

¹⁶¹ <https://paperspast.natlib.govt.nz/newspapers/THA18850604.2.10>

Thames Advertiser, Volume XVI, Issue 5185, 4 June 1885, Page 3

¹⁶² <https://paperspast.natlib.govt.nz/newspapers/THA18850604.2.10>

Thames Advertiser, Volume XVI, Issue 5185, 4 June 1885, Page 3

The bridge is for foot and horse traffic; no vehicles!

La Monte Furnace

6 June

We are informed that Mr R. K. Davis will shortly call for tenders for the carting of about 300 tons of material from Paeroa to Karangahake to be used in the construction of the smelter now shortly to be erected there on Mr La Monte's principle.¹⁶³

8 June

KARANGAHAKE

Ivanhoe...At the battery there are four head of stampers running twelve hours per day upon crushing-dirt from different parts of the mine, and the show on the plates would indicate a payable return.

Woodstock. The crushing that is now being passed through the Hauraki battery for this mine is shaping for an all round return of 2ozs per ton...

The furnace that is to be built in connection with the mine will be in full blast within six months from date, and meantime attention will be given to driving the different levels and otherwise opening up the mine so as to keep the smelting plant fully employed from the start...

Mr La Monte guarantees 95 per cent. of the assay value of the stone...

Martha: The County track from this mine to the Hauraki Company's tramway has been sufficiently improved to admit of a trolley being used upon it, and no difficulty will be experienced in forwarding crushing dirt to the battery, though the mode of transit is costly in the extreme.¹⁶⁴

9 June

Davis has gone to Karangahake to commence the erection of a La Monte furnace.¹⁶⁵

13 June

Re Woodstock mine, Karangahake. A sample of stone tested by La Monte contained £30 worth of bullion per ton, as against fifty shillings' worth usually obtained by the battery process.¹⁶⁶

22 June

It has been more than suspected that a very large percentage of gold was being lost by the gold-saving processes at present in use. A Mr. La Monte, of California, recently visited Auckland, and has succeeded in impressing upon the minds of those interested in mining that what has hitherto been taken for granted, namely, that perhaps half the gold is lost in treatment, is a fact. But he

¹⁶³ <https://paperspast.natlib.govt.nz/newspapers/TAN18850606.2.3.1>

Te Aroha News, Volume III, Issue 105, 6 June 1885, Page 2

¹⁶⁴ <https://paperspast.natlib.govt.nz/newspapers/THA18850608.2.10>

Thames Advertiser, Volume XVI, Issue 5188, 8 June 1885, Page 3

¹⁶⁵ <https://paperspast.natlib.govt.nz/newspapers/AS18850609.2.28>

Auckland Star, Volume XXVI, Issue 129, 9 June 1885, Page 2

¹⁶⁶ <https://paperspast.natlib.govt.nz/newspapers/TAN18850613.2.3>

Te Aroha News, Volume III, Issue 106, 13 June 1885, Page 2

goes further and asserts that he can save by means of furnaces, 90 per cent, of the bank assay.

He took samples from various mines, tested them, and was satisfied that they were rich enough to pay for treatment. His smelting process is dearer than our present gold-saving appliances—crushing mills—the difference being, say, 10s against 30s or £2, but it is urged that the increase of cost will be much more than compensated by the extra gold saved. A syndicate has been formed in Auckland for the erection of furnaces, Mr. La Monte's terms partaking somewhat of the "no cure, no pay" principle. A furnace is to be erected on the Thames within a few months, and another at Karangahake, Ohinemuri.

The belief is prevalent that these furnaces will be of great benefit to Karangahake. Several of the mines in that district have excellent returns as far as quantity is concerned, but the gold is so poor running from 20s to 30s an ounce that it is not more than payable. In fact, silver may be said to predominate. Mr. La Monte was particularly struck with the quantity of silver in the lodes, and is thoroughly convinced that they will pay handsomely as silver mines, and for the treatment of silver the furnaces are admirably adapted.¹⁶⁷

24 June

Advertisement in the Thames Star: Application to form a water race.

Warden's Office, Thames, 24th June, 1885.

APPLICATION has been made by John McCombie to construct a Water Race for mining purposes, commencing at a point on the Ohinemuri River, about half-a-mile above the Hauraki Battery Site, and terminating at a point near La Monte's Furnace Site, as shown on the plan. The length of such race is half a mile or thereabouts [805 m], and its intended course is south west. The mean breadth and depth of such race is 4 feet by 2 feet; it is capable of carrying ten sluice heads of water, and the number of sluice heads, of forty inches each, which it is proposed to appropriate, is ten.¹⁶⁸

Also in the Thames Star, same issue:

The Furnace. Three hundred tons of machinery, &c., in connection with Mr R. K Davis' furnace, is to be carted from Paeroa to Karangahake.

To you, readers, this will not appear to be such a difficulty as some here imagine. But let us picture to ourselves teams of horses and drays laden with machinery, in the depth of winter, over a bush road for say five miles, metalled 2½ inches deep, and a width of 8 feet for one half of the distance, and then reaching a river over which they must go with water covering the bottom of the dray. And then commences the unparliamentary language, for the tug of war commences, and it is up, up, and up they must go, for they must go up before they can go down. And this up continues for about one mile or more, and after reaching the top of the hill the drays have to be unloaded, and

¹⁶⁷ <https://paperspast.natlib.govt.nz/newspapers/NZH18850622.2.39>

New Zealand Herald, Volume XXII, Issue 7360, 22 June 1885, Page 6

¹⁶⁸ <https://paperspast.natlib.govt.nz/newspapers/THS18850624.2.20.3>

Thames Star, Volume XVI, Issue 5128, 24 June 1885, Page 3

sledges must then do the remainder, for it is down, down to the same river they have already crossed before ascending.¹⁶⁹

The description given here covers the road from Paeroa to Mackaytown, crossing the Ohinemuri at the ford, up the newly formed County Road to above Battery Flat, and then lowered down the very steep slope to Battery Flat (via the early sled track?). A self-acting incline is to be constructed to meet this purpose.

This “story” is somewhat deflated by the correspondent for the Thames Advertiser (spoilsport).¹⁷⁰ It is not reproduced here.

25 June

Ivanhoe.—The low level is now being driven south along the course of the reef, which measures about four feet in thickness, and is all composed of first-class crushing dirt. The tramway tunnel that is being driven to connect the low level workings with the wire tramway ought to be completed about the end of the week, and then the manager will be in a position to furnish the battery with a continuous supply of crushing dirt.¹⁷¹

This tunnel leads to the cliff edge where the cableway starts. It can be visited today.

27 June

The proprietors of the Woodstock claim, Karangahake, have lost no time in setting in motion the arrangements for the erection of the La Monte smelting furnace. Application has been made at the Warden's office for a machine site on the flat near the Hauraki Company's battery, and also for the right to the necessary water-race, from which power will be taken for driving the blast connected with the furnace. It may be mentioned that Mr Davis, who has undertaken the erection of the plant, receive one half of the ownership of the mine, and in the event of the venture proving successful, his expenditure of £4000 will be recouped from the profits, he, however, accepting the full risk of failure.¹⁷²

29 June

Seeing that the Woodstock mine is now attracting a considerable amount of public attention, a brief description of the same may not prove uninteresting to the mining section of your readers. The Woodstock; which is held under lease embraces an area of eleven acres, or thirty-three men's ground. There are only eighteen shares allotted, however, and of these Mr Davis received nine as a bonus for supplying the capital necessary to cover the cost of erecting a La Monte furnace, the other nine shares being retained by the original shareholders.

This mine is located upon a bald bluff on the western bank of the Waitawheta Stream [the Plum Pudding or Woodstock Blow], and the configuration of the

¹⁶⁹ <https://paperspast.natlib.govt.nz/newspapers/THS18850624.2.18>

Thames Star, Volume XVI, Issue 5128, 24 June 1885, Page 3

¹⁷⁰ <https://paperspast.natlib.govt.nz/newspapers/THA18850630.2.9>

Thames Advertiser, Volume XVI, Issue 5207, 30 June 1885, Page 3

¹⁷¹ <https://paperspast.natlib.govt.nz/newspapers/THA18850625.2.8>

Thames Advertiser, Volume XVI, Issue 5203, 25 June 1885, Page 3

¹⁷² <https://paperspast.natlib.govt.nz/newspapers/OW18850627.2.41>

Otago Witness, Issue 1753, 27 June 1885, Page 19

country contained within its boundaries is such as to afford fully 500 feet of backs. There are two parallel lodes, averaging four feet and six feet in thickness respectively, running throughout the whole length of the ground, and both have been proved and found to contain large percentages of gold and silver the latter preponderating. Stone from these reefs treated by Mr La Monte, in Auckland, assayed from £30 to £60 worth of bullion to the ton. The samples assayed from No. 1 reef, 6 feet thick, were taken by Mr La Monte, himself, from the tip head, where some hundreds of tons of quartz, broken out from the reef whilst driving the level, were thrown away by the shareholders who did not consider it sufficiently rich in gold to pay them for subjecting to the battery treatment and, like the shareholders in the celebrated Comstock mine, California, they knew nothing and cared less about the metal called "silver."

Mr La Monte's visit to the district, however, opened, their eyes to the fact that mining for silver will pay as well, if not better, than mining for gold and I have no doubt that their quartz which was pitched over the tip head as being of no further value, will be amongst the first parcel to be passed through the new furnace.¹⁷³

23 July

During the past week the miners at Karangahake have been almost completely isolated, and travellers experienced no end of difficulty in reaching that place. The ferry boat at Mackaytown is useless for want of a new rope to replace the old one, which was carried away by the last fresh, and although there is a bridge over the river at the Hauraki battery site, there is nothing in the shape of a road connecting it with the main line, so that it is practically useless as a means of transport across the river. A few days since, I believe, Government granted the sum of £380 for the purpose of making the road in question, and it is to be hoped that no time will now be lost in carrying out the work of construction.¹⁷⁴

Although a bridge over the Ohinemuri has been erected at the Hauraki battery site, there is yet no road connection to Mackaytown.

31 July

Tenders advertised for 15 chains (302 m) of rock siding for tramway, and for sleepers; RK Davis c/o McCombie¹⁷⁵.

This for the Woodstock furnace. Is this for the connection to the top of the Hauraki aerial tramway, or beside the river? The 4 September entry below would suggest it is for the tramway beside the river.

¹⁷³ <https://paperspast.natlib.govt.nz/newspapers/THA18850629.2.8>

Thames Advertiser, Volume XVI, Issue 5206, 29 June 1885, Page 3

¹⁷⁴ <https://paperspast.natlib.govt.nz/newspapers/THA18850723.2.11>

Thames Advertiser, Volume XVI, Issue 5227, 23 July 1885, Page 3

¹⁷⁵ <https://paperspast.natlib.govt.nz/newspapers/THA18850731.2.4.5>

Thames Advertiser, Volume XVI, Issue 5234, 31 July 1885, Page 2

Talisman Gold Mining Company, Limited formed

1 August

A meeting of the proprietors of the Talisman Licensed Holding, Karangahake, was held on Monday last at the office of Mr R. McDonald Scott, Insurance Buildings, Auckland. The holding was formed into a company, under the name of the Talisman Gold Mining Company, Limited to be registered under the Mining Companies Act, 1872, of shares 40,000 at 10s each, nil paid-up, with a nominal capital of £20,000. The following gentlemen were elected directors— viz., Messrs T. Morrin, C. C. McMillan, R. K. Davis, John Reid, C. B. Stone, and John McCombie. Mr R. McDonald Scott was appointed manager.¹⁷⁶

11 August

Owing to some laxity on the part of Mr Quinlan, contractor for conveying the material for the LaMonte furnace to Karangahake, the contract has been cancelled by Mr Davis and re-let to Mr Dickey, who has now got four teams of horses employed in carrying out the work. The second shipment of material for the furnace arrived here per cutter Sunderland on Tuesday last, and no time will be lost in conveying it to its destination.¹⁷⁷

Mr Dickey, contractor, and of Dickey's Flat fame? Presumably he held land beside the Waitawheta. There was also a Nicholl's Flat (William Nicholl) in a loop of the Ohinemuri just downstream of the masonry dam, and a Cumming's Flat downstream from Owaharoa (now bisected by SH 2), Wairere Flat where the Mackaytown ford was, Shepherd's Flat where the new Crown battery is built, of course Battery Flat, and more. A common way of describing a river "flat". Sadly, Dickey's Flat gets a variety of spellings now.

Ivanhoe -- Driving southwards upon the footwall of the reef, in the low level, was resumed last week. The connections between this level and the aerial section of the tramway will very soon be complete in every respect, after which the manager will start sending crushing dirt to the battery.¹⁷⁸

Woodstock.— Willett's and party, contractors for cutting and forming the horse grade section of tramway, are making good headway with the work, and will complete their section within the specified time. Milligan and party have, completed the formation of the self-acting section connecting the County road with the furnace site, and laying the sleepers and fastening the iron rails will be next in order. This tramway will be used as a mode of transport for material, &c., from the point of delivery by dray to the furnace site. Good progress is being made with the work of clearing and excavating for the furnace building as well as with the cutting and levelling for the water race fluming.¹⁷⁹

¹⁷⁶ <https://paperspast.natlib.govt.nz/newspapers/TAN18850801.2.3.1>

Te Aroha News, Volume III, Issue 113, 1 August 1885, Page 2

¹⁷⁷ <https://paperspast.natlib.govt.nz/newspapers/THA18850811.2.9>

Thames Advertiser, Volume XVI, Issue 5243, 11 August 1885, Page 3

¹⁷⁸ <https://paperspast.natlib.govt.nz/newspapers/THA18850811.2.9>

Thames Advertiser, Volume XVI, Issue 5243, 11 August 1885, Page 3

¹⁷⁹ <https://paperspast.natlib.govt.nz/newspapers/THA18850811.2.9>

Thames Advertiser, Volume XVI, Issue 5243, 11 August 1885, Page 3

The horse grade section is either on the Woodstock Blow, or beside the Waitawheta River (more likely?) (with a cableway in between), or both. If beside the Waitawheta, then presumably this is a repair/extension of the wooden railed Hauraki tramway completed c. August 1883. Water race for the furnace is from the Ohinemuri River.

Self-acting incline completed

This is the incline, on the slope behind the Woodstock furnace, to facilitate the movement of materials from the road at the top. It has been built by the Woodstock people. See description and image in the November clipping/s below.

Hauraki Battery becomes Ivanhoe Battery

17 August

Erection of Furnace. —Mr. R. K. Davis is making great progress with the erection of the furnace plant. Gangs of men are now busily engaged on formation of tramway to mine and water-race, and the carpenters are engaged in the erection of the building. Four team of horses are engaged carting out the material, and, although the roads are in a bad state, good progress is being made.

Ivanhoe. —The manager expects to have the new tramway completed and connection made with the low level in the course of a week or ten days. The low level will then be pushed ahead on the reef. At present he has only two men on, and the reef looks very well... The manager has also men at work upon the company's additional lease, the Victoria. This came into their hands through the purchase of the Hauraki plant, the ground being held for the Hauraki by Messrs. Hansen and Wick.¹⁸⁰

Thus the Hauraki battery is acquired by the Ivanhoe Company.

22 August

KARANGAHAKE SILVER LODES.

(From the Thames "Star.") Considerable interest was manifested in some tests of silver ore from the Karangahake, district of the Ohinemuri goldfields, which took place at the assay and smelting works of the Bank of New Zealand, Auckland. Amongst those present were a number of mining experts and gentlemen interested in the mining industry, and the tests made were conducted by Mr Burns, the assayer of the bank. Mr H. W. Shepherd had brought some ore from the Crown mine, Karangahake, and a rough sample from this was selected for the test. It showed little or no trace of value to the inexperienced eye. There were certain dark blotches, and these were said to contain silver. The first test was to calcine the stone, and then minute globules of metal could be found glistening on the broken surface. Then the stone was pounded in a mortar and put into the crucible with fluxes, and the result being treated in the cupal gave a residue in the shape of a nice button of silver weighing 13 grains. Roughly estimated, this is equal to a value of 1000 ounces to the ton, but as an accurate weight was not taken of the proportion of pounded debris put into the crucible, it is probable even more than this. Of course, as the assay value of the button has not been taken, it is impossible to say what proportion of gold it may contain.

¹⁸⁰ <https://paperspast.natlib.govt.nz/newspapers/NZH18850817.2.36>

New Zealand Herald, Volume XXII, Issue 7408, 17 August 1885, Page 6

Mr Shepherd informs us that the quartz he has brought to town is taken from a leader in the Crown mine about six inches thick, or rather from the surface outcrop of the leader, which is on top of a high bluff. There are several other lodes in the mine varying from six inches to six feet in width. He had previously made tests on his own account, and as the result of one which he made in the end of 1884, he has a bar of bullion weighing nearly 50zs, and valued about 17s an ounce. A small stone taken promiscuously from the tip head of one of the mines of Karangahake was calcined at the request of Mr J. W. Walker, and the display of metal was estimated by Mr Burns to be equal, at a very low valuation, to 800ozs to the ton.¹⁸¹

31 August

Kenilworth (Karangahake).—This claim is bounded on the north by the Woodstock, and is located on the same line of reef. A portion of the ground was held originally by the Hauraki Company, who expended a large sum of money in opening up what is known as the southern continuation of the Maria reef, and the new company will now get the benefit of that expenditure.¹⁸²

4 September

THE GOLDFIELDS.

THE UPPER COUNTRY.—KARANGAHAKE. (by a MINER)

This district, as your readers are aware, is very mountainous, and rugged in the extreme. This, although picturesque and highly attractive to the artist, is a source of difficulty to the miner. The place is difficult of access, the means of transit are few, and the roads precipitous and of the worst possible description.

Of the road between Paeroa and Karangahake, its state may be inferred from the fact that it requires a team of five or six horses to convey a load of 15cwt. Only one trip a day is possible, and the cost of carriage is £2 per ton. From Paeroa to the ford past Mackaytown the country is very level, and it should be no great engineering feat to lay off a cart road and maintain it in good order.

Mackaytown, some ten years ago, was much more known to fame than at present; now the only representative of civilisation is Carroll Nash's hotel. (Carroll's former whisky mill at the Thames is now the Conditional Immortality meeting house.) The host informed me that his house was so full that he could not afford me lodgings, so I had to push further ahead.

From Mackaytown the old road to Waitekauri, Owaharoa, Waihi, and Katikati branches off [Rahu Road? Or track to/via Waitekauri?]; but not feeling disposed to wade through a sea of black mud, with an excellent chance of getting stuck up to the ears therein, I preferred the new road [Around the bluff from Mackaytown?]. This road, although not open for horse or vehicular traffic because of the absence of bridges over tributary creeks and ravines, and of the presence of numerous landslips which occurred during last winter, is moderately passable for foot travellers.

¹⁸¹ <https://paperspast.natlib.govt.nz/newspapers/TT18850822.2.14>

Tuapeka Times, Volume XVIII, Issue 1173, 22 August 1885, Page 3

¹⁸² <https://paperspast.natlib.govt.nz/newspapers/NZH18850831.2.43>

New Zealand Herald, Volume XXII, Issue 7420, 31 August 1885, Page 6

Passing over the Ohinemuri river by means of the suspension bridge [recently opened] which spans it, the old Karangahake township is reached. The township is situated on a small flat, not more than two or three acres in extent. Its permanent buildings are the Ivanhoe battery, Shepherd's hotel, a new store just opened by Mr. Alexander Hogg, and the Woodstock furnace, in course of erection...¹⁸³

Hogg's Store opened

Note that the old Karangahake township is Battery Flat.

The La Monte furnace is here called the Woodstock furnace, the names seem interchangeable in the press reports. Maybe this sums it up: "Karangahake where the La Monte furnace is now being erected for the Woodstock shareholders"¹⁸⁴.

MINER continues:

Woodstock. —The furnace is being erected under the supervision of a gentleman named Hazlett, who is deserving of a meed of praise for the energy displayed and the excellent progress made, in spite of the vast difficulties encountered. At present the greatest drawback is the difficulty of getting material on to the ground, and timber especially is short just now. This is retarding the progress considerably. The frame of the building is up, and is roofed over with zinc. Its dimensions are 50 feet by 30 feet, and there is also a lean-to 14 feet by 20 feet which is intended for refining purposes.

Behind the furnace is a very steep self-acting tramway, three or four chains in length, connecting with the road. This will be used for conveying coke, lime, and all requisites to the furnace. At the other side is a tramway 24½ chains [493 m] long, running from the furnace to the hopper of the mine, the trucks of which carry a ton each. This tramway has been carried along a steep siding, and the cutting has just been completed. It skirts the southern side of the Waitawheta Creek. The hopper is connected with the mine by an aerial wire tramway 970 feet [296 m] in length. Of course water will be required, but of this, happily, an ample supply is available. An excellent natural dam, about two chains wide, has been found in the Ohinemuri River. A water-race from this dam, 145 chains [2917 m, error?] in length, will convey ten or twelve sluice heads to the furnace. From the head of the dam to the junction of the Waitawheta and Ohinemuri Rivers is 28 chains [563 m]. At this point (the junction) a bridge will be necessary to carry the flume across. The water-race will require some 7500 feet of timber. The fall of water from the dam will be about 40 feet, and a Pelton wheel is expected to generate about 40 h. p.

I have already stated that the country is precipitous, and of this no better illustration could be found than the Woodstock mine. Let one stand at the site of the proposed hoppers, and look upward at the seemingly almost perpendicular cliff, and the idea conveyed is that of a prodigious sugarloaf towering heavenward hundreds of feet overhead [the Woodstock Blow or Plum Pudding]. Upon leaving the furnace the workings of the mine are reached after an hour's stiff climbing. En route the camping ground of the

¹⁸³ <https://paperspast.natlib.govt.nz/newspapers/NZH18850904.2.49>

New Zealand Herald, Volume XXII, Issue 7424, 4 September 1885, Page 6

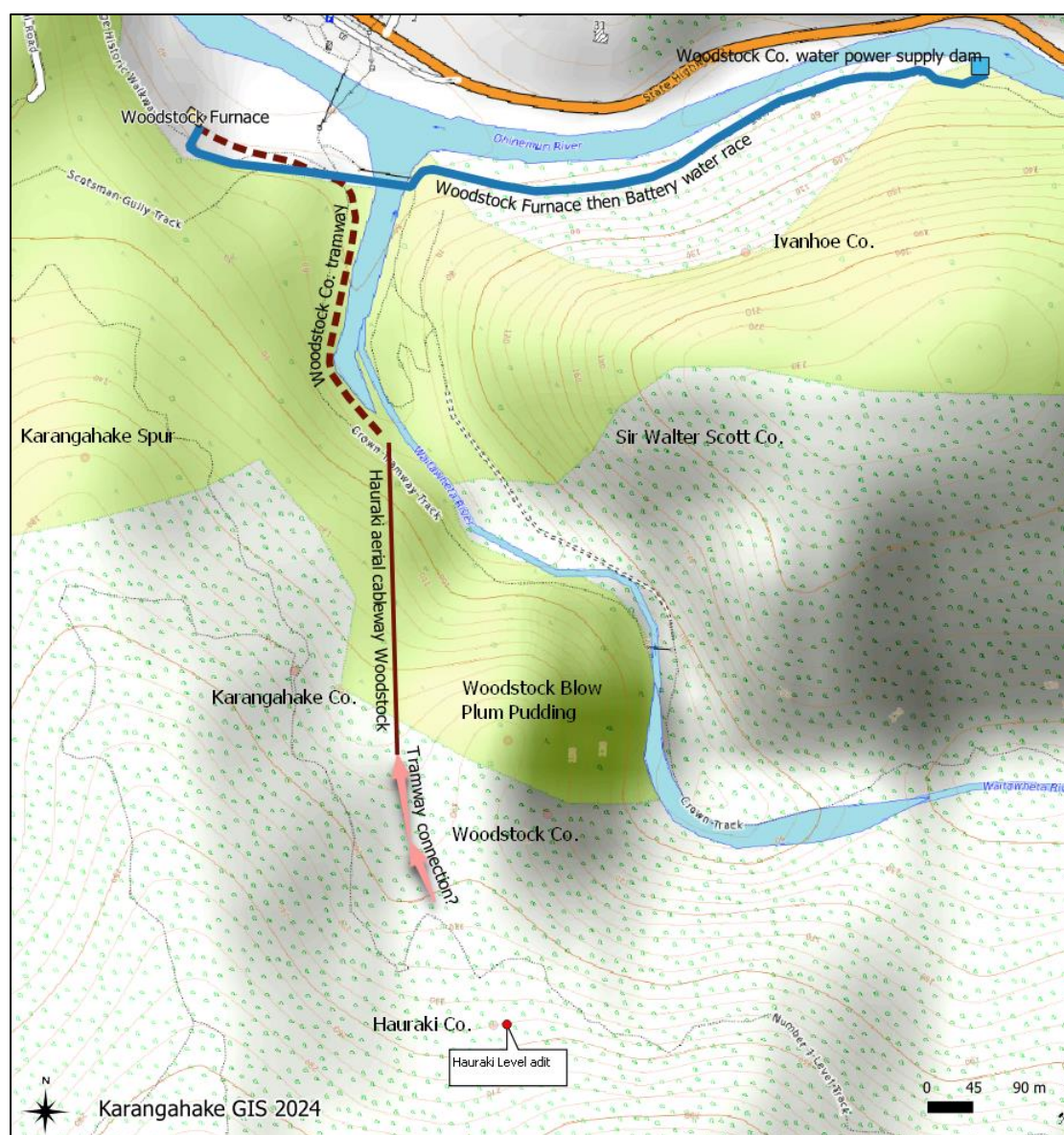
¹⁸⁴ <https://paperspast.natlib.govt.nz/newspapers/TAN18850912.2.46>

Te Aroha News, Volume III, Issue 119, 12 September 1885, Page 6

employees of several mines is passed. Here about a dozen whares were clustered.¹⁸⁵

The 24½ chain [493 m] tramway on the “southern side of the Waitawheta Creek” must be a recycling/extension of the Hauraki tramway; the start of what we now call the Crown tramway. The hopper is a little downstream of the flat area between the walkway and the river. This area is composed of fill material, and shows on several photographs. More cableways will terminate here in the future.

The aerial wire of 970 feet (296 m. This is the longer of the two cableways mentioned below) is to the hopper on the western flank of the Blow? Is this a reuse of the Hauraki cableway, a new one, or even one on the north-eastern side?



A proposed interpretation: Woodstock Furnace, their water race and dam, and re-use? of the Hauraki tramway.

¹⁸⁵ <https://paperspast.natlib.govt.nz/newspapers/NZH18850904.2.49>

New Zealand Herald, Volume XXII, Issue 7424, 4 September 1885, Page 6

4 September

Thames Star:

Ivanhoe:

The manager is at present engaged constructing an aerial wire tramway, 800 ft. in length, to connect with the hoppers; thence to the battery is a ground tramway. At present there is no paddock room at No 3 level, there being about 25 tons of quartz to grass awaiting the completion of the tramway. Towards the northern boundary of the mine is a lode known as Liddel's reef. It is about three feet wide, and the quartz is apparently very kindly. A considerable amount of driving has been done on it.¹⁸⁶

The “excellent natural dam” on the Ohinemuri is the first, and lowest on this river, and remains can be seen today. It was a low wooden structure, and contained four angles, “bending” downstream. One photograph shows this well. Elements of this image suggest that the original “dam” may indeed have been “natural”, ie without the subsequent timbering (but see 24 September 1886 report below).



The first Woodstock dam on the Ohinemuri River. 1898.

M. Roycroft collection.

Below the dark tree trunk can be seen a row or fence of metal posts, which are being used as a sieve to prevent debris from entering the water intake structure to the right. This “fence” can be seen today. The

Crown water race flume is prominent, as is the mullock tip from the adit above it. Photograph taken from the side of the road. Understand that this image is much later than 1885.

“From the head of the dam to the junction of the Waitawheta and Ohinemuri Rivers is 28 chains [563 m]” confirms this dam site. A report of 12 September puts the entire length of the flume at 40 chains (805 m).

¹⁸⁶ <https://paperspast.natlib.govt.nz/newspapers/THS18850904.2.21>

Thames Star, Volume XVII, Issue 5190, 4 September 1885, Page 3

7500 feet of timber. Presumably board feet, or 144 cu. ins, eg a 12x12x1 inch piece of wood. So 7500 feet of 12x1 inch timber, or 2286 m of 300x25 mm planks. Anyway, quite a lot.

The flume across the Waitawheta will be the second across this river (by end 1885).

Crown. —The mine perhaps most in favour just now in the Crown, consisting of 47 men's ground. There are several promising-looking lodes in process of development. The manager, Mr. Norman McGrover [McGruer], kindly showed me round the mine, and the first place visited was at No. 2 lode...

Welcome. —This mine is further down the face of the hill than the Crown. Work has just been started, but the mine should have the same run of reefs as the Crown, it comprises fifteen men's ground, and four meu are employed.

Sutro. —This claim is south of the Crown and consists of twenty men's ground...

Diamond —This mine was formerly known as the Hidden Treasure. It is on the same spur as the Sutro, but farther round towards the Waitawheta. A gentleman has just purchased four tons of quartz from the prospectors at £30 a ton, and is sanguine of realising a handsome profit on his bargain.

Ivanhoe.—This is the mine which has brought Karangahake to the front, and as yet its only rival is the Crown. It consists of 77 men's ground. The mine is portion of a great cone, at the base of which the Ohinemuri and Waitawheta Rivers course onward till they junction. This monster sugar loaf is capped by the Ivanhoe lease. On the Waitawheta side are the Sir Walter Scott, Gladys, Truro, and Argentine claims. On the fall towards the Ohinemuri River are the Ohinemuri and City of London leases. It may be mentioned, by the way, that both this spur and the Woodstock are bald, being devoid of timber. The approach to the Ivanhoe mine is up a veritable serpentine track. The workings have been entered on the north—that is, the Ohinemuri River side of the cone...

The manager is at present engaged constructing an aerial wire tramway 800 feet [244m] in length, to come north of the hoppers; thence to the battery is a ground tramway.¹⁸⁷

Today, a short tunnel, and anchoring bolts are remnants of the top of this cableway. The ground tramway is what we can see in the lithograph 3? It runs along the side of the Ohinemuri River, a little above the present walking track.

The “veritable serpentine track” shows on the 1885 Christmas Supplement image 3. And then on many subsequent photographs.

Both Taukani Ridge and Woodstock Blow are devoid of timber. Why? Were they burnt at an early stage? The Mackaytown fern was burnt before the opening of the field.

Towards the northern boundary of the mine is a lode known as Liddel's reef. It is about three feet wide, and the quartz is apparently very kindly. A considerable amount of driving has been done on it.

¹⁸⁷ <https://paperspast.natlib.govt.nz/newspapers/NZH18850904.2.49>

New Zealand Herald, Volume XXII, Issue 7424, 4 September 1885, Page 6

The battery consists of 10 stampers and four berdans; it is driven by water from the Waitawheta stream. The battery was not working at the time of my visit.¹⁸⁸

The Ivanhoe (ex Hauraki ex Karangahake battery) has been reduced to 10 stampers from the original 16 stampers. It is not clear how four 4-stamp mortar boxes become 10 stampers. An 1876 report states: "Karangahake battery has made a start with 12 head stampers; it seems the driving belt is too light to serve the other four"¹⁸⁹.

A new township, named Silverton, has been laid off by the Government on the north side of the Ohinemuri River, just below the suspension bridge, and a number of business and residence sites have been taken up. Mr. Hogg has a residence in course of erection. Unfortunately, only about five acres of flat land are available.¹⁹⁰

The name Silverton was soon replaced by Karangahake.

8 September

Ivanhoe - The wire tramway has been lowered, and all the connections between it and the low level are now complete.¹⁹¹

This makes it clear that the cableway was at a higher level when first installed. It has been lowered, and required a short tunnel to be dug to allow it to align with the new low level. This tunnel exists today.

12 September

...their worst, never lost confidence in the ultimate success of the field, was wonderfully strengthened though in an unexpected manner, for, until Mr La Monte's visit gold, not silver, had been the mineral so earnestly sought after. Nearly everyone knows the effect that has been produced by the good results from tests of ore taken from the various reefs, and the enterprise and energy shown by those who could command the necessary capital to forthwith have erected a smelting furnace at Karangahake as well as at Thames; but to be thoroughly realised, a visit to the scene of operations is necessary, and such will prove most interesting.

Everybody you meet seems sanguine that a very prosperous time is in store for the district, and there is very much to warrant such a belief — although all that is going on can by no means be approved of, as by the reckless statements of some, and the many claims that have been pegged out all over the district in an evidently reckless manner, and with no intention of being worked, it is evident those who only desire to "make a rise" out of some one, and do not care at all for the steady prosperity of the field, have been here, as on every other goldfield. But thus probably it ever will be, which is a matter for regret, as the inevitable result of wild speculation is to injure a good field.

¹⁸⁸ <https://paperspast.natlib.govt.nz/newspapers/NZH18850904.2.49>

New Zealand Herald, Volume XXII, Issue 7424, 4 September 1885, Page 6

¹⁸⁹ <https://paperspast.natlib.govt.nz/newspapers/NZH18760810.2.19>

New Zealand Herald, Volume XIII, Issue 4599, 10 August 1876, Page 1 (Supplement)

¹⁹⁰ <https://paperspast.natlib.govt.nz/newspapers/NZH18850904.2.49>

New Zealand Herald, Volume XXII, Issue 7424, 4 September 1885, Page 6

¹⁹¹ <https://paperspast.natlib.govt.nz/newspapers/THA18850908.2.10>

Thames Advertiser, Volume XVI, Issue 5266, 8 September 1885, Page 3

The amount of assaying going on and testing of reefs in every conceivable manner is something wonderful, and taken as a whole the results obtained fully warrant the belief that rich argentiferous¹⁹² ore is to be had in large quantities, and that the day is not far distant when smelters (should they prove as efficient and satisfactory a method of treating the raw material here as is anticipated), will be at work at various centres on the field, the supply of quartz being unlimited.

To visit Waihi, Waitekauri, Owaharoa, etc., would necessitate at least two days journey, but any one can easily pay a visit to Karangahake where the La Monte furnace is now being erected for the Woodstock shareholders, and inspect some of the leading mines and objects of interest, and return to Te Aroha same day.

The road from Aroha to Paeroa is in very fair condition except through the gorge, which portion needs the immediate attention of the county council; the mud in some places being very great, but worse than this, a number of small holes exist in the road itself, generally twelve to eighteen inches deep, which really are most dangerous traps for horses, and if not filled up at once an accident it is to be feared will occur, probably to some one riding through at night.

From Paeroa to Karangahake the road is in a very bad state indeed, and carting of necessity most difficult and expensive. On arriving at Karangahake one cannot but feel astonished at the activity and amount of work going on.

The erection of the furnace for the Woodstock mine is progressing rapidly, and on the various works in connection some 40 to 45 men are steadily employed. The furnace house is up, and measures about 45ft x 30ft x 21 ft stud, having a lean to attached about 20ft long. The foundation for the furnace is laid, the water-jacket¹⁹³ put together, ready to place in position, and the furnace itself also in a forward state. A self-acting tramway of about 400ft [122 m] for the conveyance of coke, stores, etc., from where unloaded direct to the furnace house is completed; whilst some 30 chains of horse grade has yet to be laid towards the mine, from the termination of which it is intended to construct a self-acting tram line [aerial cableway; see entry for November 7] to connect with the mine. Forty chains of fluming will be required in forming the water race from the Ohinemuri river, the timber for which is now nearly all ready.

A township site has been laid off on the opposite bank of the river, and some seventeen allotments already applied for there. Mr A. Hogg who has just erected a large new store has been appointed postmaster; the mail service will be triweekly, and probably commence this week.

SEPARATION AT LAST. After a long struggle and many failures, Ohinemuri residents have succeeded in getting separation, whereby their district will be constituted a separate county. There are to be four ridings, viz., Paeroa,.

¹⁹² Containing silver.

¹⁹³ "In blast-furnaces used for smelting silver lead, copper, and other minerals and metals it is common to use metal water-jackets through which water is kept circulating in order to prevent them from being burned out. These water-jackets constitute the sides or walls of the furnace in whole or in part, and it is within a space inclosed by these water-jackets that the smelting operation goes on."
<https://patents.google.com/patent/US614971>

Karangahake, Waitoa and Waitekauri. Waitoa riding is to return one member, Karangahake and Waitekauri two each, and Paeroa three. We sincerely hope now that the wish of our neighbours has been acceded to, that they will combine amongst themselves for the general good and advancement of their district, and make a wise use of the powers conferred on them.¹⁹⁴

19 September

The Furnace. The fine weather now prevailing has permitted more rapid advancement of the work in connection with the erection of the furnace at Karangahake. The heaviest part of the machinery and plant is now on the site. The blower, stone-breaker, etc., were lowered down the self-acting tramway on Tuesday last, the line working very well; the rope and brake wheel are of a similar pattern to that known as the Moanatairi brake, which is capable of lowering a great amount of material during the day. Mr Haslett has a large number of carpenters engaged in the erection of the dams, fluming, and boxes for the water-race; also the tramway construction is making rapid progress. Mr Winter, with his assistants, is making good headway with the furnace brickwork, the iron casing all being in position. The refinery and testing furnace will be finished in a few days. Should nothing unforeseen occur to retard the works, it is likely that a very few weeks from now, the fires should be alight, and we sincerely hope the spirited proprietor, Mr R. K. Davis, will be well rewarded for his enterprise.¹⁹⁵

“Some 30 chains [604 m] of horse grade” is a larger estimate than the 4 September report, and the “forty chains [805 m] of fluming” is more likely than the 145 chains in the same report (12 September).

22 September

Kenilworth.—Surface trenching on a reef about three feet wide, supposed by the manager to be the Woodstock lode, is proceeding. The quartz resembles the Woodstock considerably. It is proposed to put in a tunnel on the same level as the Woodstock, so as to connect with that company's tramway. They also intend to pick up the Hauraki level, and get it in working order.¹⁹⁶

Ohinemuri County proclaimed

1 October

“Now, therefore, I, William Francis Drummond Jervois, the Governor of the Colony of New Zealand, by and with the consent of the Executive Council of the said colony, by virtue and in exercise of the powers vested in me by “The Counties Act, 1876,” do hereby proclaim and declare that the aforesaid portion of the County of Thames shall, as from the first day of October, one thousand eight hundred and eighty-five, constitute a new county, to be called the County of Ohinemuri, and that the boundaries of the said new county so constituted

¹⁹⁴ <https://paperspast.natlib.govt.nz/newspapers/TAN18850912.2.46>

Te Aroha News, Volume III, Issue 119, 12 September 1885, Page 6

¹⁹⁵ <https://paperspast.natlib.govt.nz/newspapers/TAN18850919.2.32>

Te Aroha News, Volume III, Issue 120, 19 September 1885, Page 7

¹⁹⁶ <https://paperspast.natlib.govt.nz/newspapers/NZH18850922.2.44>

New Zealand Herald, Volume XXII, Issue 7439, 22 September 1885, Page 6

shall be those particularly set forth in the First Schedule hereto; and the said new county is hereby constituted accordingly.

“And I do further proclaim and declare that the said County of Ohinemuri shall be divided into four ridings, to be called the Waitekauri riding, the Karangahake riding, the Paeroa riding, and the Waitoa riding, the boundaries whereof shall be those particularly set forth in the Second Schedule hereto.

“And, in exercise of the like power, and with the like advice and consent as aforesaid, I do further proclaim and declare that the number of members of the County Council of the said County of Ohinemuri shall be: For the Waitekauri riding, two members; for the Karangahake riding, two members; for the Paeroa riding, three members; and for the Waitoa riding, one member.”¹⁹⁷

10 October

Sutro.—Driving south, a reef 2 feet thick shows in the face of the level of fair quality, looking better underfoot. The manager is connecting the mine with the county track by wire tram, preparatory to sending 20 tons of quartz to the smelting furnace.¹⁹⁸

Where was this? No further mention found. The Sutro was south of the Crown claim¹⁹⁹, with the same reef? and presumably above the County Road.

14 October

Antiquary. —This lode can be better worked from the level now going in, as it is cut in the face of the cliff, and the mullock from it falls on the Woodstock low-level tramway.²⁰⁰

7 November

KARANGAHAKE, Friday. The furnace is in a forward state, and should be ready in a month at the outside. Mr. Haslett, who has charge of all the works connected therewith, estimates that, should all go well, a fortnight will see it completed. The motive power will be water, of which there is an ample supply in the Ohinemuri River, the motor being a Pelton wheel, already in position. From the dam, built in the creek, the water will be led to opposite the furnace by fluming, 42 chains [845 m] in length, 18 [362 m] chains of which are on trestles, in one place there being a span of 90 feet [27 m]. Where the fluming ends 20-inch wrought iron pipes convey the water into the furnace.²⁰¹

¹⁹⁷ <http://www.ohinemuri.org.nz/historic-texts/ohinemuri-county-diamond-jubilee/282-sixty-years-of-progress>

Ohinemuri County Diamond Jubilee 1885 1945

¹⁹⁸ <https://paperspast.natlib.govt.nz/newspapers/AS18851010.2.72>

Auckland Star, Volume XXVI, Issue 235, 10 October 1885, Page 8

¹⁹⁹ <https://paperspast.natlib.govt.nz/newspapers/NZH18850904.2.49>

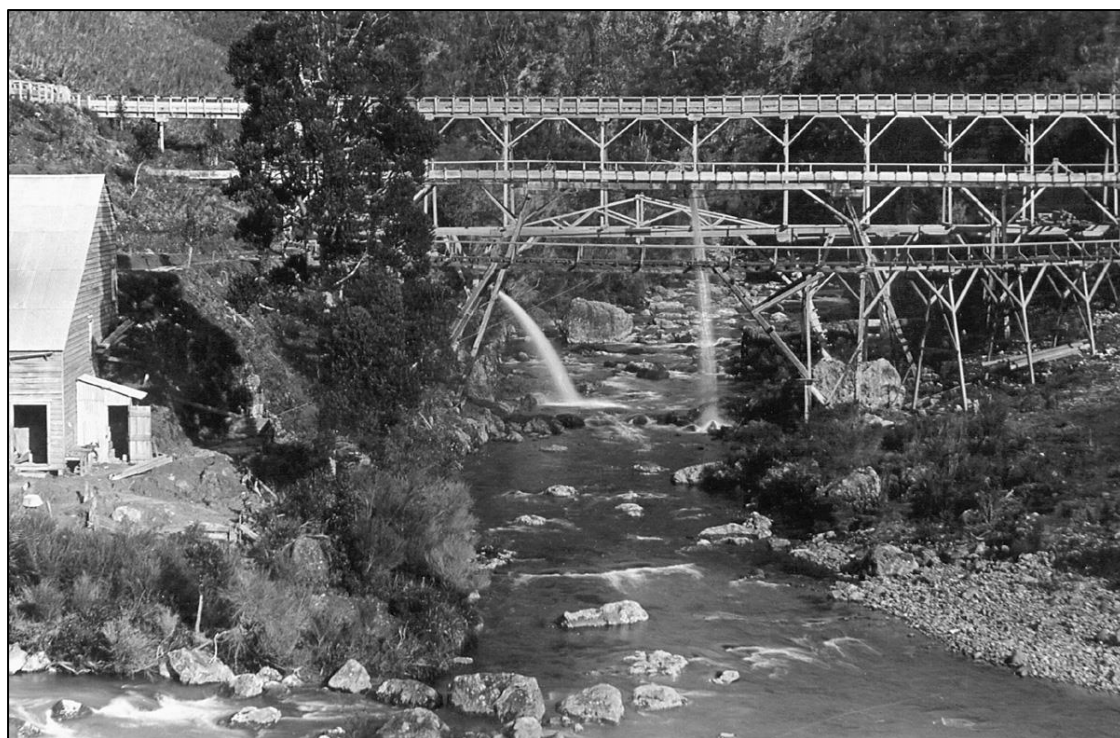
New Zealand Herald, Volume XXII, Issue 7424, 4 September 1885, Page 6

²⁰⁰ <https://paperspast.natlib.govt.nz/newspapers/NZH18851014.2.36>

New Zealand Herald, Volume XXII, Issue 7458, 14 October 1885, Page 6

²⁰¹ <https://paperspast.natlib.govt.nz/newspapers/NZH18851107.2.35>

New Zealand Herald, Volume XXII, Issue 7479, 7 November 1885, Page 6



This appears to be the earliest image of the flumes crossing the Waitawheta at the confluence. M.M. White photograph B3575. 1892-4.

The lowest bridge (dark) is the ore tramway for the Ivanhoe. The top flume is the Crown water race (1892) which we should ignore in this instance. It adds confusion because it has a lower level with a distinctive A-frame support in the middle. It is intended to provide tramway connection across the river.

Below this is the flume bringing water from the Ohinemuri to the furnace house.

This description from 24 September **1886**:

The water to drive is taken from the Ohinemuri river, which runs close in front of the furnace house, and is brought down a distance of 42 chains [845 m], in fluming three feet wide, and one foot six inches deep. This flume or race, is of timber all the way, the sides being 18 x 1¼, and the bottom, three boards of 12 x 1¼. For a distance of 18 chains [362 m] it has to be supported on trestle work, the trestles varying in height from 4 to 30 feet and averaging 22 feet apart. One of the spans, where it crosses the Waitawheta River, is 90 feet between the sole plates, and 47 feet above the river. The building of this bridge was quite an undertaking in itself. The legs, which are over 40 feet long, are 10 inches square, and rest on sole plates about seven feet above the summer level of the river. These legs lean in towards the centre, 15 feet off the perpendicular, which reduces the span at the top to 62 feet, and this is bridged over by two stringers, each of which is composed of two pieces of 14 x 4, strapped and bolted together, and supported underneath by a straining rod of 1½in. iron. The feet of the legs and the sole plates are securely bolted down to the rock, so as to resist the freshes in the river during the winter.

When the flume is full of water every ten feet of it holds over a ton weight, so it will be seen that this bridge would have a steady weight on it of over six tons, but by giving the flume more fall here than it has elsewhere the water rushes over quicker, and the flume is never more than half full, thus reducing the weight one half. When the bridge was finished it was tested with the flume

full to make sure that it was fit for the work. The rest of the flume from the dam down has a fall of 1 in 500, or a shade more than ½ of an inch to every 20 feet, which makes the water run at about the same pace as a person at a smart walk.

The whole of the timber used in the flume is the best heart of kauri, of which there is over 80,000 feet. At the top of the flume a dam had to be built, so as to raise the river about three feet above its ordinary level. This dam is over 100 feet across, and is built of kauri logs 18 inches square, bolted down to the rock, and planked with slabs three inches thick, and cross-planked with sawn timber 1½ inches. The bed of the river here is so uneven that some of these slabs are only three foot long, and some of them are 15 feet. The water is led into the flume through an iron grating of five-eighth inch bars, one inch apart, and is controlled by the usual floodgates, traps, overflow, &c.²⁰²

Iron bars, standing upright, are still at this site today.

The 7 November (1885) article continues:-

As the Woodstock claim is a considerable height above the creek and from the furnace, a wire tramway, 1000 ft [305 m] in length, conveys the ore to a horse tramway, 27 chains [543 m] long, laid to the battery [This is an update of the Hauraki wooden tramway?]. As there is a road from Paeroa on the hill near the furnace, a self-acting tramway extending from the top to near the battery, about 400 feet [122 m], serves admirably for delivering coke, timber, and other requisites at the furnace. Indeed, its use is not confined to the proprietors of the furnace, for it is largely availed of by all persons requiring goods, its owners extending the advantages derivable from using it to their neighbours with a liberal hand. As present the number of men employed in connection with the furnace is 33 and as many as 46 have been on the pay sheet. Last fortnight's payments amounted to £233, whilst £1200 has been paid in wages since July 30. I am assured by all persons to whom I have spoken on the subject, and most of them are disinterested, that the works in connection with the furnace, including the water race, are thoroughly substantial, and that they are in every way creditable to the supervisor.²⁰³

This wire tramway, 1000 ft [305 m], is to the western flank of the Blow. Ore from the Hauraki or Intermediate level?

Crown. A tramway has been laid level 232 feet, 2,500 feet of timber being sawn on the ground, 9¾ chains of road has been formed for the purpose of packing quartz, and a smithy has been erected 12ft by 10ft.²⁰⁴

Where/what is this?

Another very good description from 24 September **1886**:

The quartz is brought down from the mine by a wire tramway and a horse tramway. It comes out of the mine in small trucks, which hold half a ton each, and is tipped out of them into twin hoppers, or, as some people would call

²⁰² <https://paperspast.natlib.govt.nz/newspapers/NZH18860924.2.48>

New Zealand Herald, Volume XXIII, Issue 7751, 24 September 1886, Page 6

²⁰³ <https://paperspast.natlib.govt.nz/newspapers/NZH18851107.2.35>

New Zealand Herald, Volume XXII, Issue 7479, 7 November 1885, Page 6

²⁰⁴ <https://paperspast.natlib.govt.nz/newspapers/TAN18851107.2.10>

Te Aroha News, Volume III, Issue 127, 7 November 1885, Page 2

them, binns. Each of these holds about 20 tons. These hoppers are on a hill, about 400 feet above the horse tram, at the end of which is a large single hopper of 50 tons capacity, and this large hopper is connected with the two small ones above, by means of two wire ropes, each 700 feet long, and 1¼ inches diameter, fixed at an angle of about 30 degrees, on which travel two box trucks, each of which holds one third of a ton. These trucks are worked by a wire hauling line three-eighths of an inch in diameter, and are self-emptying into the bottom hopper, so that the brakeman at the top fills them and works them himself, and he can send down about 25 tons a day.

The horse tram for taking the quartz from this large hopper to the furnace is 29½ chains [593 m, this places the large hopper at about the small bridge on the present Crown tramway track] long, and is laid with iron rails to a 2 feet 9 inches gauge. For the greater part of this length it is cut out of the side of a very steep hill, most of it through hard solid rock. About three chains of it is supported on trestlework averaging about eight feet high [to the furnace itself], and the whole of it has just sufficient fall to allow the full trucks to run down of their own accord, requiring only a slight touch on the brake now and then to regulate their speed. These trucks hold 1¼ tons each, and are hauled back empty by horses.²⁰⁵

9 November

OHINEMURI GOLDFIELD.

Paeroa, Saturday. ... This is especially the case with regard to the mines that are located on the eastern slope of the range...

Take for instance the reef in the Diamond mine...

The next claim upon this line of country is the Rose, upon which a considerable amount of dead work has already been done, with a comparatively small outlay of capital, and the shareholders, who are mostly working men, are now in a position to reward themselves for the time and money they have spent in its development. The mine is fairly opened up and there is already broken out and bagged about 20 tons of ore, which is now being carted in here preparatory to being sent to the Thames smelting works for treatment. The lode from which this parcel was obtained is situate west of and runs parallel with that upon which the Diamond people are now operating...

The Adeline is the next claim on the same line going south, and the reef here, being identical with that in the Rose...

This mine [Adeline] is now under the supervision of Mr E. P. Hall, who contemplates erecting a wire tramway, which will be used as a mode of transporting quartz from the mine to a point on the track near to the Rose claim, from whence it can be taken by dray to Paeroa and thence on by steamer for treatment on the LaMonte principle.²⁰⁶

Was this cableway ever erected? The NZGS No16_1913_Karangahake mines map (see GIS) shows a hopper on the County Road near the Rose crosscut. This is the area

²⁰⁵ <https://paperspast.natlib.govt.nz/newspapers/NZH18860924.2.48>

New Zealand Herald, Volume XXIII, Issue 7751, 24 September 1886, Page 6

²⁰⁶ <https://paperspast.natlib.govt.nz/newspapers/THA18851109.2.9>

Thames Advertiser, Volume XVI, Issue 5319, 9 November 1885, Page 3

of the Sutro, Adeline and Earl of Glasgow workings. Is the hopper the terminus of the aerial cableway?

13 November

Ivanhoe. There are several large reefs in the mine yet to be prospected. A wire tramway 80 [800?] feet long connected with a ground tramway considered about 1200 feet in length connecting with the battery.

These dimensions closely match the GIS.

The article continues:-

Adeline.—... With respect to conveyance of quartz to county road, I would recommend the making of a sleigh-track as the most economical. The distance is about eight or nine chains [161 – 181 m], which is too long to run a single wire, and it would be too expensive for the company at present to put up a double line although eventually it will be the most efficient mode of working the ground and will have to be erected.²⁰⁷

21 November

Scott. — Operations in this mine are at present confined to breaking out quartz from the main lode, which is fully ten feet in thickness, and the whole of the stone looks well for silver. This work is going on at a point 180 feet beneath the old workings, and in order to take this stone away for treatment a new line of tramway will have to be constructed.

Woodstock - ...and then the only work remaining to be done would be the erection of the hoppers at either end of the Aerial tramway, which was placed in its position yesterday.²⁰⁸

23 November

Karangahake visited by Staff of Goldfields School of Mines.

Professor Black, Fenton, Goodlet on the 23rd, Montgomery on the 26th.²⁰⁹

27 November

Woodstock.—Working in the low level has been suspended, and the manager has started the men employed therein to cut a line for the tramway to connect the workings on the Maria reef with the Ariel section of the tramway, which is now in position.²¹⁰

28 November

Woodstock.—The water race, horse grade, and aerial sections of the tramway are now complete, and all hands are engaged in the work of constructing the hoppers, which will be made capable of holding a large tonnage of quartz...

²⁰⁷ <https://paperspast.natlib.govt.nz/newspapers/NZH18851113.2.50>

New Zealand Herald, Volume XXII, Issue 7484, 13 November 1885, Page 6

²⁰⁸ <https://paperspast.natlib.govt.nz/newspapers/TAN18851121.2.27>

Te Aroha News, Volume III, Issue 129, 21 November 1885, Page 7

²⁰⁹ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1886-I.2.1.4.11>

GOLDFIELDS CLASSES AND SCHOOLS OF MINES. (REPORTS ON)., Appendix to the Journals of the House of Representatives, 1886 Session I, C-04b

²¹⁰ <https://paperspast.natlib.govt.nz/newspapers/AS18851127.2.33>

Bibliographic details Auckland Star, Volume XXVI, Issue 270, 27 November 1885, Page 2

The stopes are still yielding a large amount of fair smelting ore, and the manager has started to cut a tram line from the Maria reef, so as to connect the workings on that lode with the horse grade section of the tramway.

Scott.— A track is now in progress to connect the workings with the shoot, and when this is completed the manager will break out a sample for testing purposes.²¹¹

Is this the No. 2 level tramway, and cableway on the north-eastern side of the Woodstock Blow? IE, this is the construction of the second cableway, late 1885 early 1886, from northeast of the Blow. The earlier Hauraki (late 1882) on the western flank and reused by the Woodstock Company.

The Sir Walter Scott ore chute is still in operation.

²¹¹ <https://paperspast.natlib.govt.nz/newspapers/THA18851128.2.7>

Thames Advertiser, Volume XVI, Issue 5336, 28 November 1885, Page 3



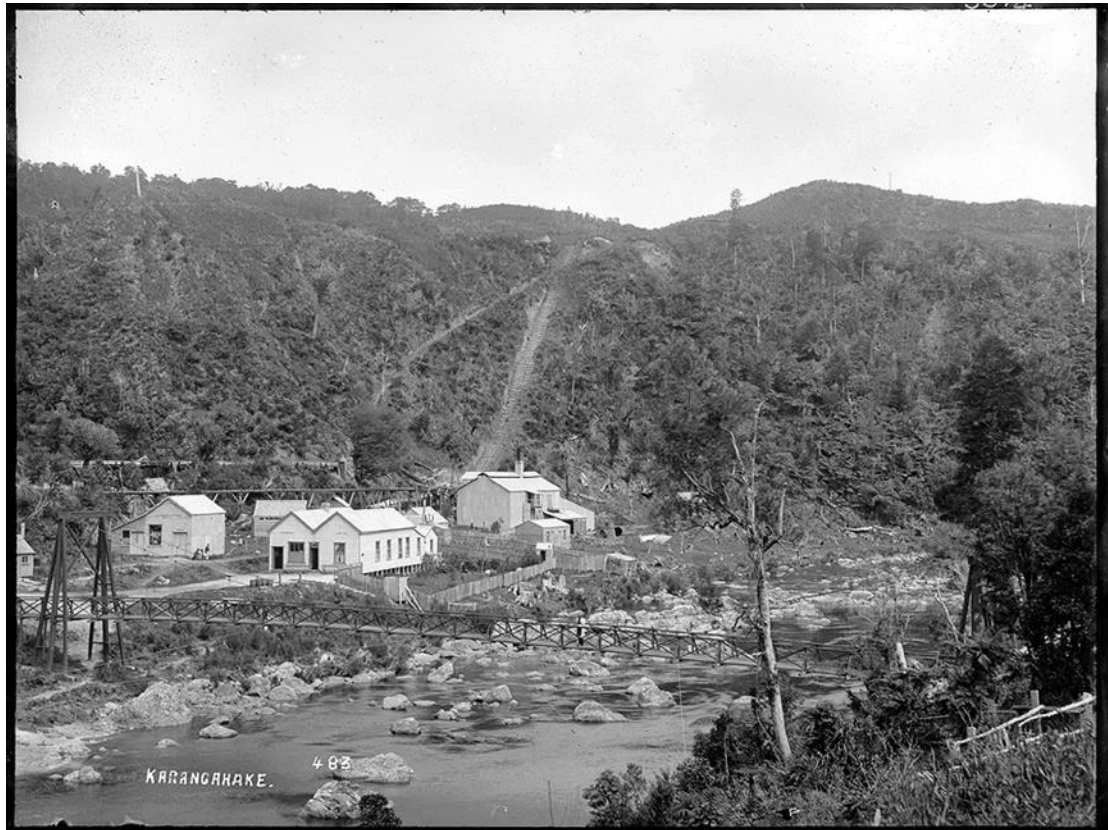
7307 Karangahake Gorge 495, Auckland Library. JD Richardson. Date undetermined.

Looking upstream Waitawheta River, Woodstock Blow top right. At the horizon, on the shoulder of the Woodstock Blow, can be seen a double ore chute above twin wooden ore hoppers. Ore would have been transported here by tramway behind the hill. The aerial tramway terminates above the river, at the end of the tramway from Battery Flat. The left of the photograph may show the ore chute from the Sir Walter Scott on the side of Taukani, completed mid 1884.

Photograph taken from a flume across the Waitawheta near the confluence?

The date of this photograph is unknown, but after mid 1886. In 1885 the Woodstock Company erect a cableway that meets this description. A later map identifies it as Woodstock No. 2 Level.

There are two similar photographs by JD Richardson, this one, 495, and another 358. I believe this is the earlier one. The double chute and hopper configuration is not seen again on any of the subsequent images of this cableway. The scrub on the steep slopes appears thicker on the other image (358). At the cableway terminus structure and hopper can be seen what appear to be two cables coming from top right. The Hauraki cableway/first Woodstock cable?



Title: Showing the Ohinemuri River, the Tramway Hotel and Pioneer Store [Hogg's] at Karangahake. 3574 Karangahake 483, Auckland Library. Photographer: JD Richardson/J Martin.

Date: after mid 1885 (bridge), the Woodstock furnace building completed by end 1885.

The building has a roof ventilator, and large chimney.

The incline is clearly visible, also a possible earlier sled track? From left; Hogg's store, Tramway Hotel, La Monte (Woodstock) Furnace house. The wooden flume supplying water from the Ohinemuri, and the trestle tramway to deliver ore to the furnace. Photograph taken from the road.

La Monte Furnace to Start?

16 December

This report details the starting of the La Monte furnace at Thames. The Karangahake furnace was water powered.

THE LA MONTE FURNACE. COMMENCEMENT OF OPERATIONS.

The commencement of smelting operations at the New Zealand Co.'s works, which has been anticipated for several weeks with considerable interest, took place yesterday. The fires were lighted at about four o'clock in the morning, and soon afterwards the air blast from the blower was turned on, and the operations were in full swing.

All the machinery, from the steam-engine winch drives the blower to the furnace itself, performed its work very efficiently, reflecting the highest credit upon all persons concerned in its erection. As the smelting operations are entirely new to this part of the world, at any rate as far as their connection with

gold mining is concerned, a brief description of the *modus operandi* will be of interest.

The ore intended for treatment is in the first place pulverised in the stone-crusher to about the size of large pebbles. It is then carefully sorted and sampled, and assays are made for the purpose of ascertaining its value (for purchase from the producers) and analyses in order to decide upon the nature and quantity of the fluxes required. These consist chiefly of iron-stone and lime, the latter being obtained either from the bed discovered near Tararu Cemetery, or by the use of ordinary seashells.

The fire being lighted, the ore and fluxes are introduced into the furnace in the required proportions through the feed doors at the level of the upper floor of the building. The powerful blast from the *rolange* blower is admitted to the furnace by tuyeres, or openings in the water-jackets. As the ores are smelted, the metals which they contain fall into the lead bath in the base of the furnace, forming an alloy with the molten lead with which the receptacle is charged.

The bullion gradually overflows into the square well situated outside the furnace, whence it is ladled out, and run into moulds, forming ingots of about 80lbs weight. These are removed to the refinery, where the bullion is separated from the lead, and finally, purified in readiness for the market. The slag formed by the refuse runs continually from the ends of the furnace which are tapped alternately by the workmen, the red hot liquid passing down an iron gutter, where it is caught in large vessel, and conveyed on trollies to the rear of the smelting shed.²¹²

Karangahake Post Office opens during 1885²¹³

Pictorial Christmas Supplement to the New Zealand Herald, December 1885

These lithographs are art works, possibly based on photographs.

Well-executed Views of New Zealand scenery, and drawn by local artists and engraved at the Herald office. Views embrace a large variety of subjects... The sketches will be accompanied by a letter-press description.²¹⁴

²¹² <https://paperspast.natlib.govt.nz/newspapers/THA18851216.2.8>

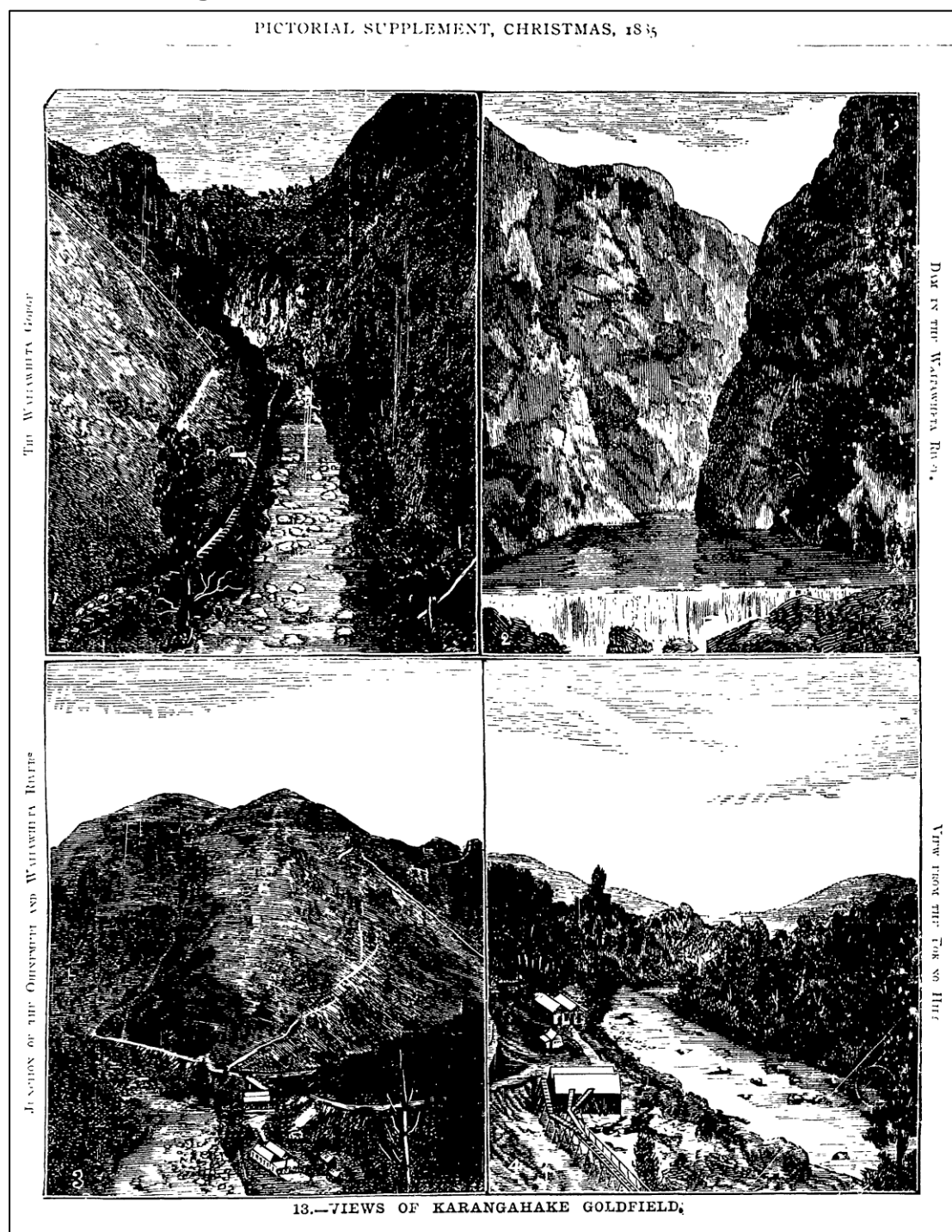
Thames Advertiser, Volume XVI, Issue 5351, 16 December 1885, Page 3

²¹³ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1886-I.2.2.4.1>

POST OFFICE AND TELEGRAPH DEPARTMENT (REPORT OF THE), FOR THE YEAR 1885., Appendix to the Journals of the House of Representatives, 1886 Session I, F-01

²¹⁴ <https://paperspast.natlib.govt.nz/newspapers/NZH18851221.2.20.2>

New Zealand Herald, Volume XXII, Issue 7516, 21 December 1885, Page 4

Views of Karangahake Goldfield²¹⁵

No.1 is a view of the Waitawheta Gorge, Ohinemuri (up view). On the left of the picture can be seen a shoot [chute] down the face of the cliff from the Sir Walter Scott Mine, ending at the hoppers below. Along the fall of the cliffs can be seen the water-race, while to the right is the creek with its bed bestrewn with boulders. On the top of the ridge on the right is the celebrated Woodstock

²¹⁵ <https://paperspast.natlib.govt.nz/newspapers/new-zealand-herald/1885/12/24/19>

New Zealand Herald, Volume XXII, Issue 7519, 24 December 1885, Page 13 (Supplement)

Mine, the yield of silver from which is expected to be large as there is a silver lode in the mine 10ft thick.

This image is 'taken' from the high ground above the later "Crown tramway", where dwellings are, or will be, located. The bottom right corner of the image shows what appears to be a section of post and rail fence. The view is similar to the one captured in image 'Karangahake Gorge 495', though it was taken from the tramway.

No. 2. Dam in the Waitawheta river, Karangahake. This picture gives a splendid illustration of the wild and rugged character of the country. Both spurs of the range present precipices 700ft in height, and believed to be perfectly impractical for travel, no European having got further than the dam at their base as shown in the foreground.

This image was 'taken' from one of the large boulders below the dam. Access could be via the water race flume.

No.3. is a view of the junction of the Ohinemuri and Waitawheta rivers as taken from the Paeroa Road.

By 'Paeroa Road' is meant County Road, as this image must have been taken from the top of the ridge accessible by this road. Although today the view is severely compromised by the large trees, a spot about 50m south of the junction with the Old Rotokohu Road could have been the photographer's location. This could also be roughly where the top of the incline is, or was to be, constructed.

On the left foreground can be seen the bed of the Ohinemuri River, strewn with boulders. The Waitawheta cannot be seen, owing to the banks obstructing the view. Down the face of the cliff on the Ohinemuri side of the river is seen the Ivanhoe Mine tramway [does this mean the aerial tramway completed early in the year, or the ground tramway clearly visible beside the river?], with the Argentine Gold Mining Company's ground lying between the tramway and the track winding along the base and side of the Tokano [Taukani] Hill. In the foreground is the hotel, and between that and the spur is the Ivanhoe Battery.

The Ivanhoe acquired the battery from the Hauraki Company circa August 1885²¹⁶.

The road on the right leading to the buildings is the road from Paeroa.

This must be Scotchman's Gully, and confirms that this, and the County Road, is the 'Paeroa Road'.

No. 4: This view is taken from the Tokano [Taukani] Hill, and represents in the foreground the water race supplying the Ivanhoe Battery, Shepherd's Hotel in the distance, with the Ohinemuri River, having on its right timber-covered spurs. A solitary kauri tree is to be seen growing against the sky line, towering above the forest growth below.

Image "taken" from a little way up the track ascending Taukani, as seen in image No. 3. Water race and tramway. The building in the foreground is the Hauraki Battery. The Ivanhoe Company acquired the battery from the Hauraki Company circa August 1885. The description, if written in December, has updated the ownership/name.

The image shows the tramway dividing at the battery building. Maybe this allowed ore from the different mines to be kept separate, eg from Sir Walter Scott, and from

²¹⁶ <https://paperspast.natlib.govt.nz/newspapers/NZH18850817.2.36>

New Zealand Herald, Volume XXII, Issue 7408, 17 August 1885, Page 6

Ivanhoe. This divided tramway can be seen in later photographs taken after the battery is removed.

No buildings shown on true right bank of Ohinemuri, nor bridge (completed June 1885²¹⁷). No sign of the La Monte furnace building under construction. This also began in June 1885. Hogg's Store opened early September, and it is not clear whether it is seen in the images. A building which might be the store appears in two different positions in the two images. Of course, buildings/details may simply have been left out of these images.

This seems to date these images early in June at the very latest. They are no earlier than early May 1884, when the Sir Walter Scott install their ore chute.

AJHR 1886

Published 1886, but largely reporting on 1885.

MINES STATEMENT BY THE MINISTER OF MINES, THE HON. W. J. M. LARNACH, C.M.G.

Delivered on Tuesday, 6th July, 1886.

APPENDIX TO THE JOURNALS OF THE HOUSE OF REPRESENTATIVES, 1886 SESSION I, C-02

Before leaving the interesting subject of quartz-mining, I desire briefly to refer to the invention known as the "La Monte Process," for the extraction of gold and silver from ore; and I feel much cause for regret that the smelting-works erected on that principle at the Thames have failed to come up to the expectations that had been formed of them. The failure, however, seems fairly attributable to the want of cheap and proper fluxes; for, although the process gave a larger product of metal from the ore than any other method yet adopted in the colony has done, the cost of treatment under existing circumstances precludes it from use in operating upon ores of low grade, of which there are unlimited quantities in many portions of New Zealand. It is fair, however, to the promoters of the process to state that, through the erection of their works, the attention of the miners has been directed more closely to the richly-argentiiferous ores which are now found to be abundant in the Ohinemuri district, and along the Hauraki Gulf to the Thames. I have little doubt, within a short period a new and valuable branch of mining, that has hitherto lain dormant, will be vigorously prosecuted. As illustrative of the great mineral richness of the large district of the Thames, I may here refer to the valuable discovery recently made at Waiomo, a trial crushing of the stone having yielded at the rate of 75oz. of gold to the ton. With such evidence of wealth in our mines, I hope the miners of New Zealand will pause before deciding to proceed to Western Australia; for, with the greater experience I have been enabled to gather by the visits I have had the pleasure periodically to make to the many mining centres and districts in this colony, I feel convinced that to the practical miner, as well as to the steady worker who is willing to follow the pursuit of mining, no better field can be found for the profitable occupation of

²¹⁷ <https://paperspast.natlib.govt.nz/newspapers/THA18850604.2.10>

Thames Advertiser, Volume XVI, Issue 5185, 4 June 1885, Page 3

their labours, nor no finer or more wholesome sphere for the well-being and exercise of their physical capacities, than exists in this colony.²¹⁸

GOLDFIELDS, ROADS, WATER-RACES, AND OTHER WORKS IN CONNECTION WITH MINING (REPORT ON).

APPENDIX TO THE JOURNALS OF THE HOUSE OF REPRESENTATIVES, 1886 SESSION I, C-04²¹⁹

Mr. H. A. Gordon, F.G.S., Inspecting Engineer,

to the Hon. W. J. M. Larnach, C.M.G., Minister of Mines. Mines Department, Wellington, 4th May, 1886.

Page 1. Thames County, Auckland.

Prospecting-track to open up Karangahake Goldfield. —This track has been in course of construction for nearly two years. When completed it will give access to the whole of the country between the Ohinemuri River and Te Aroha, which, bears favourable indications of good auriferous and argentiiferous reefs being found. This is a district that has lately been proved to contain rich silver lodes, which are likely to lead to a branch of mining that has heretofore been neglected in the colony owing to the mining community not being acquainted with the various descriptions of ores in which silver is found. The cost of this work up to the present time has been £784, and it will take about £597 to complete. [this is the County Road]

Page 2. Road from Karangahake to Battery. —This is a dray-road to connect the mines with the crushing-battery at Waitewheta Creek. The total cost of the work was £300; of this amount £200 have been paid as subsidy. [Is this Scotchman's Gully?]

Ohinemuri County, Auckland. Tauranga Road to Karangahake Bridge Site. — A horse-bridge has been constructed across the Ohinemuri River, near the junction of the Waitewhata Creek, to give access to the Karangahake Goldfield. A road forming an approach to this bridge from the Tauranga Road is now in course of construction. The work is estimated to cost £380; of this amount £243 6s. 8d. have been promised as subsidy.

[Could be this: "The bluffs near the present tunnel (rail)were cut back in 1886 giving direct access to Karangahake township via Doherty's Creek."²²⁰]

Page 37. CRUSHING-MACHINERY. There is no subject connected with mining that deserves more attention than machinery for the reduction of ores, not only in this colony, but in every country where metalliferous lodes exist.

²¹⁸ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1886-I.2.1.4.3>

MINES STATEMENT BY THE MINISTER OF MINES, THE HON. W. J. M. LARNACH, C.M.G. Delivered on Tuesday, 6th July, 1886., Appendix to the Journals of the House of Representatives, 1886 Session I, C-02

²¹⁹ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1886-I.2.1.4.9>

GOLDFIELDS, ROADS, WATER-RACES, AND OTHER WORKS IN CONNECTION WITH MINING (REPORT ON)., Appendix to the Journals of the House of Representatives, 1886 Session I, C-04

²²⁰ <https://www.ohinemuri.org.nz/journals/journal-44-september-2000/karangahake-roads-and-bridges>
Karangahake Roads and Bridges. Ohinemuri Regional History Journal 44, September 2000

The rich lodes that have been found, and for many years worked advantageously, are getting gradually poorer, and require a cheaper method to be employed than that adopted at the present time by reducing the ore with cumbersome and expensive stamping-batteries. In this colony there are many large lodes of low-grade auriferous quartz that cannot be worked profitably with the present method of reduction, and there is no instance that stands out more prominently than the mining district of Te Aroha, where a large quartz lode is known to extend between two and three miles, and in certain places giving as much as 2oz. of gold per ton; but when the yield comes below 15dwt. per ton it is found not profitable to work. On this field there is one of the best stamping-batteries erected in the colony. No expense has been spared to make it as complete as this class of machinery can be made; yet the working expense and wear and tear are so costly that low-grade quartz cannot be worked to pay with present appliances. The prosperity and greatness of any country, and none more so than Great Britain, are due in a great measure to the mineral wealth it contains; and it may truly be said that the future greatness of New Zealand will depend in a great measure on an energetic and systematic development of her mineral resources. The rich agricultural lands are confined to valleys, plains, and low undulating country; but there is a large percentage of high mountain-land that is only suitable for pastoral purposes, unless it contains mineral wealth. Fortunately, nature has so formed this colony that the metalliferous deposits are chiefly confined to the high lands; but, unless machinery of a more improved character be introduced to reduce the various ores at a much cheaper rate, and these deposits worked remuneratively, they will fail to add to the permanent wealth of the colony.

Until lately mining in this colony has been chiefly confined to gold and coal; but, recently, attention has been directed to argentiferous lodes, which exist at Karangahake and Waihi, in the Ohinemuri district, and smelting-furnaces for the reduction of this class of ore have been erected. So far these furnaces have not proved a success, owing to the class of ore not being of a suitable character for smelting at a cheap rate. The smelting-furnaces that are erected at Karangahake and the Thames are specially adapted for smelting argentiferous and auriferous ores containing a large percentage of galena and iron, as these minerals are specially required as fluxes, in conjunction with lime, to make the silica run freely; but where the ore is deficient of either galena or iron the cost of fluxes to smelt the silica is so great that it requires ore of a high grade to pay for its manipulation. Different classes of argentiferous ores require different treatment. Those containing galena and iron are specially adapted for smelting, while ores containing chlorides and chloro-bromides of silver can be manipulated far more advantageously and economically by chlorination and amalgamation. Therefore the same class of machinery that is suitable for the reduction of auriferous quartz is also suitable for the reduction of many kinds of argentiferous ores. In introducing new crushing-machinery there are three essential things to consider —viz., (1) the cost of the plant and the number of working-parts subject to wear and tear; (2) a compact and portable machine, so as to get over the difficulty of transit in a mountainous country; (3) a machine that will reduce the ore at a much less cost than by the stamping battery.

GOLDFIELDS.

APPENDIX TO THE JOURNALS OF THE HOUSE OF
REPRESENTATIVES, 1886 SESSION I, C-04A²²¹

WARDENS' AND WATER-RACE REPORTS.

AUCKLAND GOLDFIELDS.

No. 1. Mr. Warden Kendrick

to the Under-Secretary of Mines. Sir, — Warden's Office, Thames, 24th April, 1886.

I have the honour to forward the annual report upon the various gold-mining districts under my control, together with the goldfields statistics and returns for the year ended 31st March last.

Page 2....A prominent feature in my last year's report was the reference to the necessity of introducing new gold-saving appliances into this district, in the full belief that a very large percentage of gold was being lost by the present method of treatment. The advent of Mr. La Monte, from California, in the early part of the year was taken advantage of by an energetic syndicate, who at once made arrangements for the erection of two of his wet-jacket smelting-furnaces, one at the Thames, the other at Karangahake. The Thames furnace was completed, and up to the 31st March last had run through about 180 tons of ore, purchased from various mines at Waihi, Karangahake, and Tui (Te Aroha); but little of any Thames stone was put through...

[For the full report, see the document: Parliamentary Papers.docx]

Page 4....At Karangahake much has been done during the year in the various mines, and a fair measure of success met with. The larger portion of the stone sent to the furnace at the Thames has been from this district, as much as £105 per ton being given as the assay-value of one parcel sold. The difficulty in procuring the necessary fluxes has retarded the opening of the local furnace, iron ore having to be brought from Whangarei by sea, up the Thames River to Paeroa, and from thence to be carted some seven miles; and, as the coke, lead, lime, &c, will have all to be brought from a distance, I am afraid that the expense will be too great for the class of stone to be treated. It certainly will be cheaper to send the more valuable stone to the Thames, as for every ton of stone smelted some two tons of flux have to be brought to the furnace.

No. 4. Mr. Mining-Inspector McLaren

to the Under-Secretary of Mines. Sir, — Mining Inspector's Office, 20th May, 1886. I have the honour to forward mining report for the Hauraki North and South Goldmining Districts for year ended 31st March, 1886.

Page 9. As I understand the Warden has entered into details re the smelting quartz at Mr. La Monte's new furnace, I need not go further into particulars, save to say that its failure has thrown a great damper on mining; but in one respect Mr. La Monte has most undoubtedly done good—in drawing attention to the large quantities of silver contained in our lodes, especially in the Ohinemuri district; and, though these lodes appear to be very difficult to treat

²²¹ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1886-I.2.1.4.10>

GOLDFIELDS., Appendix to the Journals of the House of Representatives, 1886 Session I, C-04a

under his process, attention having been drawn to them, different parties are now at work trying the best and cheapest method that minerals can be extracted. Already a new battery, or reduction work, is being erected at Karangahake, in Ohinemuri, in which I understand the mineral is partly to be roasted and partly treated with chemicals. I understand that, from experiments already made under this process, more than double the amount of bullion has been obtained than from the ordinary battery process. [Railey]

Page 12. Karangahake District.

Like the Waihi, the failure of the smelting-furnace has had a most disheartening effect on the shareholders of the various mines here, and I have been obliged to forfeit over one-half of these mines for not working, or even trying to prospect their ground. The stone obtained here is in many respects very similar to the Waihi stone, both in appearance and in the quantities of silver and gold obtained. For instance, 5½ tons from the Adeline Mine was sold for £106 10s. per ton, the Rose Mine obtained £103 per ton, and the Diamond £57 per ton.

In connection with the Woodstock Mine a complete smelting-furnace has been erected. Everything has now been ready for some months to begin operations, but there is no apparent intention to make a start; and the general impression is, that after the experience had from the same kind of furnace at the Thames they never will start. However, this remains to be seen. If not, it would not be difficult or very expensive to convert the water-power to drive a battery.

This district is labouring under a great disadvantage in not having a proper low-level road through the Waitawhita Gorge as an outlet for its quartz. The hill-road now constructed does very well for enabling miners getting to and from their work; but the transit of quartz costs to the battery about £2 per ton. There are nine or ten companies working under this great disadvantage. The different parcels of quartz sold by these companies to the Furnace Company have ranged in value from £8 16s. to £117. I consider a fair estimate of the quantities of ore at the highest value, about 20 per cent, of the output; the balance, 80 per cent., may be graded downwards to the lowest assay-value mentioned. One thing essential to successful mining is cheap carriage; and, as I have said, a low-level road is necessary for this purpose, to which the mines on both sides of the gorge or valley can connect by means of wire tramways or shoots. The gorge is an exceedingly wild and precipitous one. The first bluff will require a tunnel of 500 ft. in length driven through it; so the first cost of this road must be great. The mining companies have, I believe, subscribed some £40 or £50 for the purpose of obtaining a survey and estimate of the cost. The engineer's estimate I understand to be between £4,000 and £5,000; but I think this could be cut down to under £3,000, and yet give a road quite suitable for all present requirements. The ordinary battery-crushing in this district (Karangahake) for the year has been 1,277 tons of quartz, for a return of 1,699oz. ldwt. retorted gold.

POST OFFICE AND TELEGRAPH DEPARTMENT (REPORT OF THE), FOR THE YEAR 1885.

APPENDIX TO THE JOURNALS OF THE HOUSE OF REPRESENTATIVES, 1886 SESSION I, F-01²²²

General Post Office, Wellington, 21st June, 1886. I have the honour to submit to your Excellency the report on the Postal and Telegraph Service for the year 1885, with a statement of revenue and expenditure to the 31st March last. I have, &c, Julius Vogel, Postmaster-General and Electric Telegraph Commissioner.

Page iv. 54 additional post-offices were established, 4 reopened, and 16 closed during the year:— Opened.

Karangahake, Thames

Page vi. The following new services were established:

Thrice weekly between Paeroa and Karangahake.

RETURN SHOWING THE POPULATION OF THE COLONY; THE POPULATION IN COUNTIES, BOROUGHs, AND ON SHIPBOARD; THE POPULATION IN RIDINGS OF COUNTIES, ROAD AND TOWN DISTRICTS.

APPENDIX TO THE JOURNALS OF THE HOUSE OF REPRESENTATIVES, 1886 SESSION I, H-31²²³

Page 7. Table III., showing the Populations of the different Counties, with Particulars for Ridings, Road and Town Districts, therein— continued. 28 March 1886.

County Ohinemuri.

Karangahake Riding: 290 persons, 196 Males, 94 Females

²²² <https://paperspast.natlib.govt.nz/parliamentary/AJHR1886-I.2.2.4.1>

POST OFFICE AND TELEGRAPH DEPARTMENT (REPORT OF THE), FOR THE YEAR 1885., Appendix to the Journals of the House of Representatives, 1886 Session I, F-01

²²³ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1886-I.2.3.3.42>

RETURN SHOWING THE POPULATION OF THE COLONY; THE POPULATION IN COUNTIES, BOROUGHs, AND ON SHIPBOARD; THE POPULATION IN RIDINGS OF COUNTIES, ROAD AND TOWN DISTRICTS., Appendix to the Journals of the House of Representatives, 1886 Session I, H-31

1886

John Dye La Monte²²⁴

Was La Monte a Con Man?

A cutting obituary published in Australia after his death certainly inferred that he was a con man. The suggestion was made that only a Bret Harte might do justice to his complex character. Harte was famously known for his short stories about the colourful characters in the Californian Gold Rush.

In retrospect, the New Zealand establishment definitely would not have invested in La Monte if they had had access to the communication and information systems that we take for granted in the 21st Century. Let us look at five warning flags that would have immediately come up.

First, La Monte obviously had no formal training as a geologist, or mining engineer, let alone as a metallurgist. Yet he inferred, or outright claimed, these qualifications at various times.

Second, the patents on water-jacketed furnaces and ore processing that he licensed to various companies were trivial, almost meaningless modifications, or did not exist at all.

Third, when he did deals to sell his furnaces in New Zealand, it was probably not fully realised that he and Kahlo were principally in the business of selling as many smelter systems as they could, using sweetening deals and extracting royalties from gullible companies. This was their business model.

Fourth, and crucially important, NZ investors seemed unaware of La Monte's disastrous involvement in the Australian silver mines, which had already resulted in a scenario which had an uncanny similarity to what was about to happen in Thames, i.e. not delivering on the contracted results, blaming others for not following protocols, then being dismissed/disappearing after selling his shares, leaving the investors urgently needing to bring in competent people to clean up the mess. This happened in 1884/85, just before the NZ ventures.

Finally, by 1885, he was committing the cardinal sin of trading while grossly insolvent.

La Monte was lucky that he would have been given the benefit of the doubt by the NZ establishment. They were well aware that the mining business was highly speculative and would accept the risks involved; so that, while some of their investments would make enormous profits, there would be others that were spectacular failures. And examples abounded of even experienced and well-qualified mining experts getting things wrong. For example, the metallurgist John Howell with a proven track record erroneously recommended the expensive expansion of the Te Aroha Silver and Gold Mining Company.

Of course, all the warning flags would not have mattered if the 'La Monte Process' had been successful in New Zealand. However, any hard-nosed experienced metallurgist would have warned that the likelihood of success was extremely low. Besides, La Monte was demonstrably incompetent even when

²²⁴ For background on La Monte, see: <https://www.thetreasury.org.nz/the-journal/john-dye-la-monte-the-wrong-man-in-the-right-place-at-the-right-time>

John Dye La Monte - The Wrong man in the Right Place at the Right Time.

it came to getting the process working under favourable conditions with silver at Sunny Corner in Australia. When George Beardsley was recruited from California (presumably from the company that La Monte had been president of), he had the process quickly running and generating huge profits...

So, in summary, what do we make of Mr John Dye La Monte? A cold analysis of the facts does not put him in a very good light. Multiple name changes, extreme license with the truth, promises that could not be kept, investors losing serious money, impenetrable financial affairs and a peripatetic habit of keeping ahead of his disasters. On the other hand, he displayed amazing energy, championed the development of silver mining in Australia, and in later years seemed to settle down doing nobody serious harm...

Perhaps John Dye La Monte really believed in his smelters and his mining expertise but, in his quest for fame and fortune, he often extended himself beyond his abilities. Whatever the case, he lived an extraordinary life, of which the people of New Zealand got just the briefest glimpse.²²⁵

13 January

Woodstock. Mr Littlejohn reports that the tram to connect the Maria reef with the bottom level is nearly complete. The tunnel is now in a distance of 68ft, and about 22ft more will reach the reef. The drive for the Woodstock reef is in 55ft, and is about 5ft from the reef.²²⁶

23 January

Woodstock. —The tramway from the Maria tunnel to connect with the hopper is practically completed, being 14 chains in length. A wire tramway with a hopper at each end is now in course of construction from the Maria tramway to the main line furnace tramway, and will probably be completed in about a fortnight.²²⁷

This must be the Woodstock No. 2 level tramway, on the eastern side of the Blow. A cableway delivers to the tramway beside the Waitawheta River.

26 January

Woodstock.— In the low level the Maria reef was met with, after a distance of 105 feet had been driven. At the first point of contact the level will afford 50 feet of backs on the reef and this will increase to 300 feet as work advances southwards. The Maria reef varies from 2 to 5 feet in thickness, and is composed of a kindly quartz intersected by dark blue seams, which are invariably found to be associated with both gold and silver, in this district. Samples assayed from this lode have yielded extraordinary percentages of gold and silver, the latter predominating, and the manager is now sorting the whole of the stuff for smelting purposes. The No. 2 level has now reached the hangingwall side of the Woodstock reef, which is about 3 feet 6 inches in

²²⁵ <https://www.thetreasury.org.nz/the-journal/john-dye-la-monte-the-wrong-man-in-the-right-place-at-the-right-time>

<https://web.archive.org/web/20191218075322/https://thetreasury.org.nz/lamonte/wilkins.htm>

John Dye La Monte - The Wrong man in the Right Place at the Right Time.

²²⁶ <https://paperspast.natlib.govt.nz/newspapers/THS18860113.2.12>

Thames Star, Volume XVIII, Issue 5298, 13 January 1886, Page 2

²²⁷ <https://paperspast.natlib.govt.nz/newspapers/TAN18860123.2.11>

Te Aroha News, Volume III, Issue 138, 23 January 1886, Page 2

width, and although there is no gold visible in the stone, it prospects for an all round battery return of fully one and a half ounces per ton. Good headway is being made, and the work of connecting the low level with the Horse Grade section of tramway, which is being done by means of an aerial section of tramway, and the whole line should be in complete working order about the 10th of the ensuing month. The search for limestone and iron ore is still being prosecuted, and several deposits of the latter have been discovered within easy distance of the furnace site, Mr Smith, assayer, has been experimenting with samples of this ore with very good results, and he is of opinion that there is in the neighbourhood at least one deposit of iron ore which is admirably suited for fluxing purposes.²²⁸

22 March

KARANGAHAKE DISTRICT.

(from our own correspondents.)

Woodstock Mine.— As the attention of the public has been for some time past, and is now to a great extent concentrated upon this mine, and the La' Monte furnance [furnace] connected therewith, we will commence with a description of the same. Most of the readers of the Herald are probably aware that the smelting furnance which has been for some months in course of construction is now perfectly completed, and as the first instalment of the necessary fluxes is now on its way to Karangahake, no time will be lost in commencing active operations. For this purpose the manager, Mr. Littlejohn, has been busily engaged during the last few days in transmitting ore from the mine, and a considerable quantity has already been put through the stone-crusher, and is quite ready for treatment in the furnace. At the time of my visit, on Monday morning, the three large hoppers were full of quartz, and the manager informed me that he has over one hundred tons ready to put through the stone breaker, and anticipates no difficulty in supplying a sufficient quantity to keep the furnace at constant work. A large staff of men are actively engaged on the mine itself, and a vast amount of what is technically known as "dead-work" has been got through since Mr. Littlejohn took charge. At present what is known as the tramway level [indeed, just above the No. 2 level tramway] has been driven in a distance of eighty-five feet, and it is intended to start stoping at once to open up the block. The reef here averages three feet in width, of which at present about fifteen inches is being saved for treatment. A parcel of ten tons was sampled and assayed by Mr. Smith, which resulted in a return of nearly £9 in value per ton, the greater proportion of which was silver. The intermediate level has been driven some 90 feet, and stoping operations were commenced last week, when some very rich stone was obtained, a trial parcel of which was also assayed by Mr. Smith, the well-known assayer, who declared its value as £62 10s per ton. I was shown some splendid-looking stone this morning, which had just been taken out of the leading stopes, and the manager informed me that he has already on hand over 10 tons of similar ore. This block will give some 80 feet of backs overhead, and about 120 feet between it and the lower level. There can be little doubt that the reef now being worked upon, and which for some years past has been known as the

²²⁸ <https://paperspast.natlib.govt.nz/newspapers/THA18860126.2.9>

Thames Advertiser, Volume XVII, Issue 5316, 26 January 1886, Page 3

Maria reef, will fulfil the anticipations of those who have for so long been working in the district, and prove itself rich in silver. Prospects have been obtained from it down to the level of the creek, some 400 feet below, and have given most encouraging returns. What is urgently needed to the further development of this reef, is a tunnel driven through the spur on a level with the lower tramway [would this become the Tourist tunnel?], and if the Government fulfil the promises made by Mr. Larnach when on a visit to this district, a great incentive will be given to mining operations, and a large tract of auriferous country opened up. A visitor to the Woodstock mine cannot fail to be favourably impressed with the ore now being won, and the very satisfactory manner in which the work is being carried on.

Kenilworth. —At the time of my visit the manager was engaged at the Ivanhoe battery superintending the treatment of a parcel of some 15 tons which was being crushed, and which I understand was shaping for a return of 1½ozs to the ton. A large quantity of ore is available for immediate treatment, and as the Maria reef runs into this ground it should prove a valuable property.

Crown.— Most of the readers of the Herald will remember the intense disappointment caused at the result of the first parcel of stone taken from this mine to the Thames furnace for treatment. Sanguine shareholders had expected a very high return, and private assays had been made of choice pieces of stone, which misled public opinion, and raised expectations which were doomed to inevitable disappointment. I must myself confess that I had assisted at some of these amateur assaying operations, and the buttons of bullion which my confreres and myself obtained from pieces of Crown ore were of the most astounding size (at least to us), and led us to hope for a very large return from the fifty ton-parcel sent down to the Thames. But we were all doomed to disappointment; our cup of fond and glowing hopes was ruthlessly flung to the ground, and we were sadder but withal wiser men. And yet we are prone to think that "some one had blundered," as assays of the same ore were made by competent assayers, and the results were widely different from those given by the gentleman who acts for the Smelting Company. But we are glad that arrangements have been made by which, in case of any discrepancy between the Smelting Company's return and the parties desiring to sell the ore, disputes can be referred to an arbitrator in the person of Mr. Bernewitz, the well-known assayer to the Bank of New Zealand at the Thames. This arrangement has given great satisfaction, and has done much to allay the feeling of irritation which was engendered by the result of the 50-ton parcel from the Crown mine. The manager, Mr. McGruer, informed me that at present the men are engaged in stoping a small block on the No. 2 lode, and are getting out some very good stone. A parcel of 10 tons is ready to be sent to the Ivanhoe battery, for crushing. What is known as the Crown reef has been traced by Mr. McGruer to a distance of 150 feet below the present working, where it is about six feet wide, and is a fine solid body of stone. Whilst resting for a short time, Mr. McGruer took a few pieces of stone from the heap, and crushed them in my presence, and the result was as fine a dish prospect of coarse gold as I have seen in Karangahake. These pieces were taken from a paddock of stone of similar character to that sent to the Thames furnace. In the stopes, the reef is some four feet in width, of which the manager is saving about two feet, and frequently meets with strong blotches of coarse gold, several of which were shown to me this morning, taken principally from the

foot wall. I noticed strong bands of flint, about eight inches in width, which are an excellent indication of gold. There are paddocked some 200 tons of second-class dirt and 15 tons of first-class, 10 tons of which will be submitted to the battery process. I venture to think the directors are quite wise in taking this course of treatment, as the battery will be able to save a very large percentage of the coarse gold which this stone contains. Mr. McGruer informed me that he is also working a lode which contains little gold, but a very large quantity of silver. The lode averages 9 inches, and has been cut in a trench some 60 feet further south. Two assays, made of fair samples selected by Mr. McGruer, gave returns of 72ozs and 210ozs of silver to the ton, and a very small percentage of gold. There are nine different lodes upon which work has been done in this mine, and it is one of the most promising mines of the district.

Welcome—It is intended to shortly resume operations in this mine. When the men were last employed hereon a shot was put in the cap of the big reef, and disclosed from four feet to five feet of splendid stone, some of which showed gold freely. The manager of the Crown informed me that he had no doubt that the main Crown reef traversed the Welcome mine.

Sutro. — It will be remembered that the returns from Thames furnace of two trial parcels sent down were most encouraging, and the men are now busily at work sinking. They have got down to a distance of over fifty feet, and are unearthing some really good ore. As I examined the paddock of quartz I could not help being struck with the similarity of some pieces of stone to that of the Maria reef of the Woodstock. This mine, as is the case with many others, requires a much larger staff to enable the manager to do anything like justice to the ground over which he has charge.

Diamond. — My next visit was to the Diamond. The same remark holds good here, and it is absurd to suppose that any good results can ensue from the meagre staff of which Mr. Lee has the oversight. I venture to express the opinion shared in by the most experienced men of the district, that there is not a more excellent block of ground in the whole of Karangahake than what is now known as the Diamond mine, and it is absolutely necessary that more men should be immediately put on to open up the many rich lodes traversing this mine. Mr. Lee, the manager, is at present doing what he can with a limited staff of four hands driving a low level to intersect the reef cut some short time since, and which showed gold so freely. Some good stone is being saved, and the reef now being worked upon is looking better as it goes down. At present they have driven in some 70 feet, and have cut three small reefs, and at the time of my visit Mr. Lee was expecting to get the main reef every moment. As this level is 40 feet below the higher one it will give some 60 to 70 feet of backs. I have no doubt that with a proper staff of men this mine would turn out similar parcels of stone to that which fetched £56 per ton at the Thames furnace.

Rose,— is the adjoining mine to the Diamond, and a parcel of stone is now at the Thames awaiting treatment. The manager is busily engaged in bagging some second-class dirt for treatment at the Ivanhoe battery. Mr. McGuire informs me that he estimates its worth at from 2ozs to 3ozs. He has on hand some five tons ready bagged from No. 2 reef, and is awaiting instructions as to its mode of treatment. Some of the men are stoping No. 1 reef, and obtaining

some good general dirt, and a new level is being started to cut No. 2 reef, which will give sixty feet of backs.

Adeline. — A stiff walk of about ten minutes up a winding path brought me to the now famous Adeline mine. When I last visited it some three months ago I was then struck with the character of the ore, and assisted in assaying some samples given to me, and was much struck with the size of the buttons of bullion obtained therefrom. I must confess that, in contradistinction to the case of the Crown, I was agreeably disappointed with the magnificent return from the Adeline, and I saw in the paddock this morning a good quantity of ore of a similar character. The men are now engaged in driving a low level 50 feet below the upper workings, and are already in some 50 feet. There is on hand some five or six tons of second-class dirt.

Dubbo. — Another stiff walk of a quarter of an hour brought me to this mine, which is manned, or rather undermanned, by three hands. The reef in the low level has been intersected, and connection has been made with both levels, and the men were just starting to break down the reef. There is about one ton of first-class dirt on hand, in several pieces of which I saw gold. I noticed that some of this stone was very similar in appearance to the Maria reef in the Woodstock, and a trial parcel of one ton, crushed two years ago by Ritchie, produced bullion worth only 37s 6d per ounce.

Imperial. — Mr Clements, the manager, reports that he is busily engaged sinking on the reef, and is down about 20 feet. The reef is three feet wide, and gold is seen every breaking down. A few days ago Mr Clements cut a new reef, which gives good dish prospects. There are only two men employed on this ground.

After having visited the whole of the mines at work on the field, I could not help being struck with the favourable results which are apparent to even a casual observer. With scarcely a single exception I was shown stone showing gold in every mine, which, taken in conjunction with the results of the multitudinous assays made from almost every reef on the field, and the satisfactory returns obtained at the Thames furnace, is proof positive that, provided sufficient capital be expended, a payable goldfield exists at Karangahake. But it is perfectly useless to expect more than meagre returns at present. With the single exception of the Woodstock, the number of men employed on the other mines is barely sufficient to satisfy the very moderate demands of the mining inspector, and the capital invested in so many different ventures had been concentrated on one or two mines, Karangahake would bear a different character to that which it has at present in the minds of the investing public. All eyes are turned towards the Woodstock furnace, and the results of the first month's operations are anxiously awaited. Of its ability to save the precious metals there can be not a shadow of a doubt, but the great bugbear will rest with the cost of treatment. If, on the other hand, ores containing galena and oxide of iron can be obtained at a cheap rate to blend with the purely silicious ores of Karangahake the success of the La Monte process will be placed beyond doubt, and the recent discovery of large lodes of carbonate of lead and oxide of iron in the Tui district (within ten miles of Karangahake) is tending to relieve anxiety on this score. But, if it should be proved that the smelting process is suitable only for the richer class of ores, we doubt not that a cheap mode of treatment will be obtained, and Mr. Reilly

[Railey], who has had large experience in treating ores of a similar character in Nevada, has been here for some three months past, and has proved satisfactorily that he can save 80 per cent, of silver and 90 per cent, of gold at a cost of 30s per ton.²²⁹

28 March

1886 New Zealand Census: County Ohinemuri.

Karangahake Riding: 290 persons, 196 Males, 94 Females.²³⁰

6 April

Another description of the Thames furnace can be found here: Auckland Star, Volume XVII, Issue 81, 6 April 1886, Page 4.

<https://paperspast.natlib.govt.nz/newspapers/AS18860406.2.49>

Isaac Railey arrives

29 April

... The new road from Mackay town to Karangahake is now quite complete and fit for ordinary cart and dray traffic.²³¹

26 April

Mr Railey arrived here yesterday, accompanied by a staff of men who are to be employed in the work of erecting new quartz-reducing machinery, which has all been ordered and is expected to be on the ground within six weeks from date.²³²

6 May

APPLICATION FOR A MACHINE SITE, Warden's Office, Thames, 5th May. 1886, APPLICATION has been made to me by Isaac Railey, for permission to occupy as a Machine Site, One acre of land situated at Waitewheta, Ohinemuri, as shown on Plan lodged with Application.

HAURAKI DISTRICT. APPLICATION TO FORM A WATER RACE.

Warden's Office, Thames. 5th May, 1886.

APPLICATION has been made to me by ISAAC RAILEY, for permission to construct a Water Race for Mining purposes, commencing at a point on the Waitewhata River, Ohinemuri, and terminating on the same creek 15 chains lower down, as shown on plan lodged in Warden's Office. The length of such Race is 15 chains [302 m] or thereabouts, and its intended course is along the bank of the creek. The main breadth and depth of such Race is 3 feet by 2 feet,

²²⁹ <https://paperspast.natlib.govt.nz/newspapers/NZH18860322.2.28>

New Zealand Herald, Volume XXIII, Issue 7591, 22 March 1886, Page 5

²³⁰ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1886-I.2.3.3.42>

RETURN SHOWING THE POPULATION OF THE COLONY; THE POPULATION IN COUNTIES, BOROUGHs, AND ON SHIPBOARD; THE POPULATION IN RIDINGS OF COUNTIES, ROAD AND TOWN DISTRICTS., Appendix to the Journals of the House of Representatives, 1886 Session I, H-31

²³¹ <https://paperspast.natlib.govt.nz/newspapers/BOPT18860429.2.12>

Bay of Plenty Times, Volume XIV, Issue 1980, 29 April 1886, Page 2

²³² <https://paperspast.natlib.govt.nz/newspapers/AS18860422.2.46>

Auckland Star, Volume XVII, Issue 95, 22 April 1886, Page 4

it is capable of carrying eight sluice heads of water, and the number of sluice-heads, of forty inches each, which it is proposed to appropriate is eight.

NOTICE is therefore given, that on the nineteenth day of May, 1886, a Licence will be granted to the above-named ISAAC RAILEY for the said Water Race, unless valid objection thereto be in the meantime made in writing and lodged at this Office, not less than seven clear days before that date.

HARRY KENRICK, Warden.²³³

27 May

Railey underway

KARANGAHAKE

About 12 tons machinery has been delivered on the site of the new quartz reducing works at Karangahake. The erection of the building and machinery under the able supervision of Mr Railey who is a typical Yankee of the straight-ahead type, is being rapidly proceeded with. A company has been formed in Auckland with a capital of £5,000 in 10,000 shares 500 fully paid up and 9,500 with 4s paid up. An influential board of directors has been appointed and Mr R. McDonald Scott is to be secretary &c. This will very favorably affect the whole of the field in the eyes of the public.²³⁴

This is the Karangahake Quartz Reduction and Mining Co. Limited. Usually shorthanded to Railey's Battery.

Richard K. Davis; who was he?

Davis was an Auckland accountant and commission agent, with shares in several Hauraki mining districts, his investment in the LaMonte furnace at Karangahake in 1886 would bankrupt him.²³⁵

R. K. Davis was a well-known citizen of Auckland. He became dazzled by the new scheme, and being interested in the Woodstock mine at Karangahake he conceived the idea of erecting a Lamont furnace for the Woodstock company. Mr Davis spent all the money at his command upon the furnace, which, however, did no better in Ohinemuri than at the Thames. The result was that he shortly afterwards became bankrupt, with liabilities to the amount of £10,496.²³⁶

10 June

Richard K. Davis.— At the end of May last year I entered into an agreement with the Woodstock Goldmining Company, Karangahake, to erect a furnace and subsidiary connections, in order to work the mine upon the smelting process. The price was to be £4000, to be paid out of the proceeds of the smelting, as set out in the agreement.

²³³ <https://paperspast.natlib.govt.nz/newspapers/THA18860506.2.15.5>

Thames Advertiser, Volume XVII, Issue 5473, 6 May 1886, Page 2

²³⁴ <https://paperspast.natlib.govt.nz/newspapers/BOPT18860527.2.14>

Bay of Plenty Times, Volume XIV, Issue 1991, 27 May 1886, Page 2

²³⁵ Philip Hart. Te Aroha Mining District Working Papers; No. 72 and 86.

²³⁶ <https://paperspast.natlib.govt.nz/newspapers/TO19070216.2.6>

Observer, Volume XXVII, Issue 22, 16 February 1907, Page 4

I received one-half of the mine as bonus for erecting the furnace. At several interviews with the proprietors after having commenced operation, their attention was drawn to the fact that, in our mutual interests, it was desirable the work should be done in a thoroughly substantial manner. They gave me then assurance that any extra cost beyond the £4000 should be allowed to me. This extra cost, including fluxes, amounted to 2450, making the total outlay £8500 or thereabouts.

My liability on this account amounts to £4000 (about), and the rest is out of my own pocket. The smelting process at Karangahake has not yet been in operation, although everything is in readiness for a 21 days' run. In consequence of the result of similar operations at the Thames being so unsatisfactory in the matter of expense, and the failure of Mr LaMonte to fulfil his agreement with regard to price, or cost per ton for smelting, a difficulty has been caused in obtaining the services of experts. The delay in getting returns for my outlay necessitated my calling a private meeting of my creditors in February last. The majority in number and value on that occasion decided to let me go on for four weeks under supervision of three creditors then appointed, and since then the estate has been virtually managed by these supervisors.²³⁷

For the full article, see the Appendices page 956

For RK Davis; a Postscript, see the Appendices page 957

Footnotes from Phil Hart documents which mention Davis.

Thames Advertiser, 9 June 1886, p. 2; Te Aroha News, 3 July 1886, p. 2; Auckland Weekly News, 22 September 1904, p. 19, 5 October 1905, p. 21; Observer, 16 February 1907, p. 5.

See Waikato Times, 5 July 1884, p. 3; Thames Advertiser, 9 June 1886, p. 2; Te Aroha News, 3 July 1886, p. 2.

See *New Zealand Herald*, 26 June 1883, p. 6; *Thames Advertiser*, 4 June 1885, p. 2, 9 June 1886, p. 2, 3 July 1886, p. 2; *Auckland Weekly News*, 22 September 1904, p. 19; *Observer*, 17 September 1904, p. 17, 16 February 1907, p. 5.

17 June

The Tarawera eruption was visible from the top of the ranges in Ohinemuri, and dust and ashes were falling freely subsequently, as far as Te Aroha and Karangahake.

Extremely cold weather is being experienced here, the frosts being very hard and giving the place an appearance in the early morning as though a heavy fall of snow had occurred.

The following resolution has been passed by the Ohinemuri County Council on the motion of the Chairman (Mr J. Cock) Resolved. That this Council to unite the local bodies in the districts of Thames, Tauranga, Whakatane, Piako, and Waikato, to co-operate with this Council with the object of eradicating the

²³⁷ <https://paperspast.natlib.govt.nz/newspapers/NZH18860610.2.4>

New Zealand Herald, Volume XXIII, Issue 7660, 10 June 1886, Page 3

Codlin Moth and other insect pests now infesting the Orchards of New Zealand.²³⁸

19 June

KARANGAHAKE.

Adeline. — Fair dirt still to hand from the stopes, and a parcel for crushing is being carted to the Ivanhoe battery. The road is still very bad here, and will be so until the bush is cleared sufficiently to allow the access of sun and wind. A good deal of money has been spent upon road making on this, the eastern side of Karangahake, but until the natural agencies of sunlight and air, have fair play, the track, owing to the nature of the country, will always be more or less troublesome.

Mr J. H. Walsh, who has been granted a transfer of his publican's license, from Owaharoa to Karangahake, is busy with preliminaries, and will start building immediately. The site of the new house, which will be called the Karangahake Hotel, is on the newly constructed County Road, from Butler's Road to the Suspension bridge, on the Western bank of the river.²³⁹

This must be in the Karangahake township, true right bank of the Ohinemuri River. There is no road beyond the new suspension bridge. That come later as the "gorge Road" 1890. An advertisement clarifies its location (see also June 29 entry below):

KARANGAHAKE HOTEL KARANGAHAKE.

J. H. WALSH (Late of Owaharoa Hotel, Owaharoa) This Hotel is most conveniently situated on the east bank of the Ohinemuri River, at the termination of the direct road from Paeroa, adjoining the Suspension Bridge; and is within easy reach of all the leading Mines, and Quartz Reduction Works.²⁴⁰

24 June

KARANGAHAKE

Karangahake Quartz Reducing Works. — Work is being carried on in the erection of the building of these works, with great spirit. The trolly track from the Rose camp on the County road is, considering the unavoidable steep grade, in very good trim. Excavating the building site is the chief work at present. The plant will consist of a battery of 10 head stampers, and a stone crusher, an amalgamator and a sub-plant of the Mackay Pans and settlers. The Pelton wheel is to be used as motor and the building will cover an area of 3600 square feet [334 sq m]. Several mines are pledged to support the new enterprise which is certainly well worthy of such support.

No flourish of trumpets preluded Mr Railleys advent here, as it did the theatrical entree of Mr LaMonte, but there is no doubt as to whom is due the

²³⁸ <https://paperspast.natlib.govt.nz/newspapers/BOPT18860617.2.9>

Bay of Plenty Times, Volume XIV, Issue 2000, 17 June 1886, Page 2

²³⁹ <https://paperspast.natlib.govt.nz/newspapers/TAN18860619.2.11>

Te Aroha News, Volume IV, Issue 157, 19 June 1886, Page 3

²⁴⁰ <https://paperspast.natlib.govt.nz/newspapers/TAN18861002.2.16.2>

Te Aroha News, Volume IV, Issue 172, 2 October 1886, Page 3

most praise. Upwards of 3000 shares have been taken up in the Company 4s paid up.²⁴¹

“The trolley track from the Rose camp on the County road” surely describes the location of the sled track that was used to access Railey’s battery site. LiDAR shows this track starting at the beginning of the modern Dubbo 96 track. This area beside the County Road could easily have accommodated a “camp”. The Rose mine was a little further around the mountain. The sled or sleigh track is frequently spoken of later. It still exists.

26 June

HAURAKI GOLD MINING DISTRICT. Warden's Office, Thames, 4th June, 1886. THE Applications for Licenses for Gold Mining purposes, under the Gold Mining Districts Act, 1873, specified in the Schedule here under, may be granted on MONDAY, the 28th day of June, 1886, unless valid objections thereto be in the meantime made in writing, and lodged at this office not less than seven clear days before that date. Plans and applications may be seen here. HARRY KENKICK, Warden.

SCHEDULE. No. 19. — Isaac Railey, Wolseley Claim; area, 8 acres 2 roods and 4 perches; situated at Karangahake, in the Hauraki Gold mining District. Bounded westerly and southerly by the Welcome, Crown, and Imperial Licensed Holdings, easterly by supposed unoccupied ground, northerly by Railey's Machine Site, and the Waitawheta Stream. Distinguishing mark on Pegs A.²⁴²

29 June

The new road from Butler's deviation to the Karangahake bridge is now quite finished, and is one of the best roads in the County.²⁴³

This stretch of road, roughly 1300 m, runs from almost Doherty’s Creek, where Butlers Track meets the Ohinemuri River, to the new bridge. Not beyond.

Butler’s Track still lives in the cadastre as a road, but that finishes at about the Karangahake School.

3 July

OHINEMURI GOLDFIELD. FROM OUR OWN CORRESPONDENT.

Karangahake Paeroa, Thursday.

Woodstock. --Matters are now approaching a crisis in the management of this mine. The equity of redemption of the furnace was to have been sold on Wednesday last at Tonk's mart Auckland, but up to the time of writing no news has been received concerning the sale. Until recently there was some hope that the Woodstock shareholders would have been unable [able?] to raise funds to buy or lease the smelter, but now it is discovered that there is a millstone round its neck in the shape of a £1500 mortgage which the buyer must first redeem. That hope, at least, is a fruitless one, as the shareholders in

²⁴¹ <https://paperspast.natlib.govt.nz/newspapers/BOPT18860624.2.14>

Bay of Plenty Times, Volume XIV, Issue 2003, 24 June 1886, Page 2

²⁴² <https://paperspast.natlib.govt.nz/newspapers/TAN18860626.2.21.5>

Te Aroha News, Volume IV, Issue 158, 26 June 1886, Page 4

²⁴³ <https://paperspast.natlib.govt.nz/newspapers/THS18860629.2.8.1>

Thames Star, Volume XVIII, Issue 5436, 29 June 1886, Page 2

the mine demur even to paying their own calls. The trouble is chiefly caused by the gross misstatements of Mr La Monte, who asserted positively that Karangahake ores could easily be smelted with the aid of about 30 per cent of flux to assist. Provisions was duly made to get that amount of flux, when it was found that it would require more than eight times the percentage of iron and limestone flux, viz., 240 per cent added to the quartz before it would properly flow. As all the iron ore was foreign to Ohinemuri, and had to be handled five or six different times, that made a wonderful difference in the estimated expenses. This matter, combined with the lack of forethought on the part of Mr R. K. Davis and others, has brought matters to their present pass. It is hoped, however, that arrangements will be made for a month's run of the furnace, in order that its capacity and capability may be really and practically known, and that the value of the Woodstock ores as treated by the fire process may be estimated also.

Monastery. — This claim is an old friend with a new face, it being the (late) Gladys mine. Prospecting is all that is being carried on at present. There is a good reef in the mine.

Ivanhoe. — The repairs are all but completed in the battery. There is a rumour, as to the Sir Walter Scott and this mine amalgamating. This is a desideratum, as the two mines can be very economically worked from one main level.

Quartz Reduction Company's Works. — Splendid progress is being made here. The frame work of the main building is complete, and the dam is also nearly finished. About 35 hands are at present employed.

Adeline. — A parcel of 40 or 50 tons of good grade dirt is being carted to the Ivanhoe battery for crushing purposes. The roads are in a terribly bad state here.

Rose. — Good quartz is coming to hand from the stopes. Crushing commences at the battery as soon as the Adeline cleans up.²⁴⁴

8 July

OHINEMURI GOLDFIELD.

Karangahake

It is now definitely settled that the fires of the Woodstock Furnace will be lit in about a week's time. Your correspondent has been favored with a perusal of a letter from headquarters in which it is stated that the furnace has been bought in on behalf of the trustees in R. K. Davis's estate and that they intend seeing the thing through. It is not well to prophecy concerning the future of anything connected with mining as there are, to use a popular phrase, wheels within wheels, there is not the slightest doubt however that given the fair starting of the smelter, no hitch in the supply of flux, and a little more foresight and common sense than was used at the LaMonte establishment at the Thames, that a new era will commence for Karangahake and the whole of the Ohinemuri Goldfield, with the first puff of smoke that rises from the furnace chimney.

There are rumours that the Woodstock mine has been partly "jumped" by a shrewd mining speculator here, who taking advantage of the general chaos that

²⁴⁴ <https://paperspast.natlib.govt.nz/newspapers/WT18860703.2.28>

Waikato Times, Volume XXVII, Issue 2182, 3 July 1886, Page 3

has characterised the bankruptcy of R. K. Davis, bought from the Official Assignee a portion of the Woodstock ground, known as the Leamington, which is said to contain some splendid ore.

Crown.— Mr McGruer manager of this claim has not been idle during the temporary suspension of the underlings. He has been doing a lot of fossicking and I am informed that his efforts have been well rewarded. There are more known reefs in this claim than in any other on the field.

Monastery. — This claim is situated at the bottom of the Waitawheta gorge not far from the new Battery works. Sometime ago it was known as the Gladys and was looked upon as a crack claim, but the re-action which set in after the LaMonte boom compelled the owners to forfeit.

Ivanhoe. — The work of renovating and refitting the machinery is now complete in the battery. The new Pelton wheel placed in lieu of the turbine appears to work well, and an early start will be made on quartz from the Adeline mine.

Sutro.— The tunnel which is being driven to intersect the winze is now in about 86 feet, and a similar distance is expected to bring the winze in hand. Country rather hard but improving.

Quartz Reduction Works (Limited) [Railey's] —Nothing fresh to report, but good progress both in the erection of the main building, dam, and water race.²⁴⁵

19 August

KARANGAHAKE

New Quartz Reduction Works (Limited) [Railey's battery].—The whole of the Machinery requisite is now on the ground and Herculean efforts are being made for an early start of the concern. Inside the establishment the stanchions supporting the can [cam] shaft have been fixed also the stamper boxes. The Mackay Pans are also in position. The entire plant from the timber to the most gingerbread casting is all of the very first quality, the casting especially being worthy of notice as being all local manufactures, made by Price Bros. Thames. Should the heavy fresh which has been experienced during the week, subside the dam framework will be shortly finished. The matter of transit of quartz to this plant will now occupy some attention. From the county track near which are located the chief Karangahake mines the grade is very steep to the new works, and unless a tramway or a short or some better means of transit than rough sledging is established it will put expenses on, that Companies can ill afford at present.

Woodstock furnace.—For the scene of unreliability commend me to this concern. From its very conception it has been a very Will o' the Wisp for misleading. When LaMonte first visited Karangahake with a load of novelty and a number of mysteries encircling his person he was listened to as an oracle. In his off hand yankee dialectic he spoke of the fortunes that were being slung over the tipheads, the quartz that was being saved as not being worth a hundredth of that thrown away. He picked at random pieces of hungry looking quartz and extracted by some esoteric alchemy large prills of

²⁴⁵ <https://paperspast.natlib.govt.nz/newspapers/BOPT18860708.2.12>

Bay of Plenty Times, Volume XIV, Issue 2009, 8 July 1886, Page 3

"bullion," and in short left an impression upon the credulous similar to that left upon a schoolboy after a midnight persual of Jules Verne.

He wanted to sell a furnace and like most commercial travellers whether travelling for a sewing machine at £10 or a smelter at as many thousands, a few slight exaggerations made no matter so long as the end justified the means. At this present moment however the major part of the quartz so jealously garnered up has been condemned by the assayer as worth nothing but for macadamising [road making] purposes. The fact of the matter is that unless foreign fluxes are introduced the Woodstock ores will not smelt freely and the cost of the fluxing outweighs the value of the ore. This is no fault of the system, which is the only true reducing system. The fault lies with the seller of the furnace whose words were that Karangahake ores would "flow like milk." The furnace was bought and erected on the strength of that statement. Hence these tears. As to the commencement of operations I can only paraphrase Cousin Jack's remark. "When it starts then-it starts."

Crown.—A test of the saving powers of the old and new battery processes is to be made when opportunity offers. A good sized parcel of quartz is to be sent to the new works [Railey's] and a similar one to the Ivanhoe Battery.²⁴⁶

The Woodstock Furnace (La Monte) has short run

2 September

KARANGAHAKE Considerable disappointment has been manifested at the poor return from the 20 tons ore smelted at the Woodstock Furnace. It is said that unless there is prospect of better success that the Company will adjourn any further operations *sine die*. The second class ore from the Woodstock mine is shaping for a return of over an oz. to the ton at the Ivanhoe battery.²⁴⁷

4 September

New Quartz Reduction Works. — During the past ten days the weather has been anything but favourable for outdoor work, and consequently but little headway has been made with the work of completing the dam and fluming. In the mill-house the whole of the machinery is now in position, and the tanks, 12 in number, for holding the crushed ore, are fast approaching completion.²⁴⁸

This is Railey's battery.

6 September

Karangahake, Friday. Woodstock, — Since the furnace shut down I have made some inquiry with regard to the general results attending the late smelting operations, and I find that the total quantity of stuff put through for the three and a-half days' run was approximately about 80 tons, made up as follows : —Iron ore, 42 tons ; quartz, 28 tons; lime, 4 tons; lead, 6 tons: total, 80 tons. The assay value of the quartz treated, after making a deduction of 15 per cent, for ordinary loss and moisture, was £496, and the amount of bullion

²⁴⁶ <https://paperspast.natlib.govt.nz/newspapers/BOPT18860819.2.20.2>

Bay of Plenty Times, Volume XIV, Issue 2026, 19 August 1886, Page 2

²⁴⁷ <https://paperspast.natlib.govt.nz/newspapers/BOPT18860902.2.8.1>

Bay of Plenty Times, Volume XIV, Issue 2032, 2 September 1886, Page 2

²⁴⁸ <https://paperspast.natlib.govt.nz/newspapers/TAN18860904.2.15.4>

Te Aroha News, Volume IV, Issue 168, 4 September 1886, Page 3

saved was about £290 in value, showing a loss of fully 60 per cent, on the assay value of the ore treated. As against that, there is £100 worth of bullion in the slag, flue dust, and furnace trimmings, which have all been reserved for future treatment. A large proportion of the loss may be accounted for by the fact that the interstices of the brick lining in the furnace are all filled with lead bullion, and the floor, as well as the rim of the crucible, or furnace "well," are also lined with a pretty thick coating of the same substance.

In short, the trial was not by any means a fair one, and it is to be hoped that the Company will see its way clear to give the process another chance by making provision for at least a fortnight's run before throwing up the sponge, and I am certain that the results will be more satisfactory to all concerned than was the case with the first venture.²⁴⁹

11 September

New Quartz Reduction Works Limited. The recent freshes have been very troublesome inasmuch as they have debarred the manager Mr Railey from finishing the dam and water race. The water is now fast subsiding however, and good headway should soon be made.

Large ore tanks 12 in number are being constructed for holding the pulverised quartz, all the machinery is now in place. It is worthy of remark that not a single accident has occurred, in the cartage of the plant machinery &c, from Paeroa to Karangahake. To those who know the country this is a praise worthy feat on the part of the carting contractors.²⁵⁰

21 September

New Quartz Reduction Works.— Mr Railey reports good progress considering the adverse weather. The fine weather now apparently coming on, will enable Mr Railey to finish the dam and water race, which is the chief work to be done. It is expected that the plant will start about November next.

None of the adjacent mines have as yet made any attempt at tram or other connection with the plant. This should be looked to by the directors of the various mines. Only about 14 chains [282 m] of tramway are required from the present County track to the mill, which would barely cost £200. The cost of transit at present from most of the mines to the works would be about 16s per ton, but with a tramway barely 2s. Thus the connection would soon pay for itself.²⁵¹

24 September

KARANGAHAKE FURNACE.

(from a CORRESPONDENT)

²⁴⁹ <https://paperspast.natlib.govt.nz/newspapers/AS18860906.2.47>

Auckland Star, Volume XVII, Issue 209, 6 September 1886, Page 4

²⁵⁰ <https://paperspast.natlib.govt.nz/newspapers/BOPT18860911.2.7.2>

Bay of Plenty Times, Volume XIV, Issue 2036, 11 September 1886, Page 2

²⁵¹ <https://paperspast.natlib.govt.nz/newspapers/THS18860921.2.16>

Thames Star, Volume XVIII, Issue 5508, 21 September 1886, Page 2

Now that the smelting furnace at present belonging to the Woodstock Gold Mining Company at Karangahake has been started, a short account of the plant may be of some interest to your readers.

It is now just a little over a year since the Woodstock Co. made arrangements with Mr. R. K. Davis, by which he was to erect this furnace and connect it with the mine, so that the quartz could be brought down to it. I may here mention that the claim itself is so rough and broken on the surface, and so difficult of access, that it was impossible to build the furnace there, and a site had to be chosen for it at a distance of about half a mile from the foot of the hill on which the mine is.

I need not say much here about the furnace itself, as so many people have seen the one at the Thames, and it has been so often described that the majority of your readers will be familiar with the appearance of it. The one at Karangahake is just the same as the Thames one, with this difference, that the machinery in connection with it, that is the blower and stone crusher, is here driven by water power instead of by steam, and the quartz and fluxing materials are all delivered at such a height above the feeding floor that they can be sent straight to the crusher and smelter without any further hoisting.

The water to drive is taken from the Ohinemuri river, which runs close in front of the furnace house, and is brought down a distance of 42 chains [845 m], in fluming three feet wide, and one foot six inches deep. This flume or race, is of timber all the way, the sides being 18 x 1¼, and the bottom, three boards of 12 x 1¼. For a distance of 18 chains [362 m] it has to be supported on trestle work, the trestles varying in height from 4 to 30 feet and averaging 22 feet apart. One of the spans, where it crosses the Waitawheta River, is 90 feet between the sole plates, and 47 feet above the river. The building of this bridge was quite an undertaking in itself. The legs, which are over 40 feet long, are 10 inches square, and rest on sole plates about seven feet above the summer level of the river. These legs lean in towards the centre, 15 feet off the perpendicular, which reduces the span at the top to 62 feet, and this is bridged over by two stringers, each of which is composed of two pieces of 14 x 4, strapped and bolted together, and supported underneath by a straining rod of 1½in. iron. The feet of the legs and the sole plates are securely bolted down to the rock, so as to resist the freshes in the river during the winter.

When the flume is full of water every ten feet of it holds over a ton weight, so it will be seen that this bridge would have a steady weight on it of over six tons, but by giving the flume more fall here than it has elsewhere the water rushes over quicker, and the flume is never more than half full, thus reducing the weight one half. When the bridge was finished it was tested with the flume full to make sure that it was fit for the work. The rest of the flume from the dam down has a fall of 1 in 500, or a shade more than ½ of an inch to every 20 feet, which makes the water run at about the same pace as a person at a smart walk.

When the flume reaches the back of the furnace house the water is delivered into a wooden tank 3 feet square and 7 feet deep, from the bottom of which a wrought iron pipe, 20 inches diameter, carries it into the building. At the bottom of this pipe is a cast iron nozzle, four inches diameter, controlled by a screw valve, and through this valve and nozzle the water is delivered on to the wheel, and as there is a clear fall of 40 feet from the tank down, you can

imagine with what force the water strikes the wheel. The wheel used is a Pelton, six feet diameter, with cups 12 inches wide, and when the furnace is in blast, the ordinary speed is 60 to 70 revolutions per minute. The wheel, shafting, pulleys, &c., are from the foundry of Messrs. A. and G. Price, of the Thames.

The whole of the timber used in the flume is the best heart of kauri, of which there is over 80,000 feet. At the top of the flume a dam had to be built, so as to raise the river about three feet above its ordinary level. This dam is over 100 feet across, and is built of kauri logs 18 inches square, bolted down to the rock, and planked with slabs three inches thick, and cross-planked with sawn timber 1½ inches. The bed of the river here is so uneven that some of these slabs are only three foot long, and some of them are 15 feet. The water is led into the flume through an iron grating of five-eighth inch bars, one inch apart [these can be seen today], and is controlled by the usual floodgates, traps, overflow, &c.

The quartz is brought down from the mine by a wire tramway and a horse tramway. It comes out of the mine in small trucks, which hold half a ton each, and is tipped out of them into twin hoppers, or, as some people would call them, binns. Each of these holds about 20 tons. These hoppers are on a hill, about 400 feet above the horse tram, at the end of which is a large single hopper of 50 tons capacity, and this large hopper is connected with the two small ones above, by means of two wire ropes, each 700 feet long, and 1¼ inches diameter, fixed at an angle of about 30 degrees, on which travel two box trucks, each of which holds one third of a ton. These trucks are worked by a wire hauling line three-eighths of an inch in diameter, and are self-emptying into the bottom hopper, so that the brakeman at the top fills them and works them himself, and he can send down about 25 tons a day.

The horse tram for taking the quartz from this large hopper to the furnace is 29½ chains [593 m, this places the large hopper at about the small bridge on the present Crown tramway track] long, and is laid with iron rails to a 2 feet 9 inches gauge. For the greater part of this length it is cut out of the side of a very steep hill, most of it through hard solid rock. About three chains of it is supported on trestlework averaging about eight feet high, and the whole of it has just sufficient fall to allow the full trucks to run down of their own accord, requiring only a slight touch on the brake now and then to regulate their speed. These trucks hold 1¼ tons each, and are hauled back empty by horses.

On arrival at the furnace house, the quartz is tipped on to a sloping platform, from whence it is fed into the stone crusher, and falls from it on the feeding floor of the furnace. The crusher is one of M. B. Dodge's No. 1, made by Savage, Son, and Co., of San Francisco, and can put through from 25 to 30 tons per day according to the size required. When the quartz comes from the crusher, it is mixed with the necessary fluxes, ironstone, lead, lime, &c., and is then fed into the smelter or furnace, from where it is drawn off below in a molten state, the quartz and fluxes as slag, which is thrown away, and the gold, silver, and lead at a lower level as bullion, which has still to be refined.

The house in which the furnace stands is a two storey building of galvanised iron, 45ft long, 30ft wide, and is 22ft high. From the end of this building, a large opening leads into the refinery, 34 x 30 feet, and one storey high. Here are two reverberatory furnaces, where the lead is extracted from the bullion,

leaving only the gold and silver, which is not treated any further here, but is sold to the banks in that form.

The blast for the smelter is got from one of Baker's rotary pressure blowers, No. 4½, made by Wilbraham Brothers, of Philadelphia, and when the furnace is working it runs about 120 to 130 revolutions per minute.

Immediately behind the furnace house rises a very steep hill, about 200 feet high, and it is on the top of this hill that all the materials used in the erection of the works, as well as all the coke for the furnaces, and the lead, lime, ironstone, etc., for the fluxes, are delivered by the carts which bring them from Paeroa, so that a self-acting tramway had to be constructed here to lower these things down. This tram is about 400 feet long, with a fall of 180 feet, and is laid with three lines of 24lb iron rails, having a passing loop in the centre. The rope used is of steel wire, five-eighths of an inch in diameter, and is worked by a powerful break [brake] at the top. The average load put on the trucks is about a ton, but some parts of the machinery which had to be sent down weighed over two tons. Besides the aerial or wire tramway already described, there is another one of the same sort connecting another part of the mine with the horse tram, and having similar hoppers, trucks, etc., as the first one, with this difference, that the wires on it are 1050 [320m] feet long. The quartz at this part of the mine not having proved so suitable for the furnace as was expected, this tram has scarcely been used yet.

Is this the wire that can be seen in RIC 358 Waitawheta Gorge cableway Aklib, coming from lower down the Woodstock Blow, and further to the east? This cableway, with chute, receives ore from the north or east side of the Blow. This must be the No. 2 level Woodstock.

I am informed that; altogether over four and a half tons of wire rope have been used in connection with these tramways, and over 20 tons of iron rails on the horse and self-acting trams. To give some idea of the amount of work done here, I may mention that at one time Mr. Haslett, who was manager for Mr. Davis, had 46 men at work under him, and during the five months the work was on hand, paid away for wages alone over £1900. Work was commenced on the 30th of July last year, and on the 30th of November, just four months after, the water was turned on to the Pelton wheel, and the machinery set in motion; and by the end of the year the whole of the works were so far finished that smelting operations might have been started at once, but for the difficulty of getting iron stone to flux with.

Not the least difficult part of this undertaking was the carting of the materials from Paeroa to here, a distance of five miles over roads that in many places had never had a shilling spent on them, and where at times it took three or four horses to take what on ordinary roads would be considered but half a load for one horse. Add to this that there was a river to ford over 200 feet wide, which, after a day's rain, would rise to the floor of the carts, and sometimes stop all traffic for a week, and remember that most of the carting was done in winter, and you have some idea of what Mr. Dickey, who had the contract for this work, had to contend with in transporting some 600 tons of material to the ground.

The levels for the water race, tramways, etc., were taken out by Mr. H. Crump, surveyor, Te Aroha, while the furnace itself was erected under the supervision of Mr. Lane, engineer, the whole of the works being under the immediate

direction of Mr. J. M. Haslett, late of Auckland, and the total cost being about £8000.²⁵²

2 October

KARANGAHAKE HOTEL KARANGAHAKE.

J. H. WALSH (Late of Owharoa Hotel, Owharoa), WISHES to inform his friends and the public generally that they will find everything in connection with his new Hotel most satisfactory. This Hotel is most conveniently situated on the east bank of the Ohinemuri River, at the termination of the direct road from Paeroa, adjoining the Suspension Bridge; and is within easy reach of all the leading Mines, and Quartz Reduction Works.

Terms will be found most moderate. Note. — Only first-class Liquors kept. STABLING AND PADDOCKS FOR HORSES.²⁵³

Karangahake Hotel opens

23 October

NEW BATTERY AT KARANGAHAKE.

Now that the new Quartz Reduction Plant, at Karangahake, erected by Mr Isaac Railey is almost completed, and great things being expected to result from its erection, a few particulars relating thereto will no doubt be of interest to many of our readers. The work was started last May. The site of this plant is romantic in the extreme, and not easy of access, being a considerable distance up the Waitawheta river, on the bank of which it is situated at an elevation of about fifty feet from the river bed; about 1500 to 1800 feet almost immediately below the Karangahake trig station, and about 1000 feet below the main county track to the various mines. Of course these figures are only approximate.

The dimensions of the building in which the machinery is erected is 40ft x 60ft x 20ft stud, boarded in on all sides, having 16 windows, roofed with galvanized iron, and having three or four separate entrances. Inside there are four separate platforms, excavated from the solid in the hill side. No. 1, or the highest platform, is the stamper floor 40ft x 16ft, on one half of which have been erected 10 head of stampers, set much closer than usual, and which are almost equal to new, having been purchased from the owners of the Caledonian battery Thames. It is believed these stampers will be fully equal to reducing 20 tons daily, and it is intended to add additional stampers as found necessary. The other half of this platform is reserved for the erection of a "dry crusher" on most improved principle, now being imported direct from England; and which it is stated will be capable of treating 12 tons of high class ore per day.

The motive power for driving this portion of the machinery will be derived by a belt from an intermediate shaft fixed overhead. Ore sent for treatment will, according to quality, be first passed through the dry crusher or reduced by ordinary stamper process.

²⁵² <https://paperspast.natlib.govt.nz/newspapers/NZH18860924.2.48>

New Zealand Herald, Volume XXIII, Issue 7751, 24 September 1886, Page 6

²⁵³ <https://paperspast.natlib.govt.nz/newspapers/TAN18861009.2.17.4>

Te Aroha News, Volume IV, Issue 173, 9 October 1886, Page 3

No. 2 platform is also 40ft x 16ft, and here have been ranged 12 tanks or settling vats, each 6ft x 5ft x 3ft deep, constructed of 2- inch kauri boards. Into the first of these the crushed quartz will be conducted by means of a shoot, direct from all the stampers, whilst several openings near the top in each tank permit the waste water and lighter substances to traverse through each tank, the final escape being into a pit outside the building by means of a shoot. As soon as No. 1 tank becomes filled with the crushed ore, the connecting holes with adjoining tank, already referred to, are closed, and the shoot conveying the crushed ore changed to No. 2, and afterwards to No. 3 and so on; by which means the lighter substances previously deposited in any tank will become incorporated with the heavier deposit and all be transferred to the pans together. As soon as a tank becomes filled (they are computed to hold about 4 tons each), the contents are emptied direct on to the adjoining platform which divides the tanks from the amalgamators, and which is slightly inclined towards the tanks, in order that the surplus water may drain off.

No. 3 platform is 40ft x 6ft, and on it are erected six amalgamators capable of treating half a ton of the crushed ore at a time, and driven direct by the main shaft, which runs underneath; each amalgamator having gearing independent of the other. The dirt for treatment is shovelled from the platform already referred to into the amalgamators whilst the latter are in motion. These amalgamators are so constructed that the dirt is kept constantly forced towards the centre, during treatment. The ore is generally treated in the amalgamators for four or five hours.

The last or No. 4 platform is 40ft x 18ft, and it is here the settlers, three in number, are stationed. Each of these settlers are capable of containing the contents of about four of the pans (or amalgamators) and are driven by a shaft running underneath and connected with the main shaft by a belt. The settlers are intended to be worked simultaneously except during cleaning up time, which would probably be about once a week. We have already stated there will be two processes at work, the battery or wet process for low grade ore, the dry for high class dirt; but the ore from both will be passed through the amalgamators and settlers.

The whole machinery will be driven by water power, a 6ft pelton wheel being used. This wheel is fixed at the bottom of an upright shaft 46ft deep 8ft x 3ft 6in connected with the creek by a tunnel, for the discharge of the water after it leaves the pelton-wheel. The water will have a direct fall to the wheel of about 44ft; being conveyed by iron pipes from the termination of the water race. From the wheel power will be imparted to the machinery by means of an upright shaft 46ft long with bevel gear, and 98ft [30 m] (12 inch six ply) of rubber belting, will connect direct with the main shaft. The water supply is derived from the Waitawheta river, by means of a water race 20 chains [402 m] in length 3ft x 2ft composed entirely of kauri (sawn on the spot) [ie pit sawn?] boards 2in thick at bottom 1½in at top. The dam across the Waitawheta river is at its widest part about 120 ft [36.5 m] at top, and at bottom about 100 ft. Its construction has been a work of great difficulty, and the many occasions when a considerable amount of work has been undone by successive floods, would have disheartened many less determined men. The main stays are all of kauri or totara 12in to 14in square; and faced to 8ft above ordinary water level, with 2in kauri boards, the lower portion being double faced. There is also a

break at the side 6ft higher than the dam, to protect the flume. The greatest height of the cross pieces is about 16ft.

In the construction of the works some splendid kauri has been used. We saw junks²⁵⁴ 7ft in diameter being cut up by the sawyers, and the construction of both fluming and dam, has been carried out in a most substantial manner. We understand nearly all the machinery and fittings have been supplied from the foundry of Messrs Price Bros., Thames; and the excellent character of the work turned out by this firm is too well known to need comment.

Mr Railey expected to have everything ready for starting at an earlier date, but the wet winter has greatly retarded the work, and to those who know from practical experience the condition of the roads and tracks over which the plant had had to be transported, the wonder is that work had not to be discontinued till summer weather set in; and it is certainly a mystery to us how Mr Dickey, the contractor for carting, ever succeeded in conveying some of the heavier and unwieldy portions of the plant to the scene of operations in winter time, and his charge for carting will have to be high indeed to compensate him for the difficult, disagreeable, and dangerous work he undertook.

However, everything in connection with the plant is now well nigh completed, and another week or two should suffice for the carrying out of the few odds and ends still remaining to be attended to. Very sanguine hopes are entertained by those interested in the Karangahake goldfield that Railey's plant will be the means of resuscitating the field, and there is no doubt that Mr Railey thoroughly understands what he is about. Something to revive the present depressed state of affairs is sadly needed, and we sincerely hope the process shortly about to be thoroughly tested, will be found applicable to the class of ore supplied. The gold is so extremely fine that it is absolutely essential for good results that the quartz be very finely pulverised to set it all free; and the pans now erected should prove quite equal to the work. Similar pans are very extensively used in America, and with most satisfactory results.

One thing struck us most forcibly on the occasion of our visit, viz , that whilst the work of erecting the crushing plant has been steadily in progress for months past, apparently no effort worthy of the name, has been or is being made to provide crushing dirt in any considerable quantity; and to effect the necessary connections between the various mines and the battery with respect to the Crown, Sutro, Diamond, Adeline, Dubbo, Kenilworth, and other mines in the vicinity, work should have been long since started in the direction of preparing for the transport of quartz from mines to crushing plant in order to thoroughly test its capabilities and the value of the quartz treated by this method. It is high time the directors in the various mines that can avail of this new and expensive machinery, constructed at so great a cost and in the face of such great difficulties, should rouse themselves from their lethargy, and start work in real earnest. It must be disheartening in the extreme to those who have shown such faith in the field, and such dogged determination, by erecting this plant in the face of much to depress and discourage them, to see so little being done in the direction indicated. Government too might very reasonably be asked to grant a subsidy towards the construction of the roads, tracks or tramways necessary to connect the mines with the battery; and we hope to be

²⁵⁴ Timber term? These were large kauri trees.

able at an early date to report that these works are in active progress, and men put on to break out quartz; so far, we understand it is probable that the first, parcels of dirt will be received from the Sutro and Crown and both of these claims can forward quartz of excellent quality.

In conclusion we would strongly advise all interested in mining and who can manage to spare the time to pay a visit to this new plant at an early date, and they may rest assured they will see much to interest them, and receive the greatest courtesy and attention at the hands of Mr Railey, who is ever willing to answer any questions put to him and to impart information gathered from his long and varied experience in mining; and we do most sincerely trust his new plant will fulfil all that is expected of it, and exceed his most sanguine expectations, for he richly deserves that success should crown his efforts.²⁵⁵

The description above gives the following dimensions for Railey's battery:

No.1 40x16ft, No.2 40x16ft, No.3 40x6ft, No.4 40x18ft, 20ft stud, 16 windows.

That is a footprint of 40x56ft, or 12.2x17m total area (207.4 sq m). Quite a large building.

6 November

New Quartz Reduction Works. — I have much pleasure in informing your readers that this plant is now complete in every sense of that word, and at the preliminary trial of machinery which took place on Wednesday last, the whole concern worked in the most satisfactory manner possible. Although the construction of this plant was surrounded with innumerable difficulties, the work has been carried out in a most substantial and workmanlike style, which reflect considerable credit on the designer, Mr Railey, as well as upon the men who were engaged under his supervision. The manipulation of quartz will be commenced next week, and the first parcel to be treated will be from the Sutro mine, where there is a large tonnage awaiting transmission and this work is now being carried on by several teams of horses.

Ivanhoe. — A start has been made to form the line for a tramway between the present wire section and Liddells' reef. As soon as this is finished the manager believes that he will be able to keep the battery fully employed in the reduction of average quality crushing dirt.²⁵⁶

Sutro.— Mr Dickey reached the mine to day with several teams of horses, for the purpose of conveying quartz to Railey's mill, when the work of reduction will be started early next week, provided the weather holds up, and the sleigh track proves equal to the demands made upon it.²⁵⁷

Thames Advertiser KARANGAHAKE.

Comstock.—This mine is, I believe, the first in the colony that has ever been worked for chloride of silver alone, and, therefore, its development opens up a new era in the history of mining. It was discovered by that well known

²⁵⁵ <https://paperspast.natlib.govt.nz/newspapers/TAN18861023.2.11>

Te Aroha News, Volume IV, Issue 175, 23 October 1886, Page 2

²⁵⁶ <https://paperspast.natlib.govt.nz/newspapers/TAN18861106.2.10.4>

Te Aroha News, Volume IV, Issue 177, 6 November 1886, Page 2

²⁵⁷ <https://paperspast.natlib.govt.nz/newspapers/THA18861106.2.16>

Thames Advertiser, Volume XVII, Issue 5629, 6 November 1886, Page 2

prospector Mr T. Liddell, who has been in the district for many years, and the very fact of his making such a discovery leads up to the conclusion that, the last 12 months' experience has not been utterly devoid of good results. The lode upon which work is now being carried on is partly composed of quartz and partly of cement, throughout which there are unmistakeable indications of silver chloride, and it averages 12 inches in thickness. At present work is confined to an underhand stope, which is being carried along the outcrop of the lode, and from which there is no gold, whatever, obtainable, either by the fire or water process. As soon as there is enough stone to grass to form a fair trial parcel, it will be sent to Railey's plant for treatment, and should the results prove satisfactory, the proprietors will then go in for a systematic development of the mine.

Monastery.—Satisfactory progress is being made with the formation of the line for the tramway to connect this mine with Mr Railey's plant, which is located just 7 chains distant from the main level, where there is now a trial parcel of quartz ready for transit and treatment.

Sutro.—The manager expects to break through from the winze to-night and this will complete the connection between the main and intermediate levels which are 120 ft apart. Mr Dickey reached the mine to-day with several teams of horses, for the purpose of conveying quartz to Railey's mill, when the work of reduction will be started early next week, provided the weather holds up, and the sleigh track proves equal to the demands made upon it.

Ivanhoe.—The formation of the line for the tramway from Liddell's reef to connect with the wire section at the old workings is being rapidly advanced towards completion. When this line is open for traffic the manager will start permanent work on the reef, from which, he expects to obtain sufficient good stone to keep the battery moving for some time to come.

Opposition.—This mine is located north of, and next to, the Ivanhoe, and embraces the same line of reef which, in his ground, averages 3ft in thickness...

Adeline.—Campbell and party, contractors for extending the low level, are fast approaching the desired goal, which is a point immediately underneath the present workings. There is no change to note in the stopes, where the lode is about 18 inches in width, and the stone is equal in quality to that which is now under treatment at the Thames. On the No. 2 reef the prospecting level is now in a distance of 60ft, and, though the stone yields mortar prospects of gold, it is not, as yet, good enough to warrant its being saved for treatment.²⁵⁸

11 November

Karangahake, Friday,

New Quartz Reduction Works.—This plant is now complete in every respect, and at the preliminary trial on Wednesday last the machinery worked in the most satisfactory manner, which reflects great credit on Mr Railey, under whose supervision the construction of the whole concern was carried out. If this gentleman had not been possessed of indomitable pluck and perseverance,

²⁵⁸ <https://paperspast.natlib.govt.nz/newspapers/THA18861106.2.16>

Thames Advertiser, Volume XVII, Issue 5629, 6 November 1886, Page 2

he never could have overcome the innumerable obstacles with which he had to contend, and now it is to be hoped that he will be equally as successful in extracting a high percentage of the metal contained in the ore which will be subjected to his process for treatment.

Sutro.—The work of conveying quartz from this mine to Railey's plant is proceeding, and the work of reduction will be started as soon as there is enough quartz on hand for that purpose.

Monastery. — Rapid progress is being made with the formation of the line to connect this with Railey's plant.²⁵⁹

This connection from the Monastery will include the cable across the Waitawheta, which will be described a little later. A swing bridge is added below this cable later.

13 November

KARANGAHAKE.

During the past week this district has been favoured with a good number of visitors, and amongst others I noticed Messrs Murray, manager of the Bank of New Zealand, and Adams, manager of the Bank of New South Wales, Thames, who made a thorough all round inspection of Mr Railey's new plant, upon the success of which prosperity in the immediate future for this district is now considered in a great measure to depend. The proprietors of this plant are not meeting with that amount of encouragement from the mine owners which their pluck and perseverance deserves.

Several of the leading mines, though located within easy distance of the plant, have made no effort whatever to effect the necessary connections, and now that the whole concern is in perfect working order there is not a particle of stone ready for treatment. The directors of the Crown, which is one of the principal mines in the neighbourhood, offered to send a 5 ton trial parcel, but this Mr Railey refused to treat, on the grounds that it was unfair alike to the mill and the mine to deal with small lots of that description, especially when it is a well known fact that there is an abundance of stone at the mine awaiting treatment.

Early next week, however, the Sutro will be in a position to send a large tonnage of stone, and judging from appearances this mine should be able to keep the mill running continuously for some time to come.

Sutro. — The winze connecting the upper and lower levels was completed yesterday, and a start will be made today to send quartz to Railey's mill which will very probably commence crushing operations to-morrow.

Adeline, — The tender of Mr James Brown for the tailings from the crushing at the Moanatairi battery, Thames, was accepted as follows : — No. 1, 5 tons, £12 10s per ton, and for No. 2, 17 1-3rd tons, at £6 8s per ton. The total amount thus obtained from the tailings will be about £173. The tailings from the late crushing at the Thames proved of such high value the mine manager has been instructed to bag the tailings from the crushing at the Ivanhoe battery and forward them to Mr Melrose, Thames, for tenders and sale.²⁶⁰

²⁵⁹ <https://paperspast.natlib.govt.nz/newspapers/AS18861111.2.46>

Auckland Star, Volume XVII, Issue 266, 11 November 1886, Page 4

²⁶⁰ <https://paperspast.natlib.govt.nz/newspapers/TAN18861113.2.10.1>

15 November

Starting the Railey Plant.

At Karangahake Mr Railey's plant started crushing operations at noon to-day, and the whole concern works admirably. The parcel of quartz under treatment is from the Sutro mine, which will be able to keep the mill fully employed for some time to come.²⁶¹

Thames Advertiser

Monastery.—This claim will very shortly be in a position to send a parcel of quartz to Railey's battery, the tramway to connect therewith being now in an advanced stage of completion.

Crown.—The intermediate level has been driven along the course of the No 2 lode for a distance of 60ft, but the stone coming to hand at present is not very high grade. From the stopes above the low level on the same reef some very good stone is being grassed, with every prospect of improvement as work advance southwards. At one time I thought that this would be the first mine in the district to avail itself of Mr Railey's plant, but the directors have allowed the Sutro to step in before them, and now they will have to wait for a couple of months to get another chance to treat their stuff....²⁶²

Railey's Battery starts 15 November.²⁶³**27 November**

Paeroa Friday. The Adeline Co. are sending a parcel of 50 tons to Railey's mill. The return should be a magnificent one, considering that the new process has been proven to save from 30 to 50 per cent. more than the old battery system.

Karangahake Quartz Reduction Works. —The crushing completed of Sutro ore is as follows No. 1: 14 tons, 2240 lbs to the ton [ie a ton of 2240 lbs], yielded 106ozs bullion, value, 10s per oz. The tailings, by fire assay at Bank of New Zealand, contained only 1oz 12dwts 16grs of silver, and only a slight trace of gold. No. 2: 14 tons yielded 18ozs bullion, value, 14s 6d per ounce. The tailings have not yet been tested. The above result of No. 1 proves the process a complete success, as the tailings possess no commercial value.

Adeline. The mine manager reports:-

...There are about nine tons of quartz to grass, a portion which will be sent to Railey's battery for a test the first opportunity.

Crushing: We will be ready for bagging ore about Thursday next. I therefore beg to suggest that the directors decide within the next few days as to choice

Te Aroha News, Volume IV, Issue 178, 13 November 1886, Page 2

²⁶¹ <https://paperspast.natlib.govt.nz/newspapers/THA18861115.2.11>

Thames Advertiser, Volume XVII, Issue 5636, 15 November 1886, Page 2

²⁶² <https://paperspast.natlib.govt.nz/newspapers/THA18861115.2.16>

Thames Advertiser, Volume XVII, Issue 5636, 15 November 1886, Page 2

²⁶³ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1887-I.2.1.4.5/3>

GOLDFIELDS, ROADS, WATER-RACES, AND OTHER WORKS IN CONNECTION WITH MINING (REPORT ON)., Appendix to the Journals of the House of Representatives, 1887 Session I, C-05

of battery. If we crush again at the Moanataiari I shall have to order 400 three-bushel bags; while if we take the stone to Railley's, I think we could manage with what we have on hand. The 35 tons of tailings now bagging for the Thames leaves us only 200 bags for quartz. I think Railley's plant will give satisfaction, and do justice to the stuff. The tailings will be all bagged by to-morrow night, and if all goes well, shipped per Kotuku on Thursday. Twenty nine tons are already on the wharf at Paeroa. The mine manager wired yesterday (Thursday):—"740 bags tailings shipped to-day for Thames per Kotuku."²⁶⁴

We learn that ore is transported to Railey's in 3-bushel bags [bushel = 8 English gallons, 36.4 litres, therefore bags are 109 litres (quite heavy if filled with ore)]. Also, tailings from Moanataiari battery, and now also from Ivanhoe battery are being saved and sent to Mr Melville for tenders and sale. Not sure who to.

Liddell's reef tramway

7 December

IVANHOE (KARANGAHAKE). The tramway connecting Liddell's reef with the aerial section has been finished, and crushing operations for this mine have been started, the stone already attesting its value by making a good show of amalgam on the plates.²⁶⁵

Liddell's reef and tramway are high on the northern side of Taukani ridge.

9 December

Ivanhoe (Karangahake). —The crushing now proceeding is shaping very satisfactorily, and the manager will put on all stampers next week [at their own battery].

Monastery. —The machinery for the continuous wire tramway connecting with Railey's plant arrived to-day, and will be immediately put into place.

Tui Creek.— Mr C. A. Cornes has put a test parcel of two tons of dirt through Railey's plant, but the result has not been made known, it being for private information.

Most of the Adeline ore is on the Paeroa wharf en route for the Thames.²⁶⁶

14 December

Ohinemuri County Council.

The ordinary monthly meeting of the above Council...

Tramway to Railey's Plant, Karangahake

Mr McDonald Scott sent in a letter stating that the mines interested in the construction of the above-mentioned tramway were prepared to subscribe a sum of £150 if the County would find £50, and this would entitle them to

²⁶⁴ <https://paperspast.natlib.govt.nz/newspapers/NZH18861127.2.27>

New Zealand Herald, Volume XXIII, Issue 7806, 27 November 1886, Page 5

²⁶⁵ <https://paperspast.natlib.govt.nz/newspapers/THS18861207.2.17>

Thames Star, Volume XVIII, Issue 5574, 7 December 1886, Page 2

²⁶⁶ <https://paperspast.natlib.govt.nz/newspapers/WT18861209.2.9>

Waikato Times, Volume XXVII, Issue 2250, 9 December 1886, Page 2

receive the Government subsidy of £200, which would bring the total amount up to £400. The work could be carried out under the auspice of the council, and when completed the line could be handed over to the battery company as previously agreed upon. —The chairman said that the Council never agreed to hand the tramway over to the battery company, and he did not consider it would be fair to the public to do so...²⁶⁷

McDonald Scott is the secretary of the Karangahake Quartz Reduction and Mining Co. Limited. It is this plan that comes to grief the following year.

28 December

Dubbo.—The mine manager reports : — Sledge Road: The contractor for the sledge track from the mine to the Adeline Road finished to-day. He has made a good job of it, and I think will work well.²⁶⁸

31 December

Monastery. — The ground tram is finished, and the aerial tram across the Waitawheta almost completed. A parcel of quartz is ready for transit to Railley's new Quartz deduction Works.²⁶⁹

Who was Isaac Railey?

Born in America on 1836 to I. T. Railey and Hestia ? Thomas. Isaac Railey married Rachel B. Dawson and had 5 children. He passed away on 1904 in Braidwood, New South Wales, Australia.²⁷⁰

A contractor in Auckland, filed for bankruptcy April 1885.

Notice is hereby given that I, Isaac Railey, of Auckland, in the Provincial District of Auckland, in New Zealand, Contractor, have this day filed in said Court at Auckland a petition to be adjudged a Bankrupt. Dated this 16th day of April, 1885.²⁷¹

He had been a contractor for the last four years²⁷². What sort of contractor, and how is it that only a year later he is erecting a battery in the wilds of Karangahake? What did he know about gold saving?

The Adelaide Observer of February 13, 1869 shines some light:

Silver Mining.—Mr. Isaac Railey, a gentleman who, we understand, has had considerable experience in matters connected with silver mining at the St. Arnaud's and other mines in Victoria, the Nevada Mines, California, Mexico,

²⁶⁷ <https://paperspast.natlib.govt.nz/newspapers/THA18861214.2.11>

Thames Advertiser, Volume XVII, Issue 5661, 14 December 1886, Page 2

²⁶⁸ <https://paperspast.natlib.govt.nz/newspapers/NZH18861228.2.38>

New Zealand Herald, Volume XXIII, Issue 7831, 28 December 1886, Page 6

²⁶⁹ <https://paperspast.natlib.govt.nz/newspapers/THS18861231.2.17>

Thames Star, Volume XVIII, Issue 5593, 31 December 1886, Page 2

²⁷⁰ https://www.ancestry.com.au/genealogy/records/isaac-railey-24-1b7lrh9?geo_a=r&geo_s=us&geo_t=au&geo_v=2.0.0&_ga=2.239452739.1182977309.1603601932-1543433799.1603601932&o_iid=41019&o_lid=41019&o_sch=Web+Property

²⁷¹ <https://paperspast.natlib.govt.nz/newspapers/NZH18850417.2.49.5>

New Zealand Herald, Volume XXII, Issue 7305, 17 April 1885, Page 8

²⁷² <https://paperspast.natlib.govt.nz/newspapers/NZH18850418.2.5>

New Zealand Herald, Volume XXII, Issue 7306, 18 April 1885, Page 3

and other parts of the world, arrived here two or three weeks ago, under engagement to several of the silver mining Companies whose properties are adjacent to the Almanda, for the purpose of testing in a more satisfactory and complete manner than can be determined by assaying alone the value of the argentiferous deposits on their claims, the future remunerative working of which can in this way be more thoroughly ascertained.²⁷³

In 1867, under the heading: Applications for Patents for Inventions.

Isaac Railey, of Melbourne, engineer, for an invention of “Improvements in the Construction and Working of Amalgamating Pans”; 24th September, 1867.²⁷⁴

And then under: **Scientific Patents.** Notice to Proceed.

The undermentioned applicant must give notice, on or before the date specified, of his intention to proceed:-

Isaac Railey, engineer, Melbourne. Improvements in the construction and working of amalgamating pans. February 10.²⁷⁵

In the Leader, a Melbourne newspaper, 30 May, 1868:-

ABSTRACTS OF RECENT SPECIFICATIONS.

Isaac Railey, engineer, Melbourne. Improvements in the construction and working of amalgamating pans. Title altered by supplementary specification to *Improvements in the construction and working of pans for the more complete reduction of auriferous and other quartz and earthy matter and the amalgamation of metals contained therein*. The pan is of cast iron, covered on the bottom with cast steel plates. The pan surrounds a vertical shaft, to which is attached a hollow iron casing, having a muller at its lower extremity, to which are attached shoes or face plates of steel to correspond with the plates on the bottom. These shoes are fastened by a wrought iron rivet cast in the shoe and riveted to the muller. Three copper plates are suspended in the pan above the muller, and these may be raised or lowered at pleasure, their purpose being to arrest the finer floating particles. These plates are carried so as to guide the material as it is fed into the centre of the pan. The material after passing under the grinding surface is discharged at the outer surface into mercury, with which the space between the bottom plates, and the side of the pan is filled. The material is thus brought into connection with agitated mercury, but the mercury itself is not subjected to the pulverising operation.

Claim.— The improvements whereby the pulverisation of the mercury is avoided.²⁷⁶

²⁷³ <http://nla.gov.au/nla.news-article158935697>

THE WEEK'S NEWS. (1869, February 13). Adelaide Observer (SA : 1843 - 1904), p. 4.

²⁷⁴ <http://nla.gov.au/nla.news-article185503798>

GOVERNMENT GAZETTE. (1867, October 5). The Age (Melbourne, Vic. : 1854 - 1954), p. 6.

²⁷⁵ <http://nla.gov.au/nla.news-article197430130>

SCIENTIFIC. (1868, February 1). Leader (Melbourne, Vic. : 1862 - 1918, 1935), p. 26.

²⁷⁶ <http://nla.gov.au/nla.news-article197426153>

SCIENTIFIC. (1868, May 30). Leader (Melbourne, Vic. : 1862 - 1918, 1935), p. 8.

OK, so a mining engineer with experience in America and Australia, with silver ores, and inventor/modifier of a type of amalgamating pan. Hence Railey's Pans. He has moved to New Zealand by October 1871.

In the Daily Southern Cross (ie New Zealand), 4 October, 1871: Mr Isaac Railey occupies the premises known as the Lion and Lamb Hotel on Chancery Street. He is reported as manufacturing, and exporting to Honolulu, barrels for sugar. "The energy of Mr. Railey in thus taking steps to extend Auckland's trade deserves success."²⁷⁷

Notice

The Partnership hitherto existing between ISAAC RAILEY and THOMAS BELL, under the style of Bailey [Railey] and Bell, Quartz Grating Manufacturers, &c, has this day been dissolved by mutual consent. Auckland, October 22, 1873.²⁷⁸

He appears in the press again 1875, 1876, and then again 1885, bankrupt.

Intriguingly, a report from 26 August 1868, of an Isaac Bailey in Thames (his name was occasionally confused in the press):

Accident. —A man named Isaac Bailey was brought up by the paddle steamer Duke of Edinburgh yesterday, from Sortland, having met with a serious accident by falling down and breaking his leg, whilst walking along the flat at Graham's Town, on Saturday last. The unfortunate man has been conveyed to the Provincial Hospital.²⁷⁹

Was this Railey, was he visiting Thames?

Railey's Battery

A full description from AJHR can be seen in the Appendices, page 965

See also RAILEY'S BATTERY, WAITAWHETA GORGE in the Treasury Journal.²⁸⁰

Why did Railey choose the site for his battery?

Aboriginal (John McCombie), having a wee rant, said this in March **1891**:

...a "mining expert" was imported all the way from England to supervise the working of the mines, and he accomplished his mission after the manner of "mining experts" as a rule...

McCombie is talking about the manager of the Crown Company mine, vice Capt. Coward.

...he had squandered the bulk of the company's available capital in the erection of bogus machinery on a rotten foundation, in a most inaccessible spot, where it is neither use nor ornament, but is simply a monument of the imbecile manner in which goldmining affairs are conducted generally. Years

²⁷⁷ <https://paperspast.natlib.govt.nz/newspapers/DSC18711004.2.42>

Daily Southern Cross, Volume XXVII, Issue 4402, 4 October 1871, Page 7

²⁷⁸ <https://paperspast.natlib.govt.nz/newspapers/DSC18731025.2.2.5>

Daily Southern Cross, Volume XXIX, Issue 5048, 25 October 1873, Page 1

²⁷⁹ <https://paperspast.natlib.govt.nz/newspapers/NZH18680826.2.12>

New Zealand Herald, Volume V, Issue 1483, 26 August 1868, Page 3

²⁸⁰ <https://www.thetreasury.org.nz/the-journal/raileys-battery-waitawheta-gorge>
<https://web.archive.org/web/20191223012229/https://thetreasury.org.nz/RaileysBattery/RaileysBattery.htm>

ago a quartz crushing and fairly good gold saving mill was erected in the same place [Railey's], and after running for a few months it was closed down almost entirely on the score of its not being accessible to the surrounding mines. In this, as in all other gold mining affairs, experience teacheth nothing. It would appear to be the sole aim and object of each successive mining expert to outpace his predecessor in the prosecution of idiotic schemes, regardless of consequences to his employers.²⁸¹

So why that location? Water power! And proximity (if not access) to many mines, is my suggestion. The Ivanhoe battery water supply dam was at the exit of the Waitawheta gorge, the Woodstock furnace(s) dam likewise on the Ohinemuri. So these sources/locations were not available to him. Railey needed a site that gave him water power, wasn't in the steepest part of the gorges, and was close to a number of early mines. And Railey appears to have been someone not easily daunted by the terrain. See a useful discussion by JCF Johnson, *Getting Gold*, in the Appendices, page 955.

Railey was working for the Karangahake Quartz Reduction and Mining Co., not using his own money (bankrupt a year earlier), and probably keen to prove himself with this new venture. Haste may have contributed to site selection. The work of transporting to the site, and erection of battery and water race, was pushed ahead through the winter months.

Mr Railey expected to have everything ready for starting at an earlier date, but the wet winter has greatly retarded the work, and to those who know from practical experience the condition of the roads and tracks over which the plant had had to be transported, the wonder is that work had not to be discontinued till summer weather set in; and it is certainly a mystery to us how Mr Dickey, the contractor for carting, ever succeeded in conveying some of the heavier and unwieldy portions of the plant to the scene of operations in winter time, and his charge for carting will have to be high indeed to compensate him for the difficult, disagreeable, and dangerous work he undertook.²⁸²

The County Road gave access to many of the mines, and in a straight line, the battery was not far away. It appears that Railey/the company expected the miners, or the Council, to provide the connections. A self-acting incline was eventually built, but apparently never, or little, used.

Karangahake Reduction Works. — Writing to Mr. R. McDonald Scott, Mr. Railey says:—"Tenders for tramway, and clearing bush one chain wide, close on Monday, to be finished in nine days. The other part will be let in two tenders, to hurry it on—hoppers and wire tram in one, ground tram in the other. I am trying to get them to have it done in April."²⁸³

So how did he get the machinery to the site during construction?

Details of this feat by Mr Dickey are lacking, but probably via the County Road, to roughly where the present Dubbo 96 track veers off, and then sledge track to battery.

²⁸¹ <https://paperspast.natlib.govt.nz/newspapers/THA18910307.2.17>

Thames Advertiser, Volume XXIV, Issue 6860, 7 March 1891, Page 2

²⁸² <https://paperspast.natlib.govt.nz/newspapers/TAN18861023.2.11>

Te Aroha News, Volume IV, Issue 175, 23 October 1886, Page 2

²⁸³ <https://paperspast.natlib.govt.nz/newspapers/NZH18870202.2.52>

New Zealand Herald, Volume XXIV, Issue 7861, 2 February 1887, Page 6

There is a hint of this at the start of the Dubbo 96 track. A recently viewed map (Karangahake claim map Jan 1895) shows a track to the battery in this location. LiDAR confirms the existence of the sled track, and also the self-acting incline. Both are navigable today.

The following snippets speak to the nature of the track:-

From the county track near which are located the chief Karangahake mines the grade is very steep to the new works, and unless a tramway or a short or some better means of transit than rough sledging is established it will put expenses on, that Companies can ill afford at present.²⁸⁴

A start was made on Tuesday to send a parcel of five tons to Railey's, but the rain rendered the steep track too slippery to cart upon.²⁸⁵

Cassel Gold Extracting Company [at the old Railey's site]: The progress of this Company's works has been retarded through want of timber, the sledge track (never very good) being almost impassible since the last rain...²⁸⁶

More on Railey in the Appendices, page 961 and 970.

Summary 1886

Although largely complete in 1885, the La Monte (Woodstock) furnace remains untried for over half the year.

Mr Railey, an American, arrives in April, to start erecting his new battery. By late May construction is underway. This is for the Karangahake Quartz Reduction and Mining Co. Limited. Usually shorthanded to Railey's Battery. It will be situated on the true left bank of the Waitawheta River, a little upstream of the worst of the Waitawheta Gorge. A dam and water race will provide power via a pelton wheel. The battery will be in close proximity with several of the more promising mines, but without means of transporting ore in the rugged terrain.

At end August, the La Monte furnace has a short run with 28 tons of ore. It showed "a loss of fully 60 per cent, on the assay value of the ore treated"²⁸⁷ It is not used again. "This furnace was afterwards purchased by the company"²⁸⁸.

The La Monte furnaces are suitable for galena ores; but for the form in which silver occurs in the Karangahake and Waihi districts, bring principally as sulphides, chlorides, and, tellurides, with at least 90 per cent. of silica, these furnaces are not suitable, because the large amount of flux required to make the slag run freely prohibits this class of treatment from being adopted. Two of the La Monte furnaces are erected, one at Grahamstown, and the other at

²⁸⁴ <https://paperspast.natlib.govt.nz/newspapers/BOPT18860819.2.20.2>

Bay of Plenty Times, Volume XIV, Issue 2026, 19 August 1886, Page 2

²⁸⁵ <https://paperspast.natlib.govt.nz/newspapers/NZH18870218.2.47>

New Zealand Herald, Volume XXIV, Issue 7875, 18 February 1887, Page 6

²⁸⁶ <https://paperspast.natlib.govt.nz/newspapers/TAN18890601.2.12.1>

Te Aroha News, Volume VI, Issue 373, 1 June 1889, Page 2

²⁸⁷ <https://paperspast.natlib.govt.nz/newspapers/AS18860906.2.47>

Auckland Star, Volume XVII, Issue 209, 6 September 1886, Page 4

²⁸⁸ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1887-I.2.1.4.5>

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Karangahake. The former was worked for several months, and the latter only made a small trial-smelting.²⁸⁹

Into the Spring Railey continues to progress his battery, dam and water race construction. However, “none of the adjacent mines have as yet made any attempt at tram or other connection with the plant”.²⁹⁰ This will become a major issue in subsequent years. “The dimensions of the building in which the machinery is erected is 40ft x 60ft x 20ft stud, boarded in on all sides, having 16 windows, roofed with galvanized iron, and having three or four separate entrances. Inside there are four separate platforms, excavated from the solid in the hill side.”²⁹¹

In November a trial crushing was made at Railey’s Battery. “Although the construction of this plant was surrounded with innumerable difficulties, the work has been carried out in a most substantial and workmanlike style, which reflect considerable credit on the designer, Mr Railey, as well as upon the men who were engaged under his supervision.”²⁹² Horses and the “sleigh track” will be used to forward the first ore from the Sutro mine to the battery.

The Monastery mine, a little downstream, and on the other side of the river, start forming a tramway connection with the battery. They erect the cable (and possibly the swing bridge) across the river.

“Several of the leading mines, though located within easy distance of the plant, have made no effort whatever to effect the necessary connections, and now that the whole concern is in perfect working order there is not a particle of stone ready for treatment.”²⁹³

15 November. “Starting the Railey Plant. At Karangahake Mr Railey's plant started crushing operations at noon to-day, and the whole concern works admirably. The parcel of quartz under treatment is from the Sutro mine, which will be able to keep the mill fully employed for some time to come.”²⁹⁴

The crushing of the Sutro ore is completed end November, and the process is hailed as a “complete success”²⁹⁵.

By year’s end, the Monastery mine’s connection with the battery is nearing completion, and there is discussion on an incline tramway from the County Road to the battery.

²⁸⁹ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1887-I.2.1.4.5>

GOLDFIELDS, ROADS, WATER-RACES, AND OTHER WORKS IN CONNECTION WITH MINING (REPORT ON)., Appendix to the Journals of the House of Representatives, 1887 Session I, C-05

²⁹⁰ <https://paperspast.natlib.govt.nz/newspapers/THS18860921.2.16>

Thames Star, Volume XVIII, Issue 5508, 21 September 1886, Page 2

²⁹¹ <https://paperspast.natlib.govt.nz/newspapers/TAN18861023.2.11>

Te Aroha News, Volume IV, Issue 175, 23 October 1886, Page 2

²⁹² <https://paperspast.natlib.govt.nz/newspapers/TAN18861106.2.10.4>

Te Aroha News, Volume IV, Issue 177, 6 November 1886, Page 2

²⁹³ <https://paperspast.natlib.govt.nz/newspapers/TAN18861113.2.10.1>

Te Aroha News, Volume IV, Issue 178, 13 November 1886, Page 2

²⁹⁴ <https://paperspast.natlib.govt.nz/newspapers/THA18861115.2.11>

Thames Advertiser, Volume XVII, Issue 5636, 15 November 1886, Page 2

²⁹⁵ <https://paperspast.natlib.govt.nz/newspapers/NZH18861127.2.27>

New Zealand Herald, Volume XXIII, Issue 7806, 27 November 1886, Page 5

AJHR 1887

Published 1887, but largely reporting on 1886.

See the document: Parliamentary Papers for the complete texts.

See the Appendices for all the reports for the 1887 year, page 961

GOLDFIELDS, ROADS, WATER-RACES, AND OTHER WORKS IN CONNECTION WITH MINING (REPORT ON).

APPENDIX TO THE JOURNALS OF THE HOUSE OF REPRESENTATIVES, 1887 SESSION I, C-05

Page 2

Tramway from Karangahake Track to Railey's Battery. —There has been a new battery erected in the gorge of Waitawheta Creek, about a mile and a half above the junction of this creek and the Ohinemuri River, for the treatment of gold- and silver-ores. From the parcels of ores which have been treated it has given very satisfactory results. The side of the range from the Karangahake Track is very steep down to the creek where the battery is erected. A dray-road could only be constructed at a great expense, and the character of the country is more suitable for the construction of a self-acting inclined tramway, which is estimated to cost £400. Of this amount the Government has authorized a subsidy of £200.²⁹⁶

GOLDFIELDS.

APPENDIX TO THE JOURNALS OF THE HOUSE OF REPRESENTATIVES, 1887 SESSION I, C-06²⁹⁷

WARDENS' AND WATER-RACE REPORTS.

AUCKLAND GOLDFIELDS.

No. 2. Mr. Inspector McLaren

to the Under-Secretary of Mines. Inspector of Mines' Office, Thames, 15th April, 1887.

I have the honour to forward mining report for Hauraki North and South Gold-mining Districts for year ending the 31st March, 1887.

Page 16. Ohinemuri Goldfield. Karangahake District.

Monastery Gold-mining License. —The ground held under this license comprises about nine acres, and is situated on the east [north] side of the Waitawheta Gorge. This ground was formerly held by the Gladys Company, who obtained some splendid stone from a reef which is supposed to be a continuation of the Golden Crown lode. Owing to the want of communication with the then existing batteries, and the great cost of making a road to these through the gorge, which was estimated at £4,000, this company did not see its way to start work, and consequently the mine was forfeited on account of not working. The present owners saw an opportunity of profitably working the

²⁹⁶ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1887-I.2.1.4.5>

GOLDFIELDS, ROADS, WATER-RACES, AND OTHER WORKS IN CONNECTION WITH MINING (REPORT ON)., Appendix to the Journals of the House of Representatives, 1887 Session I, C-05

²⁹⁷ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1887-I.2.1.4.6>

GOLDFIELDS., Appendix to the Journals of the House of Representatives, 1887 Session I, C-06

mine when they learned of the position that Mr. Railey had fixed on for the erection of his reduction-plant, which is situated about 7 chains [141 m] higher up on the opposite side of the gorge, and at once started vigorously to work to make the necessary connections between their workings and the battery by the construction of tramways, of which there are three sections, the first being a self-acting wire-tram-way. This leads into a hopper at the head of the ground-tramway, which is 200 ft. below the working-level. The second section is a ground-tramway, which winds round the face of a rocky cliff for a distance of 8 chains to a platform constructed opposite the battery. From this point another wire tramway is connected with the battery-machinery to haul the trucks across the river. The whole of these connections are now completed, and working satisfactorily...

This was for the Monastery Gold-mining Company. This infrastructure is above and slightly upstream from the "Crown Stope" (true right bank of the Waitawheta River), and includes a levelled platform (the terminus of the self acting wire, and hopper site), remains of the ground tramway cut into the cliff, and the anchor point of the last remaining cable crossing the river to Railey's battery.

The description makes clear that there is a self-acting wire tramway, from the workings (adit), and a second wire tramway to haul trucks across the river to the battery. It doesn't mention a swing bridge, as we see in photographs, so it may or may not have been there at this time. It seems that this crossing was a combination of wire and bridge.

Later, the Crown Company connect to the above infrastructure by cutting a tramway into the cliff, with bridge, hauling their ore trucks by cable to the levelled platform. The current walkway follows this cutting in the cliff.

It is expected that there will be a parcel of 50 tons ready for treatment at Railey's Battery in the course of the present month. The parcels already treated gave a result of £5 3s. 9d. per ton by Railey's treatment. One ton of ore has been sent to Freiberg for the purpose of arriving at the best mode of treating this class of ore. A parcel of 2cwt. was also sent to San Francisco for the same purpose. The return from the latter was £9 18s. 7d. per ton of 2,000lb.; the return from the former has not yet come to hand.

Woodstock Mine. —In connection with this mine there is a very complete smelting-furnace on the La Monte principle. This furnace has been connected with the mine by a very extensive system of ground- and wire-tramways and hoppers. There are two wire-tramways, which are 700 ft. and 1000ft. in length respectively. One ground-tramway 2,800 ft. long is constructed round the contour of the hill to the hoppers at the head of one of the wire-tramways, and from the foot of the wire-tramway a long horse-grade tramway is constructed to the furnace. A trial of a few days was given to the furnace, when 28 tons was put through for 603oz. of bullion, which, however, was nearly all silver, as it proved to be worth only 8s. 10d. per ounce. After the trial of the same class of furnace at the Thames this was considered sufficient proof that the smelting-furnace was better adapted for galena ores than those in the Thames and Ohinemuri Districts. After this trial the mine was for some time idle, being protected; but latterly portions of it have been let to tributers, who intend to make trials of the stone at Railey's new reduction-plant. The works done in the mine are an upper level driven on the Maria Reef for a distance of 110 ft. from the east side of the spur, and stoping over this level 40ft. by 24ft., leaving

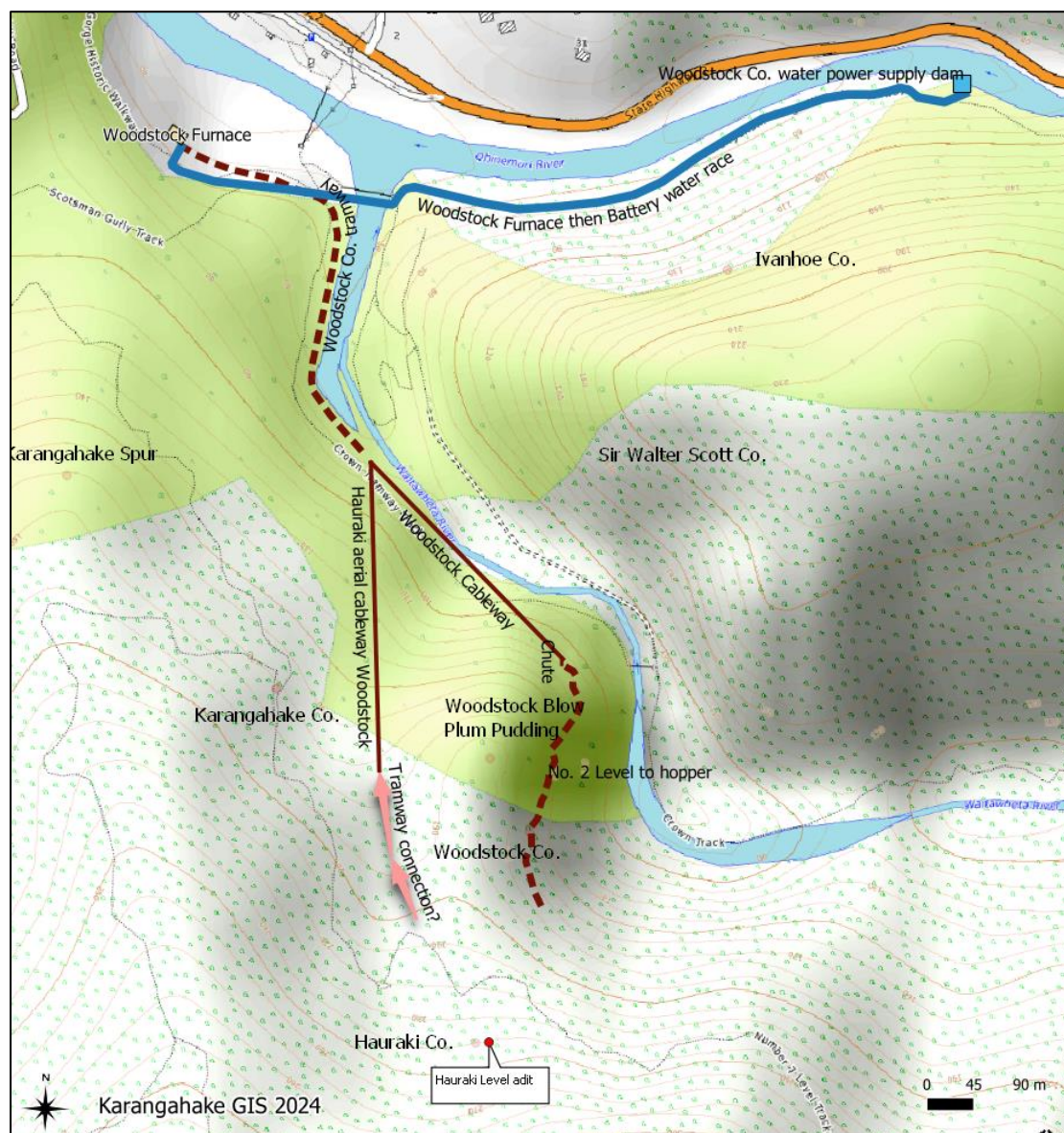
backs for 120 ft. overhead intact. A second level 115 ft. long was also driven 50ft. below the above level, and stopes 40ft. by 20ft. taken out, and a winze sunk between these two. A winze was also sunk 28ft. below the second level. There is about 500 tons of quartz to grass from this mine which has not been treated...

The quantity of quartz treated in this district at both of the batteries (Ivanhoe and Railey's) was 1,130 tons 1,220lb., for 2,447oz. 15dwt. retorted gold.

The ground tramway distance of 2,800 ft must be an error. It would reach all the way to the trig! 280 [256m] yards perhaps? This would then match the No. 2 level tramway.

Railey's Battery AJHR

A full description can be seen in the Appendices, page 965



Woodstock Furnace, now including No. 2 Level tramway and aerial cable.

1887**1 January**

Karangahake being reached, Railly's new plant was made. The descent to this is as easy as falling off a log, and savours somewhat of that operation, the plane being considerably more inclined than the persons descending it. The time occupied in getting down the track is not worth mentioning. It was, however, some seconds. Mr Railley was caught in the act of weighing out the Sutro amalgam, and received his visitors with an easy grace.

Mr Railey himself is highly reputable at Karangahake. He is less of a man than an institution, a characteristic citizen of a grand nation, he is that desirable hybrid of intellect and muscle which should be to New Zealand what the yeoman was to England. The *modus operandi* of the entire plant was shown to Mr Grace and the triumph of the new system over the old "smashing up" process was evidenced by the fact that out of 497½oz amalgam taken from the crushing of 16 tons Sutro dirt only 17½ were taken from the plates. This represents what would be saved by the ordinary battery, the ballance 480 ounces, or rather the bullion contained in it would have under that system been sent to the bottom of the creek to await the advent of a more scientific generation...²⁹⁸

Railey is well thought of. Note the three different spellings of Railey, and the dry humour in the first paragraph.

22 January

OHINEMURI COUNTY COUNCIL.

The monthly meeting of the above council ... Correspondence. — Outward ; Re Proposed Goldfield Works: To the Hon Minister of Mines, applying for £ for £ subsidies on the undermentioned works:

Making connection by ground tramway between the Karangahake-Te Aroha hill track [County Road] and Railey's Quartz Reduction plant; estimated cost L400. This would serve to connect the Adeline, Crown, Dubbo, Diamond, Rose, Welcome, Leamington, and other mines with the new quartz reduction works.

For wire tramway to connect the Monastery mine with the above new plant; estimated cost L200.

For continuation of the main Karangahake-Te Aroha hill track at an estimated cost of L600...²⁹⁹

The ground tramway between the Karangahake-Te Aroha hill track (County Road) and Railey's Quartz Reduction plant is to turn into a political wrangle. Other than the tramway and "bridge" across the river constructed by the Monastery mine, it would be the only tram connection with the new battery.

Inspecting Engineer Gordon had this to say:

²⁹⁸ <https://paperspast.natlib.govt.nz/newspapers/WT18870101.2.21>

Waikato Times, Volume XXVIII, Issue 2259, 1 January 1887, Page 2

²⁹⁹ <https://paperspast.natlib.govt.nz/newspapers/TAN18870122.2.15>

Te Aroha News, Volume IV, Issue 188, 22 January 1887, Page 2

Tramway from Karangahake Track to Railey's Battery. —There has been a new battery erected in the gorge of Waitawheta Creek, about a mile and a half above the junction of this creek and the Ohinemuri River, for the treatment of gold- and silver-ores. From the parcels of ores which have been treated it has given very satisfactory results. The side of the range from the Karangahake Track is very steep down to the creek where the battery is erected. A dray-road could only be constructed at a great expense, and the character of the country is more suitable for the construction of a self-acting inclined tramway, which is estimated to cost £400. Of this amount the Government has authorized a subsidy of £200.³⁰⁰

The Monastery mine was high above what we now call the Crown Stope. The same reef, even? This company put in the infrastructure that we still see today; the tramway bench on the true right bank of the Ohinemuri running upstream from an excavated platform, and the swing bridge and cable across the river. One cable remains. The excavated platform is below the steeper, rougher section of the walkway upstream of the Crown Stope. When the Crown Company opened up their No.6 Level (River Level adit, 1892), they carved a steep tramway into the cliff, plus bridge, to connect to the Monastery tramway. This is now part of the walking track (see entry for 24 November 1890).

Mr Warden Stratford:

Monastery Mine.—This mine is situated nearly opposite Railey's Battery, and across the Waitawheta River. Eight chains of a tramway connects with the battery.³⁰¹

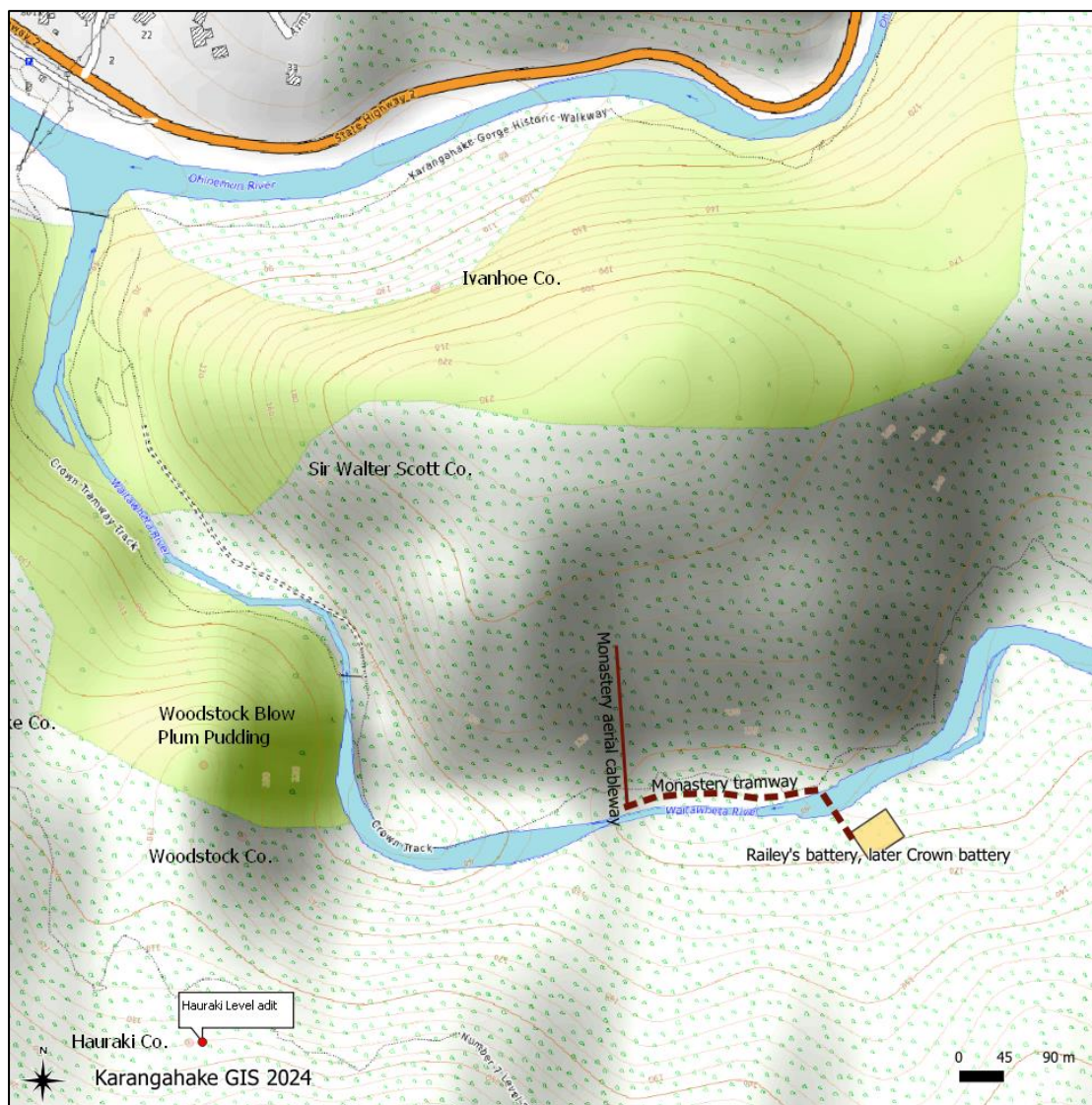
Mining Inspector Mr G. Wilson:

Monastery Gold-mining License.— The ground held under this license comprises about nine acres, and is situated on the east side of the Waitawheta Gorge. This ground was formerly held by the Gladys Company who obtained some splendid stone from a reef which is supposed to be a continuation of the Golden Crown lode. Owing to the want of communication with the then existing batteries, and the great cost of making a road to these through the gorge, which was estimated at £4,000, this company did not see its way to start work, and consequently the mine was forfeited on account of not working. The present owners saw an opportunity of profitably working the mine when they learned of the position that Mr Railey had fixed on for the erection of his reduction plant which is situated about 7 chains higher up on the opposite side of the gorge, and at once started vigorously to work to make the necessary connections between their workings and the battery by the construction of tramways, of which there are three sections, the first being a self-acting wire-tram-way. This leads into a hopper at the head of the ground-tramway, which is 200ft below the working-level. The second section is a ground-tramway, which winds round the face of a rocky cliff for a distance of 8 chains to a platform constructed opposite the battery. From this point another wire-tramway is connected with the battery-machinery to haul the trucks across the river. The whole of these connections are now completed and

³⁰⁰ Mr. H. A. Gordon, F.G.S., Inspecting Engineer, to the Hon. W. J. M. Larnach, C.M.G., Minister of Mines.— Mines Department, Wellington, 5th May, 1887. Page 2.

³⁰¹ Appendix to the Journals of the House of Representatives, 1887 Session I, C-06 Warden's Report, Mr Warden Stratford. Page 4.

working satisfactorily. The reef in this ground is exposed on the surface for a height of about 400ft. upwards from the river, the average width of which is 12ft. It is expected that there will be a parcel of 50 tons ready for treatment at Railey's Battery in the course of the present month.³⁰²



Monastery mine infrastructure. The map is representational only.

A steep aerial cableway delivered ore to a platform cut into the side of the river; it is still there. Then a tramway that is glued to the cliff beside the Waitawheta River, and a swing bridge to the battery site. The Crown Company modify this route by cutting a tramway into the cliff from the river level entrance to the platform.

1 February

Tenders for clearing the line of tramway to the new mill were opened to-day by the chairman of the county council. That of Joseph Kelly was accepted at £6 10s per chain.

³⁰² <https://paperspast.natlib.govt.nz/parliamentary/AJHR1887-I.2.1.4.6>

GOLDFIELDS., Appendix to the Journals of the House of Representatives, 1887 Session I, C-06. P16-17

The mill [Railey's] is now at work on Woodstock dirt. This will be followed by Monastery, Rose, Diamond, Dubbo, Leamington, and other claims crushing, each of which may be relieved on as likely to give A1 returns.³⁰³

2 February

Karangahake Reduction Works. — Writing to Mr. R. McDonald Scott, Mr. Railey says:—"I hope the result of the Adeline was satisfactory to all. The results of the Crown, from what the others got, will be another surprise to them again. I will give you full particulars to-morrow, after retorting. The last is going through the separators while I write (ten p.m.). Woodstock is bringing on from the furnace to the mill to-day; will start crushing in the morning. Rose is also bringing stone. All want to be first now; I will have to take them in turn as it comes to the mill, as it will not do to keep the mill waiting again for one more than another. Dubbo and Diamond are both getting ready for coming to the mill. From appearance, there will be no lack of ore for some time now. Tenders for tramway, and clearing bush one chain wide, close on Monday, to be finished in nine days. The other part will be let in two tenders, to hurry it on—hoppers and wire tram in one, ground tram in the other. I am trying to get them to have it done in April. Report of crushing forward to-morrow. The last two lots have taken more time than they should, as the water for feeding pans and stampers was very low; the pump now will stop that. No lack of water in the river - ten times more than we are using running over the dam at present."³⁰⁴

15 February

Fire

(PER WIRE-OWN CORRESPONDENT.)

Karangahake. Serious bush fires have been raging here all day Sunday, and at one time it was feared that a large amount of damage would result to mining property. The smithy belonging to the Crown mine was quickly reduced to ashes, and considerable difficulty was experienced in saving the fluming on Railey's water race, in fact, had it not been for the precautions taken by that gentleman in clearing off all inflammable matter around this plant some time since, the whole concern would have been consumed yesterday.

Considerable indignation, is felt here about the action of the local body in delaying the work of constructing the tram-way to connect Railey's plant with the County track. In a great measure the future of the whole of the district depends upon a cheap method of transporting quartz from four mines to the mill, and it was a very short-sighted policy on behalf of the Council not to push on with this work at all hazards. The very existence of the County depends upon the revenue derivable from goldfields - the ordinary rates only amounting to about £250 per annum, and therefore the Council should do its best to foster and aid the development of this industry by every possible legitimate means.³⁰⁵

³⁰³ <https://paperspast.natlib.govt.nz/newspapers/WT18870201.2.7>

Waikato Times, Volume XXVIII, Issue 2272, 1 February 1887, Page 2

³⁰⁴ <https://paperspast.natlib.govt.nz/newspapers/NZH18870202.2.52>

New Zealand Herald, Volume XXIV, Issue 7861, 2 February 1887, Page 6

³⁰⁵ <https://paperspast.natlib.govt.nz/newspapers/THA18870215.2.17>

19 February

Te Aroha News, Volume IV, Issue 192, 19 February 1887, Page 2

KARANGAHAKE. This district has been favoured by a visit from the "fire king," who threatened to wipe out all signs of civilisation in the neighbourhood of Railey's plant on Sunday last. The fire started somewhere about the dam, and it travelled up the side of the spur sweeping everything before it, and leaving nothing but ashes in its wake. If it had not been for the energetic efforts put forth by the residents and employees of the mill, the water race belonging thereto would have been destroyed. As it was the fluming was burnt through in several places, and a stoppage of two days was occasioned in effecting repairs. The Crown smithy was burnt down, and several whares occupied by Railey's men were also converted into ashes. On the whole, however, the damage is not so serious as it otherwise might have been, and this may be attributed to the forethought of Mr Railey, who, when first starting the plant, took the precaution to clear off all the bush surrounding the site. The heaviest item of loss has been that of firewood, of which there were about 100 tons cut and stacked ready for use, and of this the bulk has been consumed.

The crushing of 20 tons which is now under treatment at Railey's plant for the Monastery mine, should be completed to night, and a remunerative return is expected.³⁰⁶

5 March

KARANGAHAKE. Ivanhoe. — The owners of this mine have at last determined upon renovating their battery plant, so as to meet the requirements of the district. Excepting the stampers the present plant will be entirely removed, and a number of Railey pans substituted. These pans are now being manufactured at Messrs Price Bros., Thames, and no time will be lost in getting them into position, so that the work of quartz reduction may be resumed as quickly as possible.

Woodstock. — It is stated that this company intends establishing Railey pans in the furnace house very shortly. The cost of doing so would be very small indeed, because the water for motive power is running to waste, and the Pelton wheel which is now fixed in the building is capable of driving 20 head of stampers, together with the requisite number of pans and settlers. As to crushing dirt to keep the mill going, there is enough now in sight in the company's mine alone to keep it in full operation for years to come; and it is sincerely to be hoped that there is something more than rumour in the statement.³⁰⁷

Railey has proved the effectiveness of his pans.

The Te Aroha News article continues:

RAILEY'S BATTERY, ETC. A recent visitor to this district writes as follows: — The marked revival in the mining industry that has resulted from the starting of Railey's quartz reduction plant at Karangahake, is very noticeable

Thames Advertiser, Volume XVII, Issue 5712, 15 February 1887, Page 2

³⁰⁶ <https://paperspast.natlib.govt.nz/newspapers/TAN18870219.2.7>

Te Aroha News, Volume IV, Issue 192, 19 February 1887, Page 2

³⁰⁷ <https://paperspast.natlib.govt.nz/newspapers/TAN18870305.2.9>

Te Aroha News, Volume IV, Issue 193, 5 March 1887, Page 2

even to the most casual observer. During the long and trying period which elapsed between the time when Mr Railey commenced the work of constructing this new (to this district) style of quartz mill, till it was completed and had proved itself a success, speculation was rife as to whether it would be a success, or, like so many previous new departures, prove another failure; and had it proved a failure, there were many who would have taken to themselves the credit (!) of having foreseen, and foretold that such would be the case.

Certain it is, Mr Railey did not receive anything like the amount of encouragement and assistance he deserved; and were it not that he was endowed with an unusual amount of indomitable energy, pluck, and perseverance, and had unlimited faith as to what his plant would be capable of doing, he would have retired in utter disgust early in the day. Only those who have an intimate knowledge of the district, the site of the battery, and the roads (!) over which such an amount of heavy machinery had to be conveyed, much of it in the depth of winter, can have any idea of what had to be contended with. However, one by one the difficulties were overcome, the plant finished, and started to work, and with what interest the result of the first crushings were looked forward to. And no wonder, for had this new method of treatment proved another failure, it would have been a blow to the field that it would take a long period to recover from. But fortunately the battery has proved a success instead of a failure, and any person visiting the district after an absence of even a few months cannot help being impressed with the evidence that appears on every hand of that fact.

Mines that had been practically deserted, for the very good reason that there was no method available in the district of treating the quartz successfully, have again resumed work, and steadily though slowly, men are returning to the field, and to-day the number of men employed, although very far short from what there should be, is still in very marked contrast to the state of things that existed a short time ago. I repeat that the best thanks of the district are due to Mr Railey for what he has done, and for the new life he has been the means of infusing into the district, and I hope he will meet with that hearty support on every hand that he so well deserves. It is unreasonable to expect that he is going to give universal satisfaction to all who bring him quartz for treatment, that were impossible, and also there are sure to be complaints of one thing or another being not just as it should be, but I feel sure it is Mr Railey's desire to act fairly towards all parties.

I do not purpose referring to the mines which have already sent crushings to Railey's plant, or the results obtained, these matters being regularly dealt with by your Ohinemuri mining correspondent. But I heard during my recent visit to this district a considerable amount of dissatisfaction expressed with respect to the scale of charges levied for treating quartz at the new plant, and think it as well these should be ventilated, in order that if there is anything wrong it may be set right, and therefore proceed briefly to mention the matters respecting which I heard complaints made, without expressing personally any opinion on the matters myself.

First of all with respect to the scale of charges, which was stated to be per ton as follows: For ore yielding at the rate of £5 per ton and under, 30s; over £5 and less than £10, 35s; over £10 and less than £15, 40s; over £15 and less than £20, 50s; over £20 and less than £25, 60s. Now, a good deal of dissatisfaction

is being expressed with respect to this mode of charging. It is considered very unfair that whenever good quartz was obtained, the battery manager should practically levy blackmail thereon, and deprive the owners of the mine of a considerable proportion of the benefit they would otherwise realise. The opinion was expressed that a uniform charge should be made for crushing, and if a sliding scale were used it should be for quantity and not for quality. As an instance of the hardship of the existing sliding scale, the recent crushing for the Monastery was mentioned; the yield was £5 3s 9d per ton for 23 tons, and being over the £5 was really a loss instead of a gain to the owners, as they were charged 5s more per ton. The Rose crushing was also mentioned. The argument used in support of the sliding scale by Mr Railey, that the richer the ore the more chemicals it required and greater length of time in treatment, evidently did not "go down well," and some scepticism was shown on this point.

Another matter I heard referred to in condemnatory terms was with respect to the manner in which the crushing charges were paid. It was stated that the Bank of N.Z., Thames, had a scale of charges supplied to them, and that when the bullion from any crushing was taken to the bank, they calculated and deducted the amount due to the battery owners for crushing, lodging the balance to the credit of the company. Whether this is the case or not I cannot state from personal knowledge. The usual way I believe is for the battery manager to send in his account to the mine manager, who certifies and forwards it to the legal manager for payment; the full value of the paid for bullion being lodged to the credit of the company by the bank.³⁰⁸

12 March

Barrett and party, contractors for forming the tramway from the County track to Railey's plant, have started operations, and the Crown people have also commenced to form a siding from the above mentioned line into their mine.

At the present time there are three teams of horses carting stone to Railey's mill, which will now be kept fully employed by the Woodstock, Kenilworth, Crown, Rose, Adeline, and Diamond mines.

Of late I have often had occasion to refer to the bad state of the county track, but up to the present very little has been done in the way of repairs. This dilly-dallying will be continued till the wet season sets in, and then when the track is impassable and all the mines are shut down in consequence the cry will be, "Who'd have thought it."³⁰⁹

The horse teams must be using the sled track to Railey's, and the County Road?

The sled track is steep.

22 March

KARANGAHAKE. Paeroa, Yesterday.

Mining matters are extremely quiet at the present juncture. Railley has been engaged the whole of last week on a parcel of 18 tons, from Haslett and

³⁰⁸ <https://paperspast.natlib.govt.nz/newspapers/TAN18870305.2.9>

Te Aroha News, Volume IV, Issue 193, 5 March 1887, Page 2

³⁰⁹ <https://paperspast.natlib.govt.nz/newspapers/TAN18870312.2.11>

Te Aroha News, Volume IV, Issue 194, 12 March 1887, Page 2

Meredith's tribute in the Woodstock. Although the contractors for the formation of the tramway line are doing good work, and the County Engineer has called further tenders for the sections of the work yet to be done, there is no doubt that the lack of means of transit, will in the meantime cause a great stagnation at Karangahake. It is impossible to get either horses or sledges up or down the track, after even a slight shower, and until the tramway is finished—a period of some three or four months probably, if not longer—there will be little to report. Speaking generally, this part of the field never looked healthier since the opening...

That there are those in the place who believe in its ultimate success, is proven by the fact that men are there at all. Mr Isaac Railley is one whose faith has manifested itself in works. In the much maligned "Auckland ring" are others who have literally spent their last penny in the place. Had it not been for such as these, Ohinemuri would have been a "sweet auburn" by this time. There are complaints that Railley charges too much for treating ores, and that that is working against the place. Granted that the price is high, and perhaps even swallows the margin of profit in some cases. But it must be remembered that the new plant is the edition de luxe, and that when the second and third editions come out (as they surely will) popular prices will ensue. It is quite on the cards that after the pans have been fixed in the Ivanhoe battery, the Woodstock directors will utilise the LaMonte furnace house for the same purpose. If this should be so, a very material difference would be made to those mines and tributes now in connection with the two plants.³¹⁰

12 April

THE MINISTER OF MINES. Mr Larnach.

He inspected minutely Railey's battery and water race and tramway now in course of being constructed. In the afternoon he received deputations at Shepherd's Hotel, Karangahake. Mr F. Cock, County Chairman, acted as spokesman. The most important matter dealt with was the tramway connection already referred to. Mr Larnach stated that Government had promised a subsidy of £200 towards this work on the strength of a statement put forth that it was a county work for the general benefit of the field and the county, subsidising another £200. He now found on investigation that the county was only finding £50, and Railey Battery Company and the mine-owners interested £150, and the tramway clearly was for almost the sole benefit of the Battery Company, whose scale of charges, ranging from £3 per ton, he characterised as monstrous, and considered the County Council to blame for ever starting the work without some understanding having been first arrived at with the Battery Company re the charges to be made. He flatly refused to give any money towards the work, under the circumstances, until a proper understanding was arrived at with the Battery Company re charges, as he considered he could not do so in the interests of the miners. He was of opinion that the charges should not exceed a minimum of £1, and a maximum of 30s, as now the Battery Company would get the sole benefit of the miners hard

³¹⁰ <https://paperspast.natlib.govt.nz/newspapers/THS18870322.2.26>

Thames Star, Volume XIX, Issue 5663, 22 March 1887, Page 3

work, and have a regular monopoly. This means that the county will have to stop all contracts let re tramway forthwith.³¹¹

30 April

PROPRIETORS OF RILEY'S BATTERY AGREE TO ADOPT SCALE OF CHARGES PROPOSED AT RECENT MEETING OF MINERS.

Mr F. Cock, County Chairman, met the directors of several of the mines interested and the proprietors of the Karangahake Quartz Reduction Works (better known as Riley's), at Auckland on Friday, 22nd inst., and after a considerable amount of discussion, it was agreed to adopt the scale of charges proposed at the recent meeting of miners at Karangahake, whereupon the Chairman wired to the County Engineer to proceed with the tramway continuation works at once, and also communicated the result arrived at to the Minister of Mines.³¹²

14 May

OHINEMURI COUNTY COUNCIL. The ordinary monthly meeting of the above Council was held in the Council Chambers, Paeroa, on Saturday last. Present: Crs Cock, (chairman,) Nicholls, Strange, Corbett, Moore, Butler, Walsh, and Humphreys.

Minutes of the previous meeting were read and confirmed, after which it was decided to open tenders, for the information of those who might have come from a distance to learn the result with respect thereto.

Karangahake Tramway : (To connect county track with Riley's Quartz Reduction Works, and to include laying permanent way, providing wire rope, two breaks [brakes], building four county trucks, two traverse trucks, hoppers, etc.) :— Haslett and Meredith, £357 17s 6d; Wm. Barrett, Jas. Lawlor, and John Kelly, £347; Sorenson and Segerson, £340 17s 6d; Cornes and Munro, £337 15s 6d; John Morton, £310 3s 6d.

Cr Nicholls reminded council that for constructing this tramway they had only £400, viz., £150, provided by Auckland mine owners interested, £50 by the Council, and £ for £ subsidy from Government on this, £200; whilst already they had expended over £200. Under these circumstances he did not see how they could accept any of the tenders opened. It was evident the tramway would now cost about £600, instead of £400, the estimated cost if constructed according to first intentions. It would be necessary before proceeding further with the work to communicate with Government, asking for further assistance, and he would move that both Government and the Auckland gentlemen be communicated with, and that no tender be accepted until they had received replies, but that the two lowest tenders be meantime retained, and in the event of the reply received being favourable, that Mr Morton's tender be accepted.

Carried. Crs Humphreys and Corbett both stated with reference to the construction of this tramway that they had been given to understand that any decision arrived at agreeing to adopt the scale of charges proposed at the recent meeting of miners at Karangahake, for treatment of ore at Riley's

³¹¹ <https://paperspast.natlib.govt.nz/newspapers/AS18870412.2.30>

Auckland Star, Volume XVIII, Issue 85, 12 April 1887, Page 2

³¹² <https://paperspast.natlib.govt.nz/newspapers/TAN18870430.2.10.1>

Te Aroha News, Volume IV, Issue 201, 30 April 1887, Page 2

battery, was by no means a unanimous decision on the part of the directors of that plant.

The Chairman, in reply to one of the Councillors, said he had not obtained the consent of the directors in writing, but he had obtained their verbal consent.

Resolved, that the legal manager of Railey's Quartz Reduction Works be communicated with requesting him to state in writing whether or not the proprietors had consented to adopt the scale of charges referred to. Crs Moore and Corbett both expressed the opinion that the proposed alteration would not really prove a reduction to the miners, who under it would be no better off than heretofore.

A letter was read from the Railway Department, Wellington, in reply to Council's application for second-hand rails for the above tramway, stating there were no spare rails in Auckland district which could be given for the purpose named.³¹³

19 May

Mr R. McDonald Scott, secretary of Railey's Quartz Works, has refused, on behalf of his directors, to lower the present tariff for treating ore. This will result in the discharge of many miners.³¹⁴

20 May

Paeroa, Friday. In consequence of the directors of Railey's Battery Company refusing to accept the scale of charges fixed by a meeting of miners convened by the local body, in compliance with a condition made by the Minister of Public Works during his visit here, the Minister of Mines has refused positively to grant any money for tramway purposes, and, as a natural consequence, the local body has stopped all work in connection therewith.³¹⁵

4 June

We are informed Messrs Littlejohn and party have taken the Ivanhoe battery, Karangahake, on lease for six months ; and that crushing thereat will be recommenced without delay; a parcel of ore from the Scott portion of the Ivanhoe being now conveyed to the battery.³¹⁶

Karangahake Quartz Reduction and Mining Company, Limited. — The annual general meeting of shareholders was held on May 23rd, at the company's office, Mr Charles Alexander in the chair. On the motion of the chairman, seconded by Mr J. Howard, the report was adopted, and balance-sheet was passed. The retiring directors were Messrs Nathan and J. Chambers. Messrs L. D. Nathan and H. Green were elected directors; Mr T . A. Menzies was reappointed auditor.

³¹³ <https://paperspast.natlib.govt.nz/newspapers/TAN18870514.2.11>

Te Aroha News, Volume IV, Issue 203, 14 May 1887, Page 2

³¹⁴ <https://paperspast.natlib.govt.nz/newspapers/WT18870519.2.11>

Waikato Times, Volume XXVIII, Issue 2318, 19 May 1887, Page 2

³¹⁵ <https://paperspast.natlib.govt.nz/newspapers/AS18870520.2.6>

Auckland Star, Volume XVIII, Issue 118, 20 May 1887, Page 2

³¹⁶ <https://paperspast.natlib.govt.nz/newspapers/TAN18870604.2.7>

Te Aroha News, Volume IV, Issue 206, 4 June 1887, Page 2

The Chairman gave a lengthy explanation of the proceedings of the company in a forcible speech. Mr Green followed, pointing out the efforts which the company had made in erecting their works at Karangahake, and the difficulties it had to contend with. A vote of thanks to the chairman and secretary closed the proceedings.

Subjoined is a copy of the directors' report: — "Your directors have the honour to submit their annual report and balance-sheet. The summary up to the 10th instant is as follows: Receipts— Calls received, £2815; cash on loan, £300 19s 5d; battery earnings, £461 18s 9d; bank overdraft. £189 0s 8d: total, £3760 18s 10d. Disbursements— Cost of works to 10th instant, £3398 0s 9d; wages, £372 18s 1d: total, 3766 18s 10d.

Since the date of the erection of the works, treating quartz for the public has been carried on at a great disadvantage in consequence of there being no tramway from the mines to the works. The conveyance of quartz has been delayed, making it impossible to keep the mill constantly going. It is to be hoped that the miners will appreciate the efforts made on their behalf by the erection of the works, and do all in their power to remove the objection of the Government to pay the promised subsidy towards the construction of the tramway. The success of the company depends very much on the completion of the tramway from the county road to the works, and the directors hope soon to see that important work finished and in full operation. The works have cost far more money than at first contemplated, and the directors would point that there are 2775 shares of the company's stock still to dispose of, the sale of which at par would enable the company to meet its engagements, and place it in a sound financial position. The retiring directors are Messrs J. Chambers and L. D. Nathan, who are eligible for re-election. — Herald.³¹⁷

13 June

Karangahake, Friday. The Ivanhoe battery has been leased to Messrs Hogg and Littlejohn, who are now constructing a road in lieu of the damaged tramway, so as to enable mine proprietors to send their quartz to the mill for treatment, the price for same having been fixed at 12s per ton. In this Company's mine there are now four distinct tribute parties at work, and they are all meeting with very encouraging prospects.

Railey's mill is still idle, and it is likely to remain so during the winter season, unless the proprietors are fortunate enough to drop across a good patch of the precious metals in their own mine, where active prospecting operations are now in progress. This property is named the Wolseley and it is located in such close proximity to the mill that the cost of transport on quartz would be comparatively trifling.³¹⁸

21 June

At Karangahake about one and a half chains of the Woodstock water race [Ohinemuri, servicing their furnace house] was carried away by the flood

³¹⁷ <https://paperspast.natlib.govt.nz/newspapers/TAN18870604.2.18.4>

Te Aroha News, Volume IV, Issue 206, 4 June 1887, Page 3

³¹⁸ <https://paperspast.natlib.govt.nz/newspapers/AS18870613.2.29>

Auckland Star, Volume XVIII, Issue 138, 13 June 1887, Page 5

yesterday, and the whole of the outbuildings belonging to Tramway Hotel were demolished.³¹⁹

24 June

Imperial.—Messrs Clement and party are experiencing great difficulty in the transit of their 5-ton parcel to Railley's. It will give some idea of the style of track peculiar to this part of the field when I state that the only two possible methods of getting ore to Railley's from the hill at present is as follows—either to construct rough sledges of the fork of a tree and haul down by manual labor one or two bags at a time, using a fresh sledge each time; or if a horse is used, for the miner to carry the empty sledge on his back after sledging the ore down, the horse having enough to do to get up the track by himself. Mr Clements deserves, and will undoubtedly get, a good return from this small parcel.³²⁰

So there is some sort of track to the battery (sled track), presumably the one that was used to get the materials and machinery to the site. But not really suitable for man or beast, particularly in the wet.

25 June

KARANGAHAKE. The heaviest fresh ever seen here in the Ohinemuri River occurred on Sunday morning last, and as usual in all such cases it has left its mark in the place. About one chain of the Woodstock water race was carried away, and the whole of the outbuildings belonging to Shepherds hotel went down stream. The Waitawheta river was also in flood and the Ivanhoe water race was damaged in several places but the dam and water race at Railley's mill both escaped injury.³²¹

2 July

Woodstock tributers sent parcels of ore to both Railley's plant and the Ivanhoe battery, and after a discussion of costs, the following:

But, then, what about the percentage of bullion saved at the "respective plants"? In round numbers Railley's process extracted bullion to the amount of L4 per ton, whilst the Ivanhoe battery only saved L2 worth of bullion per ton. Of course, it is a matter of £.s.d with the tributers, and, as Ivanhoe battery gives them the largest margin of profit, they have determined to continue sending their ore to that plant.³²²

4 July

At the Ohinemuri Council on Saturday it was agreed to call for tenders for the construction of the lower portion of the tramway to Railley's battery. This will take in the section that connects the Crown tramway and other mines with the

³¹⁹ <https://paperspast.natlib.govt.nz/newspapers/THA18870621.2.18>

Thames Advertiser, Volume XVII, Issue 5815, 21 June 1887, Page 2

³²⁰ <https://paperspast.natlib.govt.nz/newspapers/THS18870624.2.14>

Thames Star, Volume XIX, Issue 5741, 24 June 1887, Page 2

³²¹ <https://paperspast.natlib.govt.nz/newspapers/TAN18870625.2.10>

Te Aroha News, Volume V, Issue 208, 25 June 1887, Page 2

³²² <https://paperspast.natlib.govt.nz/newspapers/AS18870702.2.13>

Auckland Star, Volume XVIII, Issue 54, 2 July 1887, Page 5

Quartz Reduction plant. It is hoped that the shareholders in this venture will make up the balance, and construct the balance of the tramway. Wooden rails are to be used; this will make a difference of £150.³²³

9 July

In correspondence discussed at the monthly meeting of the Ohinemuri County Council:-

Re Government subsidy of £200 towards completing tramway to Railey's Battery: The following communications were read:

Mines Department, Wellington, June 7th, 1877. To Chairman Ohinemuri County Council. Sir, — I enclose herewith for your information copy of a letter received from the Secretary of the Karangahake Quartz Reduction Works, forwarding an agreement signed by the Miner's at Karangahake, as between them and the rates for crushing at the company's works...

(Copy): Office, Karangahake Quartz Reduction and Mining Company, Ltd. Auckland, 31st May, 1887. To Minister of Mines, Wellington. Sir, — I have the honor to enclose the agreement you desired signed by the miner's at Karangahake, as between them and the rates for crushing at the Company's works. More signatures would have been obtained but for the weather, which prevented a more extensive circuit being traversed, but every one to whom it was presented signed it. The Directors hope that the difficulty of advancing the promised subsidy to the Ohinemuri County Council, for constructing the tramway is removed, now that the stipulated agreement is in your possession...

R. McDonald Scott, Secretary.

(Copy of Agreement.) Karangahake, May, 1887. We the under signed miners' of the Karangahake district, hereby agree to the tariff of charges for crushing at the Karangahake Quartz Reduction Works, with a deduction of five per cent on fifty ton parcels and ten per cent on one hundred ton parcels. —(Signed,)

There were 48 signatures, giving a great list of names of miners at Karangahake at that time.

The chairman remarked there were some signatures on the agreement which had no business there, and names not on that should have been. This question of proceeding with the construction of this tramway had been fully discussed by the Councillors in committee prior to the general meeting of Council, and it was stated that the council had arrived at the following decision: That in view of the limited means at the disposal of the Council, tenders be invited for completing the lower section of the line, (as far as the Crown, Imperial, etc.) wooden rails to be used, and that application be made to Government to provide funds sufficient for the completion of the line. It was further resolved that the agreement be referred back to Mr McGruer to have the signatures of mine manages and mine owners attached.³²⁴

³²³ <https://paperspast.natlib.govt.nz/newspapers/THS18870704.2.7>

Thames Star, Volume XIX, Issue 5750, 4 July 1887, Page 2

³²⁴ <https://paperspast.natlib.govt.nz/newspapers/TAN18870709.2.12>

Te Aroha News, Volume V, Issue 210, 9 July 1887, Page 2

13 July

Railey's Tramway.—The Ohinemuri County Council opened tenders on Saturday for the construction of the lower section of Railey's tramway. This includes the permanent way, laying sleepers, wooden rails, brake, four trucks, and 12 chains wire rope...

The section which is to be completed is the lower section, and will connect with the Crown tramway; that mine will therefore be enabled to treat some of the 300 tons of ore which is already broken out. The top section which connects with the main track on which the chief mines of Karangahake are situate; will probably not be touched for some time. Should the local authorities decide, however, to substitute a wire tramway, or even a shoot for the proposed ground tramway, the cost will be reduced to a minimum, and the work therefore proceeded with earlier. At present it is next to impossible to convey ore to the mill.³²⁵

18 July

The County Council has just let a contract for a tramway from the principal mines to Railey's mill.³²⁶

The County Council has determined to carry on with the tramway. It gets called Railey's tramway, but later it is clear that it is the County tramway.

To clarify; there are three sections to the tramway. The overall intention is to connect the County Road, high up on the mountain side, with the battery. For construction purposes it is divided into upper and lower sections. It is the lower section which is to be completed first. Conveniently, the top of this section will be connected to the Crown mine via a short section of (level) tramway, from their No.1 or 2 level. It seems these levels were about half way between the battery and the County Road. At this time there is no No.6 level (River Level).

No map nor photograph has yet been found that shows this tramway/incline. It does show on LiDAR.

1 August

Woodstock. — Heiteman and party, tributers, have finished the tramway connecting their working with the self acting aerial line [Woodstock aerial line, the older one on the western side of the Blow?] which places them in direct communication with the Ivanhoe battery, where they propose treating a portion of their crushing dirt, which should turn out handsomely.

Railey's Tramway.—The work of completing the first section of this line is now in the hands of Messrs Hasslett and Meredith, who have entered into a contract with the County Council to finish the line and provide the requisite rolling stock for the sum of £164 10s, and the whole concern should be ready for operation early in the month of September next.³²⁷

³²⁵ <https://paperspast.natlib.govt.nz/newspapers/NZH18870713.2.50>

New Zealand Herald, Volume XXIV, Issue 7999, 13 July 1887, Page 6

³²⁶ <https://paperspast.natlib.govt.nz/newspapers/NZH18870718.2.46>

New Zealand Herald, Volume XXIV, Issue 8003, 18 July 1887, Page 6

³²⁷ <https://paperspast.natlib.govt.nz/newspapers/THA18870801.2.5>

Thames Advertiser, Volume XVII, Issue 5849, 1 August 1887, Page 2

3 November

This is the Earl of Glasgow incline, but the County incline would have looked similar.

Staples collection.

The much talked of tramway connecting with Railey's plant, was finished as far as the Crown on Saturday last by Messrs Haslett and Meredith, the contractors for the work, who have made a very satisfactory job of it. Although finished, there appears very little for it to do, as it does not connect with any of the mines who subsidised the County Council for its construction, nor indeed with any at all excepting the Crown, and even this mine requires a few chains of rails to be laid down before the connection would be complete.

There is a good deal of dissatisfaction as regards the management of the Quartz Reduction Works, which accounts for the small proportion of ore which is sent there. Mr Railey, whose name is associated with the plant, is now, I understand, at Nelson, where he is supervising the construction of a large dam at the Red Hills mine. The Karangahake plant is now being run by Mr Morrow.³²⁸

Railey's/County tramway finished

Well, the lower portion. The top of it is, or will be, connected to the Crown mine by a few chains of level tramway (101m, see below). Only the Crown mine has access to the battery this way.

Mr Railey has disappeared, and the battery is for sale! All a bit sudden?

10 November**Railey's battery for Sale by Auction:**

THE WHOLE OF THE PLANT OF KARANGAHAKE QUARTZ REDUCTION AND MINING COMPANY (LIMITED), consisting of—
10 Head Stamps 4 Pans 2 settlers Retorts Portable Engine and Boiler Tools
Buildings Dam Water Race Etc., Etc.³²⁹

PAEROA.—This day. At the R.M. Court yesterday, before H. A. Stratford, Esq., R.M., judgments were given against the Karangahake Quartz Reduction Co., for wages amounting in the aggregate to nearly £150. A large number of cases were before the Court.³³⁰

³²⁸ <https://paperspast.natlib.govt.nz/newspapers/THS18871103.2.19>

Thames Star, Volume XIX, Issue 5854, 3 November 1887, Page 4

³²⁹ <https://paperspast.natlib.govt.nz/newspapers/NZH18871110.2.52.2>

New Zealand Herald, Volume XXIV, Issue 8096, 10 November 1887, Page 8

³³⁰ <https://paperspast.natlib.govt.nz/newspapers/THS18871110.2.8.1>

Thames Star, Volume XIX, Issue 5860, 10 November 1887, Page 2

16 November

A meeting of the representatives of the following mines situated at Karangahake will be held to-day at the office of Mr McDonald Scott :— Crown, Rose, Diamond, Sutro, Josephine, Adeline and Dubbo. The business to be considered is the advisability of consolidating the various mines named into one strong company for the purpose of working the mines more satisfactorily. It is thought that if some such plan is adopted the Company might secure Railey's plant, and also the tramway, which should greatly facilitate the working of the various reefs opened up in the respective claims.³³¹

22 November

The county tramway to Railey's battery is now complete, and was last week handed over to the county engineer, Mr. F. Pavitt, by Messrs. Haslett and Meredith, the contractors. The tramway is 17 chains [342 m] long, 12 [241 m] on the incline and five [101 m] on the level. There is a grade of 1 in 2, and there are three rails with a passing loop in the centre. The level part has two rails, and connects the incline with the Crown mine. The rails are heart of kauri, 5x3, fixed to a 2-feet 8-inch gauge, and 7x5 sleepers; 2 feet 6 inches apart. The rope used on the incline is of black Bessemer steel, $\frac{7}{8}$ inch [some fraction of inch; $\frac{5}{8}$?] in diameter, and is worked by a brake wheel 5 feet 6 inches in diameter. The trucks have a capacity of one ton. Messrs. Haslett and Meredith have executed the contract in a most workmanlike manner.³³²

HA Gordon, in the 1888 AJHR:

Railey's crushing-battery, from which so much was expected, and to which a tramway was constructed to connect it with the mines on the field, has turned out a failure; the whole plant was recently sold, being purchased by the mortgagees for £70. The tramway, when completed, was never used for the conveyance of quartz, as the battery since then has been standing idle.³³³

Railey's battery did apparently recover a higher percentage of the values from the ore, and this was encouraging. But the charges Railey made (had to make) to treat the supplied ore were too high to be economic to the miners, and transport of the ore to the battery was difficult and costly. The County incline tramway came too late, and would have served only the Crown mine.

The incline does get used when the Crown Company purchase the battery site.

17 December

Thames Advertiser. Ohinemuri Mining. From our own Correspondent. Paeroa, Friday. The s.s. Kotuku is now loading here at the County wharf, and will leave for Auckland to-night. She takes with her about forty tons of ore, which, on the average, is worth £25 per ton, and therefore the whole lot should realise at least £1000. This stuff is being sent away from two different mines,

³³¹ <https://paperspast.natlib.govt.nz/newspapers/AS18871116.2.42.7>

Auckland Star, Volume XVIII, Issue 270, 16 November 1887, Page 5

³³² <https://paperspast.natlib.govt.nz/newspapers/NZH18871122.2.43>

New Zealand Herald, Volume XXIV, Issue 8906, 22 November 1887, Page 6

³³³ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1889-I.2.1.4.3/1>

THE MINING INDUSTRY., Appendix to the Journals of the House of Representatives, 1889 Session I, C-02

and by three different persons. Mr H. C. Wick is forwarding to Frieberg a parcel of ore comprising 10 tons 14cwt, which he purchased from the owners of the prospectors' mine at Marototo, and a rough estimate of the assay value may be arrived at when I say the consigner reckons that the cost of purchase, transit, and treatment will figure up to £30 per ton, which, of course, must be liquidated before he can get any return for his venture.

A parcel comprising six tons bought by Mr D. R. Gellion from the tributers in the Kenilworth mine, Karangahake, forms part of the cargo, and it is stated to be worth an all round average of £30 per ton. This stuff is also intended for Frieberg, and it will leave Auckland for its destination by steamer on the 28th inst. The balance of the shipment belongs to Messrs Phillips and Sons, merchants, who bought about 25 tons from the Kenilworth tributers some time since. Of this lot about eight tons, worth about £15 per ton, will be sent to London, and the remainder, valued at £27 per ton, will be forwarded in company with the other parcels to Frieberg for disposal.

This is the thin end of the wedge, and should the present ventures result in payable returns larger shipments will follow in due course. The cost of sampling, bagging, and transport on ore from Karangahake to Frieberg is about £7 per ton, and it is a pity that by far the greater proportions of this money should be lost to the country through the want of a suitable process for the treatment of the ore locally. At present not more than 25 per cent, of the assay value of ore of the above-mentioned description can be saved by any known local system of reduction, and therefore the owners are forced to ship it to places where they will receive a much higher percentage of its intrinsic worth, even after all cost and charges in connection with its transport and treatment will have been liquidated.³³⁴

By "Frieberg" is meant Freiberg Germany. This is a long standing mining area (since 12th Century), and was the home of the "prestigious Freiberg School of Mines"³³⁵.

"Within this mining region there were, historically, a large number of smelteries and, even today, there are still various active smelting works".³³⁶

It is not clear how this high value ore (determined by assay?) will be processed; smelting most likely. Compared to the two Karangahake smelting attempts, Freiberg will have established infrastructure and expertise, and fluxes at hand. For more detail, see Freiberg Process in the Appendices p.953

Is sending ore here the expression of frustration, an attempt to generate income, or to prove the value of the ore that performs so badly at the local batteries?

In the same article, Thames Advertiser

KARANGAHAKE. Woodstock. —Heitman and party, tributers in this mine, are now treating a 70 ton lot of general dirt at the Ivanhoe battery, where it is shaping for an all round return of at least three ounces to the ton, and the bullion will be worth about 48s per ounce.

³³⁴ <https://paperspast.natlib.govt.nz/newspapers/THA18871217.2.7>

Thames Advertiser, Volume XVII, Issue 5946, 17 December 1887, Page 2

³³⁵ <https://www.onlinenevada.org/articles/philipp-deidesheimer>

³³⁶ https://en.wikipedia.org/wiki/Freiberg_Mining_Field

Crown.—Stoping out on the No 2 reef between the lower and intermediate levels is now in progress, and stone of very good quality is being grassed every shift.

Imperial.—The owners of this claim are now making preparations to sink a winze from the surface level, so as to determine the position of the reef as it descends towards the low level, where it was heaved from its regular course within the last few feet of driving.

Railey's Mill,—It is stated that this plant has been leased by Mr Alexander Hogg, who proposes to start crushing operations on a parcel of dirt from the Monastery mine immediately after the holidays.³³⁷

Te Aroha News:

Mr Alexander Hogg, has taken a lease of Railey's mill, and as soon as the repairs to the dam are finished he will commence treating quartz from the Monastery mine.³³⁸

Hogg established his store beside the Tramway Hotel in 1885. He and Littlejohn lease the Ivanhoe battery in June. He must be leasing the Railey battery from the mortgagees, the Crown Company buys it outright a little later; the sale for £1500 was reported August 2 1888.³³⁹

Several teams of horses are employed in carting ore from the Woodstock Furnace into Paeroa. This stuff belongs to Messrs Phillips and Son and Gellion, who bought it from the tributaries in the Kenilworth mine, and who intend sending it Home for treatment.³⁴⁰

Summary 1887

Railey is well thought of.

The proposed ground tramway (incline) between the Karangahake-Te Aroha hill track (County Road) and Railey's Quartz Reduction plant turns into a political wrangle.

The Monastery mine makes a tram connection across the Waitawheta to Railey's battery.

A fire in February damages Railey's water race fluming.

Horses are used to convey ore to Railey's battery via the steep sled track.

Mr Larnach, minister of mines, refuses to provide the £200 subsidy (50% of the cost) for the incline tram. He is incensed by the battery charges, which he "characterised as monstrous, and considered the County Council to blame for ever starting the work without some understanding having been first arrived at with the Battery Company re the charges to be made".³⁴¹

³³⁷ <https://paperspast.natlib.govt.nz/newspapers/THA18871217.2.7>

Thames Advertiser, Volume XVII, Issue 5946, 17 December 1887, Page 2

³³⁸ <https://paperspast.natlib.govt.nz/newspapers/TAN18871217.2.11.2>

Te Aroha News, Volume V, Issue 233, 17 December 1887, Page 2

³³⁹ <https://paperspast.natlib.govt.nz/newspapers/NZH18880802.2.54>

New Zealand Herald, Volume XXV, Issue 9122, 2 August 1888, Page 6

³⁴⁰ <https://paperspast.natlib.govt.nz/newspapers/TAN18871217.2.11.2>

Te Aroha News, Volume V, Issue 233, 17 December 1887, Page 2

³⁴¹ <https://paperspast.natlib.govt.nz/newspapers/AS18870412.2.30>

Auckland Star, Volume XVIII, Issue 85, 12 April 1887, Page 2

In June a flood causes some damage.

An agreement is reached between the miners of Karangahake and the Karangahake Quartz Reduction Works (Raileys), signed by 48 miners. This allows the Government to provide the subsidy. Work can progress on the incline. The lower section is completed in November. It can service only the Crown workings, but is not used at this time.

In early November Railey leaves the district, and the battery is advertised for sale.

In December, parcels of rich ore are being sent to Freiburg Germany. Alexander Hogg leases the battery.

AJHR 1888

Published 1888, but largely reporting on 1887.

See the document: Parliamentary Papers for the complete texts.

GOLDFIELDS ROADS, WATER-RACES, AND OTHER WORKS IN CONNECTION WITH MINING (REPORT ON).

APPENDIX TO THE JOURNALS OF THE HOUSE OF REPRESENTATIVES, 1888 SESSION I, C-05³⁴²

Mr. H. A. Gordon, P.G.S., Inspecting Engineer,

to the Under-Secretary of Mines. Mines Department, Wellington, 1st May, 1888.

Page 3. Tramway, Karangahake to Railey's Reduction-works. —

This tramway was advocated for several years, long before Railey's plant was erected, as the best means of getting the quartz taken from the claims on the Karangahake Range to the place where a crushing-battery could be erected. But since this tramway has been completed it has never been used, owing to the crushing company being put into liquidation. The cost of the work has been £400. Of this amount a subsidy was paid to the extent of £200.

[It does get used by the Crown Co. when they take over the battery]

Page 27. Karangahake District. The only mines in which work was being carried on at the time of my visit were the Mammoth, Woodstock, and Kenilworth. The operations in the other mines were suspended for a time.

Mammoth Mine. —This is owned by an English syndicate, who sent out a gentleman from England—Mr. Argill—to carry on prospecting operations to test the mine, previous to erecting machinery. The ground belonging to this syndicate is situated on the face of the range, on the westward side of the Woodstock Mine, and prospecting operations were being carried on at the time of my visit. This is the same ground where a rush took place in 1875. One of the old adit levels was cleaned out and retimbered, and was being extended. Two quartz lodes were cut through, containing a little gold and silver, but they have a very broken appearance, and indicate that the whole face of the range here is only a portion of a large slip which has at one time come from the

³⁴² <https://paperspast.natlib.govt.nz/parliamentary/AJHR1888-I.2.1.4.5>

GOLDFIELDS ROADS, WATER-RACES, AND OTHER WORKS IN CONNECTION WITH MINING (REPORT ON)., Appendix to the Journals of the House of Representatives, 1888 Session I, C-05

Karangahake Range. The character of the lodes and surrounding country rock in this adit level gives one the impression that a permanent lode will not be found here. This syndicate have adopted a wise course, to prospect the ground first before going to any expense for machinery and plant. Recently I have heard that they have suspended operations.

Woodstock Mine. —This mine is let to a party of tributers, who are working on the lode, which is 6ft. in thickness. Stopping has been carried on from the adit-level to a height of 90ft., and the lode stoped out for a length of 25ft. During last year 312 tons of quartz have been crushed, which yielded 532oz. of gold, one parcel of 54 tons yielding 148oz. There is a large body of stone in this mine which contains sulphide of silver in combination with gold, but no process has yet been adopted here for the proper treatment of this class of ore.

Kenilworth Mine. —A few miners have been employed in this mine during the last year, but the quality of the ore is such that it cannot be successfully treated at any of the present crushing-plant in the colony. The lode in this mine is 3ft. in thickness, and contains chiefly silver ore. Two parcels of ore were sold at the mine, namely, 25 tons at £23 per ton, and 5 tons at £16 per ton, which were forwarded to Europe for treatment; 11½ tons were sold to Mr. W. Littlejohn, which he intends to treat with chemicals at the Ivanhoe Battery.

Several other mines have had a few men employed in them, but the work done is chiefly of a prospective character. There has been 70 tons of quartz crushed from the Monastery Mine, which yielded 160oz. bullion; 40 tons from the Diamond Mine, which yielded 139oz.; and 20 tons of ore from the Crown Mine, have been forwarded to Europe for treatment, but the returns have not yet come to hand. Railey's crushing-battery, from which so much was expected, and to which a tramway was constructed to connect it with the mines on the field, has turned out a failure; the whole plant was recently sold, being purchased by the mortgagees for £70. The tramway, when completed, was never used for the conveyance of quartz, as the battery since then has been standing idle. There have been about forty men employed in this district during the year.

GOLDFIELDS.

APPENDIX TO THE JOURNALS OF THE HOUSE OF
REPRESENTATIVES, 1888 SESSION I, C-06³⁴³

AUCKLAND GOLDFIELDS.

No. 4. Mr. Inspector Wilson

to the Under-Secretary of Mines. REPORT ON THE AROHA AND
OHINEMURI DISTRICTS. Warden's Office, Te Aroha, 4th April, 1888.

Page 13. Ohinemuri District.

The returns also from Ohinemuri District have fallen off considerably. Railey's battery, at Karangahake, failed to give satisfaction, more especially with respect to the charges made for crushing and treatment of ores; and, prior to

³⁴³ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1888-I.2.1.4.6>

GOLDFIELDS., Appendix to the Journals of the House of Representatives, 1888 Session I, C-06

the construction of the tramway to connect with the road, most of the mines suspended work.

Karangahake District.

Woodstock Mine. —Heitman's Tribute (five men employed): To cut the reef, which is 6ft. thick, 80ft. have been driven through hard rock. The reef has been driven on for 60ft., and stoping has been carried up for 90ft. on a shot of gold 20ft. wide. There have been 312 tons of quartz crushed for a yield of 532oz. of gold.

Kenilworth Mine. —Moore's Tribute (four men employed): A drive has been put in for 90ft. on the reef, which is 3ft. thick, and a winze sunk to Woodstock low-level, 50ft. Thirty-five fathoms of reef have been stoped. Twenty-five tons of ore sold to Phillips and Son for £23 per ton, and 5 tons sold to Mr. D. E. Gellion for £16 per ton, both parcels for export to Europe. There were also 11½ tons sold to Mr. W. Littlejohn for chemical treatment at the Ivanhoe battery. The metal contained in the ore is chiefly silver. Shepherd's Tribute (two men employed) have six tons of quartz stacked, estimated to be worth 4oz. of gold per ton, value £2 14s. per ounce.

Monastery Mine. —Four men employed. On a large reef, 9ft. in thickness (3ft. 6in. of which is saved for crushing), 80ft. have been driven. A winze 82ft. has been sunk. Seventy tons have been crushed for a return of 160oz. of bullion.

Ivanhoe. —Several parties of tributers worked on blocks near the surface. About one hundred tons were crushed for a return of 152oz. of gold. The company not being in a position to work the mine, the land was forfeited.

Mammoth Special Claim. —This claim was taken up to be worked by an English company. They have expended a considerable amount in putting in drives and prospecting the ground; but, as no well-defined reef was found, operations have been suspended.

Diamond Mine. —Three men have been employed in this mine, and 60ft. of driving has been done on a reef 6in. in thickness. Forty tons of quartz were crushed, for a return of 139oz. of gold, worth £1 2s. 6d. per ounce.

Imperial Mine. —Three men have been employed in this mine. The low-level has been driven 40ft. on a reef 3ft. thick, and a winze is being sunk from the upper level. Thirty tons of quartz are stacked; one ton crushed yielded about 2oz. to the ton.

Crown Mine. —Two men have been employed, 150 ft. of driving has been done, and about twenty fathoms stoped from a reef 3ft. in thickness. Twenty-two tons of ore have been sent to Glasgow, Scotland, for treatment, the return from which is not yet to hand.

Several other mines have been occasionally worked, but no great amount of prospecting has been done in the district during the year. About forty-five miners have been employed.

The future outlook for mining in Ohinemuri County and Te Aroha is very promising; one of the chief difficulties encountered, viz., the treatment of the ores, is in a fair way of being overcome. The extensive machinery, with the latest improvements, which the Union Gold-mining Company [Waihi Gold Mining Company] are erecting at Waihi, is deemed by experts to be adapted

for the silver ores found at Karangahake, Waihi, and Marototo, whilst for the treatment of complex ores such as are found at Tui Creek, and Waiorongomai, the water-jacket smelting-furnace will be resorted to in addition to milling and chemical treatment; again, at the Thames, the Molloy-pan and the Newberry-Vautin process are each about to receive a fair trial; the School of Mines testing-plant will also soon be erected. The treatment of all ores in a manner such as science has pointed out appears now to be only a matter of time; true, disappointments will happen in some instances, as the vexed problem of extracting the highest percentage of gold and silver from different kinds of ore is not to be solved without experience in the practical part of the work. This matter is now taken up by men who are not likely to be daunted by first failure, and one need not hesitate in asserting that the difficulty experienced in the treatment of ores will soon be a thing of the past. Another difficulty which has to be mastered is to provide for the cheapest manner of transporting the ores from those mines which are at present almost inaccessible to places where machinery is erected for their treatment.

1888**19 January**

Paeroa, Wednesday. Mammoth.—Mr. Argall, the English expert sent out to inspect and supervise the Mammoth mine (Karangahake) arrived today, accompanied by Captain Morris, M.L.C. He takes full charge of the mine. It has transpired that the Woodstock mine and plant (LaMonte furnace, water race, etc.) and the Kenilworth mine, are under offer to the Mammoth syndicate in England. Some very fair stone is to grass in the Mammoth.³⁴⁴

1 March

Thames, this day, Sale of Forfeited Holdings

The following forfeited licensed holdings at Karangahake were submitted for public competition by the Warden to-day, bidding being spirited :—Sutro, £10 10s. A. Porter; Truro, £70, Percy Cox, of Canterbury; Ivanhoe, £84, Mr Cox; Sir Walter Scott, £105, Mr Cox; Lotia, £16, A. Porter.³⁴⁵

At the sale of licensed holdings by the Warden to-day, the Sir Walter Scott, Ivanhoe, and Truro claims were purchased by Mr C. Percy Cox, of Canterbury, and it is understood that there are others interested in the venture.³⁴⁶

Mr C. Percy Cox, of Canterbury purchases the Sir Walter Scott, Ivanhoe, and Truro claims.

13 March

Licensed Holdings declared forfeited by the Mining Inspector. H. A. Stratford, Warden. SCHEDULE.

Late Licensed Holding, No. 5, known as the Wolseley claim, situated at Karangahake. Area 8 acres 2 roods and 4 perches. Bounded northerly by the Waitawheta River and Railey's Machine Site, easterly by supposed unoccupied ground, southerly by Imperial, and westerly by the Crown Licensed Holdings. Late licensee, Isaac Railey.³⁴⁷

24 March

NOTICE OF OCCUPATION OF MACHINE SITE. NO. 97.
TO THE WARDEN AT THAMES.

I HEREBY give notice that I desire to occupy for MACHINE SITE one acre of land situated at Karangahake, and that I have this day marked the corners of such land with pegs, in conformity with the Regulations herein made and provided.

Applicant: C. Percy Cox.

³⁴⁴ <https://paperspast.natlib.govt.nz/newspapers/NZH18880119.2.61>

New Zealand Herald, Volume XXV, Issue 8954, 19 January 1888, Page 6

³⁴⁵ <https://paperspast.natlib.govt.nz/newspapers/AS18880301.2.42>

Auckland Star, Volume XIX, Issue 51, 1 March 1888, Page 5

³⁴⁶ <https://paperspast.natlib.govt.nz/newspapers/THS18880301.2.7>

Thames Star, Volume XX, Issue 5951, 1 March 1888, Page 2

³⁴⁷ <https://paperspast.natlib.govt.nz/newspapers/THS18880313.2.24.1>

Thames Star, Volume XX, Issue 5961, 13 March 1888, Page 3

Date and No. of Miner's Right or Business License: 9001, 5th March, 1888.³⁴⁸
 This will be the site of the small Cox battery, and in time the site of the large Woodstock battery.

28 March

NOTICE OF INTENTION TO CONSTRUCT A WATER-RACE.
 TO THE WARDEN AT THAMES.

I HEREBY give notice that I intend to construct a Water-race to divert and use water for mining purposes, commencing at a point about 3 chains above the Woodstock Company's dam on the Ohinemuri river, Karangahake, and terminating at a point near to the confluence of the Ohinemuri and Waitawheta rivers, Karangahake.

The length of such race is sixty chains or thereabouts, and its intended course is south west. The mean depth of such race is two feet six inches, and the mean breadth is four feet six inches, and it is proposed to divert ten Government heads of water.

Cost of construction: £1000. Time required for construction: Twelve months.

Number and date of miner' right: 9001, 5th March. 1888.

Applicant: C. Percy Cox. Any person objecting to the granting of this application must lodge his objection in writing at the Warden's Office at Thames within fourteen clear days from the date hereof. Hearing at 10.30 o'clock on the 12th April, 1888

H. A. STRATFORD, Warden. Warden's Office, Thames, 5th March, 1888.³⁴⁹

Percy Cox intends to erect a small battery of 4 stamps and 2 pans. It will be at the confluence of the Ohinemuri and Waitawheta Rivers, what we now think of as the Woodstock Battery site. We have photographs of it.

Mr. Inspector Wilson, Inspector of Mines' Office, Thames, reports in April 1889:

A small battery has been erected on the mine—four stamps and two pans and settlers. The pan-treatment seems to be satisfactory, and yields a large percentage of the assay-value of the ores. To prevent loss by floatage the water which is used by the stamp-mill is conveyed to reservoirs and settled; and when sufficiently clear the same water is again used. A considerable amount of gold is thus obtained from the slimes.³⁵⁰

So what is going on here? Applying to put in a dam just a short distance above the Woodstock dam. Is this application intended to encourage the Woodstock Company to let the Percy Cox battery (Ivanhoe, Sir Walter Scott and Truro mines) use water from their existing race? By the beginning of the next year the Cox battery is using water from the Woodstock race. John McCombie manages both companies.

³⁴⁸ <https://paperspast.natlib.govt.nz/newspapers/TAN18880324.2.97.3>

Te Aroha News, Volume V, Issue 249, 24 March 1888, Page 11

³⁴⁹ <https://paperspast.natlib.govt.nz/newspapers/TAN18880328.2.82.2>

Te Aroha News, Volume V, Issue 250, 28 March 1888, Page 11

³⁵⁰ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1889-I.2.1.4.3>

THE MINING INDUSTRY., Appendix to the Journals of the House of Representatives, 1889 Session I, C-02. Page 102

27 April

WARDEN'S COURT. (YESTERDAY). Before H. W. Northcroft, Esq., R. M. The following applications were granted: C. Percy Cox, application for machine site at Karangahake — Granted. The same for water race at Karangahake, —Granted.³⁵¹

30 May**MR. PARKES³⁵² AND HIS GOLDSAVING PROCESS.**

Mr. Parkes, the inventor and patentee of one of the most recent processes of treating refractory ores, and saving the highest percentage of bullion, has been visiting the mining districts of the Thames peninsula for the last three weeks or so. From what we can learn Mr. Parkes is thoroughly convinced that the Thames ores can be satisfactorily treated, and he came to New Zealand determined to investigate the whole matter, and establish suitable plants where required. He has been through the whole of the principal mining districts of the peninsula, and one result is that an offer has been made through Mr. J. Chambers, Mr. Parkes' agent, to erect a plant at the Woodstock mine, Karangahake (Ohinemuri).

A LaMonte plant had previously been erected on this mine, but did not meet expectations. Mr. Parkes would require that his own furnace should be erected, and he would then guarantee to save 90 per cent, of the assay bullion value of the ore. The probable cost of the furnace would be from £300 to £400. Of course, the cost of treatment in isolated positions would be greater than if a plant were erected in a central position where fluxes were easily obtainable, but in such positions as the Woodstock, which is isolated, he does not estimate that the cost of treatment would exceed £4 per ton, and the plant, if successful, would be taken over by the company at cost price...

We may add that the process of treatment has already been proved to some extent, for parcels of ore sent to England and treated at Mr. Parkes' works have yielded respectively 92oz and 84oz of bullion per ton, being about 95 per cent. of the assay value.³⁵³

2 June

Karangahake. Mr. John McCombie is now permanently managing for the Southern people, who recently purchased the Ivanhoe and Truro mines.³⁵⁴

22 June

We (Auckland News) are pleased to learn that one of Mr Parkes' gold-saving plants is to be erected at Te Aroha, a short distance from the township, and

³⁵¹ <https://paperspast.natlib.govt.nz/newspapers/THA18880427.2.12>

Thames Advertiser, Volume XX, Issue 6060, 27 April 1888, Page 2

³⁵² <https://biography.yourdictionary.com/alexander-parkes>

<https://g.co/arts/41JeyyQFWruc3zyW6> images

https://en.wikipedia.org/wiki/Alexander_Parkes

There are many other sites that mention Parkes.

³⁵³ <https://paperspast.natlib.govt.nz/newspapers/NZH18880530.2.26>

New Zealand Herald, Volume XXV, Issue 9067, 30 May 1888, Page 5

³⁵⁴ <https://paperspast.natlib.govt.nz/newspapers/NZH18880602.2.46>

New Zealand Herald, Volume XXV, Issue 9070, 2 June 1888, Page 5

near the entrance of the Tui Creek. This step has now been definitely decided on. Mr Parkes, through Mr John Chambers, had made an offer to the Woodstock Company (Karangahake) to erect a plant on their mine, and to treat the ore at a cost not exceeding £4 per ton, guaranteeing 90 per cent. of the assay value of the ore; but the offer was rejected, the company thinking the price too high.

To show, however, that the cost is reasonable, we have been shown returns from two lots sent to Adelaide for treatment. One of these was a parcel from Whangamata, the cost of treatment of which was £6 11s 0d per ton. The other was a parcel from Te Aroha, the cost of treatment in this case being £5 0s 2½d. These charges were independent of freight or other expenses, simply the cost of treating the ore and extracting the bullion. In regard to the offer made to the Woodstock, Mr Chambers informs us that the charge of £4 was made on account of the comparatively inaccessible locality of the mine and the bad roads, and they would much rather treat it at £3 per ton in a more suitable place. They have now decided to erect this plant at Te Aroha. It will be a small affair at first - a plant for the treatment of six tons per day — but capable of extension as required. The furnace will be the same as that used at Swansea, with all its working appliances. But at the most the present plant, although perfect in itself, will be more in the nature of an experimental plant, and to demonstrate the process, and the main works as originally intended will be erected on a central site on the Thames river.³⁵⁵

27 June

Paeroa, Tuesday. It is understood that Messrs. Parkes and Chambers are about to erect one of their furnaces at Karangahake in the old LaMonte furnace house.

Tenders are called for carting 200 tons material from s.s. Kotuku to Karangahake.³⁵⁶

28 June

THE PARKES SMELTING FURNACE. Mr J. M Chambers has now got a staff of hands engaged in pulling down the La Monte smelting furnace, preparatory to establishing in its place one of Parkes's smelting furnaces capable of treating six tons of ore per day. The smelter, which is to be erected in the Woodstock Company's furnace house, is to be in complete working order within six weeks, and operations will then be started upon a large tonnage of high-class ore, which has already been purchased from the Kenilworth tributers.³⁵⁷

³⁵⁵ <https://paperspast.natlib.govt.nz/newspapers/OW18880622.2.33.10>

Otago Witness, Issue 1909, 22 June 1888, Page 12

³⁵⁶ <https://paperspast.natlib.govt.nz/newspapers/NZH18880627.2.33>

New Zealand Herald, Volume XXV, Issue 9091, 27 June 1888, Page 5

³⁵⁷ <https://paperspast.natlib.govt.nz/newspapers/AS18880628.2.28>

Auckland Star, Volume XIX, Issue 152, 28 June 1888, Page 5

7 July

Messrs. Parkes and Chambers are making rapid headway with their plant at Karangahake, which will be ready in about three weeks. As the plant is simply an experiment, only about 150 tons of ore are required at present.³⁵⁸

Our Karangahake correspondent writes "Mr Chambers's men have completed the demolition of the La Monte water jacket furnace, which stood in the Woodstock Company's building, and a start has been made to erect one of Mr Parkes's reverberatory smelting furnaces in its place. Mr Parkes himself is now residing here for the purpose of superintending the construction of his own plant, which will be a full-sized one - equal to the treatment of 6 tons of ore per diem, and not an experimental furnace as has been stated by some of your contemporaries.

When increased smelting power is required the pioneer furnace will be supplemented by the erection of others, similar in general character, in the same building, which is sufficiently capacious for that purpose and is already fitted up with 'refinery', 'melting' and 'assaying' furnaces complete in every respect. Mr Parkes, who comes here with a world-wide reputation as an inventor and successful smelter of ores of every description, expects to be able to start operations within six weeks from date, and he is quite confident that his efforts to deal with our so-called refractory ores will be attended by highly satisfactory results. The first parcel of ore to be dealt with will be from Moore and party, tributers in the Kenilworth mine. It comprises about 40 tons, and the approximate value fixed upon it ranges from £12 to £50 per ton.³⁵⁹

Sale of Crown Company to Glasgow purchaser**Sale of Railey plant to new New Zealand Crown Mines Company****2 August**

SALE OF THE CROWN MINE AND THE RAILLEY PLANT. Mr. W. L. Mitchell reports that the directors of the Crown Gold Mining Company have received a cablegram from their agents in Glasgow, announcing the completion of the sale of the Crown mining property at Karangahake. We understand that the negotiations have been conducted on the following basis:—That the net purchase money to the company, after deducting all commission and brokerage, will amount to £16,000, to be paid for either in cash or shares fully paid up; but that, in any event, not less than £2500 sterling shall be paid in cash. Upon enquiry of the mine manager, we learn that between five and six thousand tons of ore are ready and immediately available for treatment upon a proper plant being erected.

In connection with the Crown Company, we understand that, on Monday last, an offer was made by the Glasgow purchasers of a sum of £1500 for the

³⁵⁸ <https://paperspast.natlib.govt.nz/newspapers/TAN18880707.2.6>

Te Aroha News, Volume VI, Issue 279, 7 July 1888, Page 2

³⁵⁹ <https://paperspast.natlib.govt.nz/newspapers/AS18880707.2.15>

Auckland Star, Volume XIX, Issue 160, 7 July 1888, Page 4

Railley plant and water rights, and that the proprietors of this plant promptly replied by cable accepting the offer.³⁶⁰

£1500 cheap? Attractive. Close to their mine, with tramway erected, buildings and water race/dam. And a new process in the wind.

A new process from Glasgow?

4 August

THE CROWN MINE, KARANGAHAKE. The Crown mine, situated at Karangahake, will have, under the new arrangement, a working capital of £25,000 [£2500 sterling? See above], and by the judicious expenditure of this sum in the construction of tramways, opening up the mine, and the erection of plant, there can be little doubt that the district will be thoroughly developed. From the prospects already obtained we believe that the English [Glasgow Scotland] shareholders in this venture will be handsomely paid for all their outlay.

We learn that the process by which the stone will be treated is altogether different from any process now in operation in the colony. It has, however, been found to be suitable to the Karangahake stone, over 20 tons having been tried in Glasgow, also a lot of refractory ores from Queensland, at a cost of some 12s to 15s per ton, and 90 per cent of the bullion has been saved. Should this process be found successful on a large scale, of which there seems little doubt, it will be found a great advantage to all our poorer class of refractory ores, of which there seems an unlimited amount all over the Thames goldfield. We understand that the Crown syndicate at home have been supplied with all information in respect to the probable cost of Railey's and the Ivanhoe plant, and both are under offer to them at reasonable amounts. While Railley's plant is the easiest of access to the Crown mine, the Ivanhoe is considered the most central for the whole district, and in the erection of a large plant, this must be taken into consideration. Nothing, we understand, will be done finally until both sites have been worked at by an expert from Home, who will leave as soon as the company is formed, which is expected to be concluded this month. We also understand there is every probability of a new pulveriser being made use of which has just been patented in Britain. There can be no doubt but that the shareholders of the Crown have acted wisely in having a large working capital instead of pocketing a large sum themselves, as they have agreed to take shares in lieu of cash, thereby showing their faith in their property.³⁶¹

29 August

The stone breaker at the Parkes' furnace having proved useless, Mr Parkes has decided to get a set of rollers in its place. These are being made at Prices' on the Thames. This will delay the commencement of smelting for two or three weeks.³⁶²

³⁶⁰ <https://paperspast.natlib.govt.nz/newspapers/NZH18880802.2.54>

New Zealand Herald, Volume XXV, Issue 9122, 2 August 1888, Page 6

³⁶¹ <https://paperspast.natlib.govt.nz/newspapers/NZH18880804.2.53>

New Zealand Herald, Volume XXV, Issue 9124, 4 August 1888, Page 6

³⁶² <https://paperspast.natlib.govt.nz/newspapers/TAN18880829.2.11>

Te Aroha News, Volume VI, Issue 294, 29 August 1888, Page 2

Parkes' furnace started**27 September**

Karangahake. — The Parkes' furnace started to-day. Everything is in good order, and working well.³⁶³

15 October

A SERIES of most annoying delays have been experienced by the gentleman connected with the Parkes' furnace, Karangahake. First of all the centrifugal ore crusher would not work, and had to be replaced by others. The iron chimney stack was next found to heat too quickly, and had to be raised, and other petty delays have conspired to put off the starting of the furnace probably for another week or so.³⁶⁴

26 October

A GENTLEMAN who has arrived here from Karangahake informs us that the Parkes' furnace has at just commenced smelting operations, a start having been made on Wednesday night.³⁶⁵

7 November

The furnace has been erected in the building put up for the La Monte process, which has been considerably altered, and is now fitted up with all the conveniences necessary for the carrying out of smelting by Mr Parkes process. There are about twenty men employed, working in three shifts.

The process of treatment as described to me by Mr J. M. Chambers is as follows: — The first stage is the damping of the ore, which is then crushed to a fine dust, after which assays are taken of its value. The ore is then mixed with fluxes and is passed by means of a hopper into the bed of the furnace, and spread over with a rabble. The charge consists of a ton of the pulverised ore, and the smelting occupies four hours. After the ore has been under fire for this space of time the slag is skimmed off with a rabble at the upper end of the furnace, and the regulus³⁶⁶ is tapped at the side. The regulus is then calcined, one half being reduced to lead, which is cupelled in an ordinary cupelling furnace.

The refining mainly consists of cupelling the lead containing the bullion. In this process the lead to be treated is placed in a bone ash crucible, and upon being reduced to a molten state a jet of steam is thrown upon it which drives off the dross in the shape of litharge, leaving the bullion at the bottom.

One of the advantages Mr Parkes claims for his process is that there are only three operations connected with it, no roasting or calcining being required as in other processes. The three processes are :— (1) Smelting for regulus. (2) reducing the regulus with lead; (3) the refining of the lead bullion.

³⁶³ <https://paperspast.natlib.govt.nz/newspapers/NZH18880927.2.59>

New Zealand Herald, Volume XXV, Issue 9170, 27 September 1888, Page 6

³⁶⁴ <https://paperspast.natlib.govt.nz/newspapers/THS18881015.2.7>

Thames Star, Volume XX, Issue 6092, 15 October 1888, Page 2

³⁶⁵ <https://paperspast.natlib.govt.nz/newspapers/THS18881026.2.6>

Thames Star, Volume XX, Issue 6102, 26 October 1888, Page 2

³⁶⁶ an impure intermediate metal product created by the smelting process. Encarta Dictionary.

When the appointments and conveniences are complete, it is expected the bullion will be obtained in twenty four hours from raw ore. Some 16 tons of very rich ore from the Kenilworth will be shortly put through.

The coal being used is a mixture of Greymouth and Kamo.³⁶⁷

13 November

The furnace for smelting ore erected at the Karangahake by Mr Parkes the last three weeks has proved very successful, and arrangements are being made for the introduction of another furnace which will treat 12 tons per day. It has been decided to use Greymouth coal for the smelting. Four of the furnaces are to be erected at Te Aroha.³⁶⁸

15 November

THE KARANGAHAKE FURNACE. DESCRIPTION OF THE PARKES PROCESS.

As the new furnace at Karangahake is now in thorough working order, and has been running splendidly for over a week, perhaps a short account of the works may be of some interest to your readers.

It is just three years since Mr R. K. Davis erected the first furnace here, which was one of the La Montes, and which, with its attendant refinery, blower, crusher, water-race, tramways, etc., cost over £8,000, and was then used for only four days, when it was shut down and pronounced a failure, not because it could not smelt the ores, but because the treatment was too expensive, and so it has remained ever since, rusting and rotting away, a sorry monument of misplaced confidence and misapplied capital. Now at last it has been taken down and put on our side and its successful rival has taken its place. Whether the old furnace ever had a fair trial or not is a subject on which there is great diversity of opinion; but be that as it may the new one has certainly proved itself a great success, and is now going day and night, giving out lava-like streams of metal and slag, and at night illuminating the whole township. To Mr J. M. Chambers belongs the credit of this new venture, and I am sure that everyone is glad to see his pluck and enterprise rewarded.

CONSTRUCTION OF THE FURNACE

The new furnace is a reverberatory one on the lines patented by Mr Alexander Parkes, and has been built under the immediate supervision of that veteran metallurgist himself, who, with Mrs Parkes, has been residing at Karangahake for that purpose for the past three months, and who since the furnace started (although over 75 years of age) is to be found at his post at all hours of the day and night.

The old furnace, as most of your readers are aware, was a cupola or blast furnace, using hard coke for fuel, and requiring a strong blast, which was supplied by one of Baker's rotary blowers, whereas the new one, as I have already said, is a reverberatory furnace, using coal for fuel, and not requiring any blast (A very good idea of the shape, etc., may be got by referring to

³⁶⁷ <https://paperspast.natlib.govt.nz/newspapers/TAN18881107.2.12>

Te Aroha News, Volume VI, Issue 314, 7 November 1888, Page 2

³⁶⁸ <https://paperspast.natlib.govt.nz/newspapers/HBH18881113.2.10>

Hawke's Bay Herald, Volume XXIII, Issue 8210, 13 November 1888, Page 2

Chambers's Encyclopedia where he treats of lead smelting.) Another difference is that Mr Parkes has the quartz ground much finer than was the case before, and on that account requires much less in the way of fluxes. There is also a great difference in the number of men required in the working of the furnace, so that with the saving of labour and the saving of fluxes, the cost of treating will be very much less now than formerly.

PURCHASE OF THE ORE

Of course this furnace resembles the other in that it does not treat small parcels of ore for the public, and indeed this would be an impossibility, as the ores require blending and mixing with the fluxes, etc., to say nothing of the damage the furnace would sustain, if it had to be cooled and cleaned out after every small lot of ore. But all ores brought for treatment are bought by the furnace proprietors at so much per cent, on their assay value, the percentage ranging from 30 for the very low grade ores to 75 and 80 for the higher grades; and this sum is paid to the producer clear of all charges, so that he has no risk or further expenses. It then rests with the furnace proprietors to get what they can at the lowest possible cost, the risk of saving or losing resting entirely with them.

When a parcel of ore is received at the works, whether it is one ton or fifty, it is put through the stone crusher and rollers and ground fine enough to pass through a sieve or screen having 64 holes to the square inch. It is then thoroughly mixed, and three samples are taken from it, one to be assayed by the buyer, one by the seller or his agent, and the third is sealed up and deposited with some disinterested person as a check. Then, if the assays made by the buyer and seller agree, well and good, but if not, the check sample is sent to an independent assayer, and between the three the price is arranged. In the great majority of cases, however, the check is not required, as the system adopted for sampling is so perfect that the assays rarely vary more than a few shillings per ton. Of course, even then the seller is not obliged to accept the price offered, but can remove his ore if he wishes, the only charge being a few shillings for grinding.

In some cases a ton or so is sent first to see how it will yield, and, proving satisfactory, the balance has been sent afterwards. In our case over ninety tons have been already purchased from our mine.

CRUSHING THE QUARTZ.

All the ores, flukes [fluxes], etc., on arrival at the works, are received on a large platform, which holds about 50 tons. This platform, or paddock, as it is called, is at the back of the building, and is eight feet above the upper or sampling floor, and from it the ores are fed into the crusher, then pass through the rollers and are delivered on the floor ready for sampling and mixing. The quartz when fed into the crusher varies in size from walnuts to pieces as large as a man's head, but when it falls on the floor eight feet below it is all reduced to a powder, and this, with the very hardest flinty quartz can be done at the rate of two tons per hour. In the sampling floor is a trap door connected with the furnace below by an iron hopper or shoot, which just holds enough for a charge. This hopper has a sliding door in the bottom which is controlled by the furnace men below, who, when they wish to put in a charge, draw the door and it drops down; the men on the floor above them immediately filling up the hopper again. The time required to smelt each charge is about four hours.

THE SITE OF THE WORKS

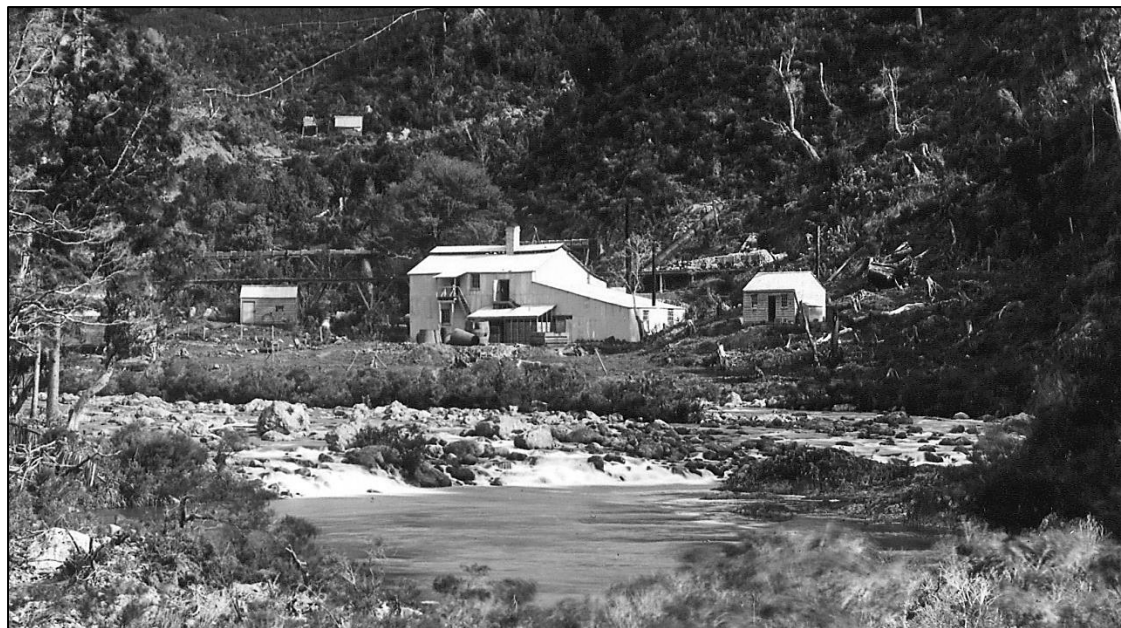
In selecting Karangahake as the place to erect the furnace Mr Chambers secured at once a building in which to put it where there was a refinery ready for use, a good floor for sampling and storage, a splendid water power for crushing and grinding, and the whole connected with the leading mines in the district by good ground and arial [aerial] tramways, and by the county road. But even with those advantages the expenses of erecting the plant have been very heavy. Of course, the old furnace had to be removed, then the building had to be enlarged, and a new tramway had to be constructed to get the materials over the river. Hoppers and paddocks for the ores, etc., had to be made, and a new set of rollers had to be got and erected, and altogether there has been a great deal of work done, and a lot of money spent. Mr Parkes himself has been on the ground all the time the work has been going on, superintending, and is at present devoting his whole time and attention to smelting and refining. The management of the works generally has been intrusted to Mr J. M. Haslett, who seems to have carried them out in a very careful and substantial manner, and who is still in charge of the grinding and sampling part of the work. Mr Chambers has also spent a great deal of time here and deserves very great credit for having brought the undertaking to such a successful issue.

A HOPEFUL OUTLOOK.

The people of Karangahake have had many disappointments, and have laboured under many disadvantages, but still they have had faith in their reefs; they knew that the bullion was there, if they could only get it out and save it—but this they were unable to do by the old battery process, in many cases getting less than 20 per cent. of the assay value, and out of this having to pay heavy charges for carting and crushing. Their hopes were raised when LaMonte appeared on the scene, and again a year later when Railey's pans were tried, but in both cases only to be dashed down again lower than ever. Let us hope that this third venture within as many years will have a long run of success, and that the difficulty of treating the refractory ores of Karangahake will be a thing of the past, and that those who have so long had patience and have held on through all difficulties will at length reap their reward.³⁶⁹

³⁶⁹ <https://paperspast.natlib.govt.nz/newspapers/AS18881115.2.30>

Auckland Star, Volume XIX, Issue 270, 15 November 1888, Page 5



The photographer (JD Richardson, J Martin) has identified this as the Parkes Furnace (484), Auckland Public Library.

The tramway and water race flume are visible. To the right of the furnace building an ore chute and stacked ore and ore trucks. This could be the ore paddock mentioned in the text.

The building has a rectangular brick chimney, but has lost the pipe extension.

Several large cylindrical/conical objects lie on the ground in front of the furnace building; the old La Monte furnace?

Date 1888-9. Photograph taken from below the road, across the river. The building is near the downstream limit of Battery Flat.

19 November

PARKES' PROCESS FOR REDUCTION OF REFRACTORY ORES, AND OTHER INVENTIONS.

Mr Parkes interviewed. Mr Alexander Parkes, who has been staying in Tauranga for a few days for the benefit of his health, was on Saturday last interviewed by our reporter with the following result: —

Mr Parkes, an expert metallurgist and well-known inventor, who belongs to East Greenwich, London, came to the Colony from Birmingham, England, about six months ago, on the invitation of Messrs Chambers, merchants, Auckland, in order to establish reduction works for refractory ores at Karangahake and Te Aroha. He is a professional metallurgical chemist of well known repute in England.

THE DESILVERIZING LEAD PROCESS.

He is the inventor of a process for desilverising lead by means of zinc, which has upset the Paterson process, and has been adopted all over the world. After he took out his patent for this process he was paid 5d an ounce of royalty by parties using the process.

CELLULOID.

He is also the inventor of celluloid, a substitute for ivory, tortoise shell, &c, and used extensively for such articles as billiard balls, combs, knife-handles, brush-backs, collars, cuffs, &c. The articles made of his celluloid are also used extensively throughout the world.

Cold Process for Vulcanizing Rubber

In early life Mr Parkes also invented the cool process for vulcanizing rubber, for which also he obtained patents. In a recent action in chancery for breach of one of these patents, the judge styled Mr Parkes "the father of the cold Vulcanizing process."

Reduction of Refractory NZ Ores.

As stated, Mr Parkes came to the Colony, on the invitation of Messrs Chambers, to attempt the reduction of the refractory gold ores and other refractory ores at Karangahake and Te Aroha. The first furnace has been erected at the Champion mine [error], Karangahake; but Customs Work, which will be the principal furnace, is to be put up at Te Aroha in connection with the Champion Mining Co., now formed in London. This company was formed by a son of Mr Parkes; and Mr Parkes came to New Zealand to build the works for them at the places mentioned. He found good material to work upon, and is confident that he can treat the ores successfully, though there may be some trouble in getting flux at a cheap rate. In England the flux is obtained on the spot for a very small price but in New Zealand the cost is greater in consequence of the difficulty of obtaining a flux in the locality; but Mr Parkes has no doubt that this difficulty will be in time overcome. As the result of reduction by his process he expects to save from 90 to 95 per cent. of gold.

DETAILS OF THE REDUCTIOIN PROCESS.

The reduction operations which are of the simplest nature are as follows:

1. Fusion for regulus (a sulphide of the metal treated)
2. Reduction of the regulus to bullion; and
3. The ordinary refining process.

By this process there is no calcining or roasting. This is very important as the operation is therefore simplified and made much more effective, and more bullion is obtained.

Operations at Karangahake

The furnace has been working during the past month, but at present is waiting for a further supply of coal.

Absolute success of the Process to be soon Proved

Mr Parkes expects that, within the next fortnight, the absolute success of his process for economical reduction of refractory ores will be demonstrated.³⁷⁰

1 December

A mishap occurred to Parkes' furnace at Karangahake, which has caused it to be shut down.³⁷¹

8 December

The Parkes' furnace at Karangahake is still closed down. The owners are very reticent as to the reason, but it is evident that in some details the affair is not as

³⁷⁰ <https://paperspast.natlib.govt.nz/newspapers/BOPT18881119.2.9>

Bay of Plenty Times, Volume XV, Issue 2360, 19 November 1888, Page 2

³⁷¹ <https://paperspast.natlib.govt.nz/newspapers/WT18881201.2.15>

Waikato Times, Volume XXXI, Issue 2558, 1 December 1888, Page 2

yet successful. We understand that a modification of the plant is to be made, which, it is hoped, will be more successful.³⁷²

18 December

Mr. Chambers is negotiating with Mr. Howell, of Waiorongomai, for the sale of Parkes' furnace at Karangahake. I understand this will be sent on to Waiorongomai.³⁷³

Summary 1888

In March the Sir Walter Scott, Ivanhoe, and Truro claims were purchased by Mr C. Percy Cox, of Canterbury.³⁷⁴ John McCombie becomes manager.

May/June see Alexander Parkes visiting. His furnace would "save 90% of the assay value of the bullion".³⁷⁵ Treatment costs would not exceed £4 per ton.

In June "Messrs. Parkes and Chambers are about to erect one of their furnaces at Karangahake in the old LaMonte furnace house. Tenders are called for carting 200 tons material from s.s. Kotuku to Karangahake."³⁷⁶

July. "Mr Chambers's men have completed the demolition of the La Monte water jacket furnace, which stood in the Woodstock Company's building, and a start has been made to erect one of Mr Parkes's reverberatory smelting furnaces in its place. Mr Parkes himself is now residing here for the purpose of superintending the construction of his own plant."³⁷⁷

In August, the sale of Railey plant to Crown is announced.³⁷⁸

By the end of the year the Parkes furnace is closed down, a failure.

AJHR 1889

Published 1889, but largely reporting on 1888.

THE MINING INDUSTRY.

APPENDIX TO THE JOURNALS OF THE HOUSE OF REPRESENTATIVES, 1889 SESSION I, C-02³⁷⁹

The Secretary of Mines

³⁷² <https://paperspast.natlib.govt.nz/newspapers/WT18881208.2.18>

Waikato Times, Volume XXXI, Issue 2561, 8 December 1888, Page 2

³⁷³ <https://paperspast.natlib.govt.nz/newspapers/NZH18881218.2.48>

New Zealand Herald, Volume XXV, Issue 9240, 18 December 1888, Page 6

³⁷⁴ <https://paperspast.natlib.govt.nz/newspapers/THS18880301.2.7>

Thames Star, Volume XX, Issue 5951, 1 March 1888, Page 2

³⁷⁵ <https://paperspast.natlib.govt.nz/newspapers/NZH18880530.2.26>

New Zealand Herald, Volume XXV, Issue 9067, 30 May 1888, Page 5

³⁷⁶ <https://paperspast.natlib.govt.nz/newspapers/NZH18880627.2.33>

New Zealand Herald, Volume XXV, Issue 9091, 27 June 1888, Page 5

³⁷⁷ <https://paperspast.natlib.govt.nz/newspapers/AS18880707.2.15>

Auckland Star, Volume XIX, Issue 160, 7 July 1888, Page 4

³⁷⁸ <https://paperspast.natlib.govt.nz/newspapers/NZH18880802.2.54>

New Zealand Herald, Volume XXV, Issue 9122, 2 August 1888, Page 6

³⁷⁹ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1889-I.2.1.4.3>

THE MINING INDUSTRY., Appendix to the Journals of the House of Representatives, 1889 Session I, C-02

to the Hon. the Minister of Mines. Sir, — Mines Department, Wellington, 27th June, 1889

Page 39. Karangahake.

Very few of the mines in this district have as yet been worked with success. There is a large percentage of silver and other metals in the ore along with gold, that has as yet baffled all those who have attempted to treat the ore. The ordinary crushing-batteries have been tried and found wanting. The La Monte furnace also has been tried, and proved a failure; and after this a battery and amalgamating-pans were erected by Mr. Railey to treat the ores—the same as adopted in Mexico some fourteen years ago; but this process also proved a failure. And, lastly, Mr. Chambers, of Auckland, made arrangements with the Parkes' Gold and Silver Ores Smelting Company, London, to secure the patent of their process for New Zealand if it proved a success for treating the ores in this district. He also guaranteed the expenses of Mr. Parkes coming to New Zealand to superintend the erection of a plant, and to prove his process capable of dealing with such ores as are found in this district.

Any one reading a description of the successful manner in which Parkes's process treated refractory ores sent from the colonies to London would naturally come to the same conclusion as Mr. Chambers—namely, that the erection of a plant in the North Island goldfields would tend to make the mining properties in the Karangahake, Te Aroha, Waihi, and Whangamata districts valuable. Mr. Chambers therefore erected a plant at Karangahake.

With such a flourish of trumpets did Mr. Parkes arrive in this colony that many believed a new era had dawned on mining, and that the industry that has been languishing in the Karangahake district for years would soon become a prosperous one. Mr. Chambers had perfect confidence that Mr. Parkes would treat the ores successfully, and purchased ores in the district by assay to operate on. The plant was completed, and the process carried on for nearly a month; but, instead of being able to obtain fluxes for smelting the ore for 12s. 6d. per ton, which was Mr. Parkes's estimate, it cost from £18 to £20 per ton, and even with all the costly fluxes the ore could not be successfully smelted. When examining the slag from the furnace it was full of knots and lumps of silica, like lumps of dry oatmeal amongst pottage.

This plant is referred to merely to show that the ore in this district is not suitable for smelting in its raw state as it comes from the mine, on account of the very large percentage of silica it contains. If smelting is resorted to the ore will have first to be crushed and concentrated, and then it is possible to smelt the concentrates and extract the metals. There are large lodes of ore in this district that will pay for working as soon as an efficient and economical process is found to extract a fair percentage of the metals it contains.

Woodstock Mine. —The workings in this mine were carried on last year by tributers. Six men obtained 101 tons of quartz, which yielded by the ordinary crushing-battery process 449oz. of gold. There is a large body of quartz in some of the lodes in this mine, some of it of low grade, and all of the lode-stuff contains a certain percentage of silver.

Kenilworth Mine. —This mine adjoins the Woodstock, and was worked last year by tributers. Eight men have obtained about 150 tons of stone, which contains a large percentage of silver. Thirty-six tons of this ore has been sold to export to Europe for treatment, the assay-value being £3,400, or over £94

per ton. Some of the remaining ore on hand will be sent to the reduction works at Waiorongomai for treatment.

Crown Mine. —This property has recently changed hands, and now belongs to the New Zealand Crown Mines Company, which is formed partially with foreign capital. The mining operations were suspended in this mine for a long time, but now they have resumed work again. There are numerous gold- and silver-bearing lodes running through this mine, some of which are 10ft. in thickness in places. The ore in general has been of low grade, or, at least, there have never been any high returns from large parcels of stone crushed. An incline tramway was constructed from Railey's battery up the face of the range by subsidy from the Mines vote, but since its completion it has never been used. This company now propose to utilise this tramway in conveying the ore from their mine to their reduction-plant, which is to be erected on the site where Railey's crushing-battery stood. Their plant is to consist of a stonebreaker or pulveriser and Lamberton mills, which have been sent from Glasgow, in Scotland. These mills are entirely new in the colonies, and, not having seen any of them, their construction cannot be described. They are spoken highly of by those who have seen them at work. After the ore is finely pulverised it is to be handed over to the Cassells³⁸⁰ Company, who are also erecting chlorination-works [cyanide] near the reduction-machinery. This company have entered into an agreement with the Crown Mines Company to treat the whole of their ore at a certain percentage of the yield, and have also agreed to save a high percentage of the bullion in the ore.

Several other mines have been worked to some extent. Ten men have been employed in the Ivanhoe and Truro Mines, and a considerable amount of prospecting-work has been done. About 77 tons of quartz have been taken out during last year; but the yield has not been very high, 43oz. of gold being obtained from 37 tons of stone. A crushing-battery consisting of four heads of stamps has been erected on these mines, and also two pulverising-pans and settler. The muddy water coming from the table attached to the battery is conducted into settling-tanks or reservoirs, and there allowed to stand until it is clear, when the water is drawn off and used again, and the slimes from the muddy water are treated and found to contain a considerable percentage of bullion.

Many of the mines are merely held waiting to see if any process can be got to satisfactorily deal with the ore. Prospecting; is carried on now and again, and sufficient work done to prevent cancellation of the holdings being made.

No. 1. WARDENS' AND WATER-RACE MANAGERS' REPORTS.

Mr. Warden Northcroft

to the Under-Secretary of Mines. Sir,— Warden's Office, Thames, 4th May, 1889.

Page 92. At Karangahake, the Crown Gold-mining Company are erecting a plant containing stonebreaker and Lamberton mills, and the ore will be treated by the Cassell Company's patent process.

"Parkes's process " has proved a failure, and disappointed all its supporters. It was looked forward to by the Karangahake, Waihi, and Te Aroha miners as a

³⁸⁰ Cassel is spelt with one l.

solution of the difficulty they had laboured under for many years— i.e., only getting in most instances half the bullion from their complex and refractory ores, and in many not even that. Mr. Parkes had samples of the ore from the Tui District sent to him in England. These he treated there, and claimed to have discovered a process of smelting by which, at a cost of not more than £2 per ton, he could treat any of the ores in that district, even the most complex and refractory. As the lodes are large and average from £4 to £20 per ton in value, it meant a "big thing" for the miners and mine-owners; but after building a furnace and running it for three weeks it had to be shut down and abandoned by Mr. J. M. Chambers, the enterprising gentleman who had introduced Mr. Parkes and his process, the loss being too great. This proved a great check to the mining industry, for the mine-owners and miners had pinned their faith to the "Parkes process" for dealing with our complex and refractory ores, he having, they were informed, successfully treated the same class of stuff in England.

The "Cassell process" is as yet untried, therefore the future must decide its suitability.

It is unfortunate that in the initiation of most of these untried processes so much capital is wasted. The promoters usually set about the erection of the plant by putting up buildings and offices of the most expensive kind, as though there was not a shadow of a doubt of its ultimate success, and finding work for twenty years to come; whereas if it were tried on a smaller scale, and care and economy used, the cost would be small, and the loss and disappointment of the shareholders in proportion, and the mining industry as a field for investment would, as it deserves to do, stand higher with foreign capitalists than at present. Similarly with our mines: Generally, on the disposal of a mine to foreign capitalists, a new manager, one who is a stranger to the district, often without even colonial mining experience, is sent to take charge. He commences by the erection of expensive works—for the most part unnecessary and unproductive—before the mine is opened up and it is ascertained whether or not the output will justify the expense. The paid-up capital is absorbed in buildings, tramways, and batteries; and the shareholders refuse to advance any more money on such an apparently barren venture. The expensive plant is sold for "a song," and a mine abandoned that, with the exercise of a little care, forethought, and judgment, and by the owners feeling their way gradually at first, would in time become a valuable property, and not only have recouped the outlay and repaid the shareholders, but probably added considerably to the wealth of the country. Such has been the fate of many mines on this field in the past, and, the same causes being still at work, will, I am afraid, be so in the future. It not only destroys confidence in our mining industries, but damages our credit as a colony.

Karangahake.

In this district the Woodstock battery is treating ore by the McKay pans; but the majority of the mine-owners and miners are waiting to see what the Cassell Company's process can do. They are erecting a large plant at the Crown mine, but I fear the mistake so often made before of spending very large sums of money on works not immediately productive is being repeated. They are putting up buildings of a very substantial character, though it is not yet ascertained, as far as I can learn, whether or not the process is suitable to the

class of ore they have to treat. They have also committed the same mistake so many others are chargeable with—of having erected their plant in the wrong place, at least that is the opinion held by many.

If this (the Cassell Company's) process can do all that is claimed for it, and at the cost stated (12s. per ton), Karangahake will more than treble its population under a year, and the bullion return increase itself fourfold, for there is a great quantity of very rich ore—but of a refractory nature, which will cost about 15s. per ton to mine and crush—fit for treatment by this process; therefore if their figures are correct, and they can do what they claim, the profit should be a very large one. Should it prove a success it will be found that the works should have been placed at the foot of the hill, in the vicinity of the old La Monte plant, where the ore could have been easily brought to it. Now, should wet weather set in I am afraid they will have to suspend operations, as I do not think they will be able to drag their plant and the necessary timber over the hills to where the works are being erected.

The Kenilworth Company have sold 36 tons for export, the assay value of which was £107 per ton.

The Ohinemuri yield of gold for the year was 3,678oz. 18dwt. This includes Karangahake, Owharoa, Waihi, and Waitekauri.

No. 2. Mr. Inspector Wilson

to the Under-Secretary of Mines. Sir, — Inspector of Mines' Office, Thames, 25th April, 1889.

Page 102. Karangahake District.

Crown Mine (60 acres 1 rood: Mr. N. Coward, manager). —This mine is the property of the New Zealand Crown Mines Company, and is now being further opened up. No. 1 Tunnel on No. 1 Reef has been extended 80ft. on the reef, which is about 3ft. in thickness; and from No. 1 Tunnel on No. 2 Reef a rise is being put up on the reef to prove the value of the block on the back of the tunnel, and a winze 84ft. in from the rise is being sunk in the bottom for the same purpose: this reef is also 3ft. in thickness. No. 2 tunnel, which is 95ft. deeper, is also being driven on this reef. Further works to open up the mines and to prospect new ground will also soon be undertaken. Preparations are being made to use the ground tramway for conveying quartz to Railey's battery-site. The company have chosen this site as being the only available one on their property for the purpose of erecting stone-breakers and their new crushing-plant. Lamberton mills are to be used for reducing the quartz, and the Cassell Company's treatment is to be adopted for extracting the gold and silver from the crushed quartz. The crushing-plant, which has been sent from Glasgow, is now being conveyed to the ground, and will be erected at an early date. The Cassell's Company are also erecting a suitable plant near the mills for the purpose of treating the crushed quartz, an agreement having been made that the Crown Mines Company shall hand over the quartz after being reduced to fine powder, and the Cassell's Company shall then treat it by their process and return to the Crown Company a large percentage of the bullion contained in the quartz at an agreed percentage on the yield.

Woodstock Mine (11 acres : Mr. John McCombie, manager).—This mine has been worked by tributers. A large block of the reef near the surface has been

stoped out, and 101 tons of quartz have been crushed for a yield of 449oz. of gold. Six men have been employed.

Ivanhoe and Truro Mine (43 acres : Mr. C. Percy Cox, owner; Mr. John McCombie, manager). —A considerable amount of work has been done in these mines since the present owner became possessed of the property. Prospecting-drives have been put in to test some of the reefs. Two hundred and twenty feet of driving has been done, and 37 tons quartz treated for 43oz. of gold. Forty tons of quartz have been obtained by tributers, but have not yet been crushed. Eight wages-men and two tributers have been employed. A small battery has been erected on the mine—four stamps and two pans and settlers. The pan-treatment seems to be satisfactory, and yields a large percentage of the assay-value of the ores. To prevent loss by floatage the water which is used by the stamp-mill is conveyed to reservoirs and settled; and when sufficiently clear the same water is again used. A considerable amount of gold is thus obtained from the slimes.

Kenilworth Mine (14 acres: Mr. John McCombie, manager).—This mine has been worked on tribute. There have been 150 tons of quartz obtained. Of this, 36 tons have been sold for export, the assay-value of which is £3,400. The remaining portion of the quartz is still in hand, and is to be forwarded part to Waiorongomai and part to Mr. C. P. Cox's mill at Karangahake for treatment. Eight tributers have been employed.

Adeline Amalgamated Gold-mining Company. —This comprises the Adeline, Rose, Diamond, Josephine, Dubbo, and Bonny Jean Claims. This company's property is under offer to an English syndicate, and have some prospects of introducing English capital to work their mine.

Several other mines have been worked occasionally, but the best mode of treating the ores in this district is yet unsolved.

Page 104. Tribute System.

The working of the mines is carried on here to a very considerable extent on the tribute system. The percentage paid by tributers to the companies or mine-owners varies from 5 per cent, to 25 per cent, on the gross yield of gold; the average may be estimated at 12½ per cent. In very few instances do the companies or private owners of mines give any assistance to tributers in the way of advances whilst prospecting-works are being carried on. Some parties of tributers are very well remunerated, whilst others frequently run in debt to the storekeepers for food for their families and for mining requisites.

A better return would no doubt be obtained from many of the mines worked on tribute if the owners would encourage those willing to take tributes by advancing a small sum weekly whilst prospecting-works were going on, to be paid back when payable returns were obtained. There are 426 men employed on the tribute system in the district: 50 at Coromandel, 326 at Thames, and 50 in the Ohinemuri District. The proportion of gold obtained by tributers has been about one-seventh of the whole at Coromandel, one-third of the whole at Thames, and seven-ninths of the whole at Ohinemuri.

1889**14 January**

(Karangahake).[Crown mine]— Captain Coward took charge of this mine on Monday last, and at once inspected the various workings in progress, and also the old Railey plant...

The new pulverising machinery is expected by the s.s. Tainui, from London, which is due in Auckland on the 15th instant, and on its arrival no time will be lost in forwarding it to its destination and erecting it. Mr. McArthur, general manager of the Cassell Gold and Silver Extraction Company, is also on his way from Queensland. Mr. McGruer still stays in charge of the underground workings at the mine, which no doubt will give satisfaction to Auckland shareholders.³⁸¹

“The old Railey plant” is presumably still intact at this time.

Cassel is correctly spelt with one l.³⁸²

2 February**THE CASSEL GOLD EXTRACTING COMPANY, LIMITED.**

By the last 'Frisco mail we received a copy of the fourth ordinary meeting of members of the above Company. The report will have special interest to many of our readers, seeing the Cassel Co.'s process is about to be introduced in connection with the recently formed Crown syndicate, Karangahake. The Company is under the direction of the following Board: Extraordinary Directors: Sir Chas. Tennant, Bart., Messrs A. D. M. Messean, Wm. A. Verrel; Ordinary Directors: Messrs John Beckett, Leonard Gow, Robert Smith, Wm. A. Arrol; Chairman: Leonard Gow, Esq.; Manager and Secretary: Mr W. A. Jones; Technical Manager: Mr J. S. Macarthur. The registered office of the Company is 157, West George Street, Glasgow; the Company's works being situated at Kinning Park, Glasgow.

The following is a copy of the Report: "The Directors have to record steady and substantial progress in the year under review. In their last Report, and at last meeting, they informed the shareholders of a new departure in the treatment of refractory gold and silver ores, which, though at that time but a few weeks old and still little more than in the experimental stage, gave such good promise of success on a commercial scale that they felt justified in referring to it in very hopeful terms. The laboratory investigations, which, in the case of a new process like this, are a necessity, and the importance of which cannot be exaggerated, were and have continued to be pushed on with vigour; and at the same time a plant capable of dealing with considerable bodies of ore was at once proceeded with. The very refractory Queensland ore, which was referred to at last meeting, was the first large parcel successfully dealt with. In the early stages various small obstacles naturally to be expected in dealing for the first time with a new body of ore on a large scale, were met with, but were successfully overcome, and gradually this complex and very

³⁸¹ <https://paperspast.natlib.govt.nz/newspapers/NZH18890114.2.61>

New Zealand Herald, Volume XXVI, Issue 9260, 14 January 1889, Page 6

³⁸² For example, see: https://www.gracesguide.co.uk/Cassel_Gold_Extracting_Co

refractory ore was mastered. Its treatment was largely a question of experience, and though, from causes beyond the Directors' control, business until now has not resulted, the work accomplished was highly appreciated by the owners of the ore, and the Directors felt satisfaction in the proof that the process was capable of dealing with such a refractory material.

In the month of May there was delivered at the Company's works a shipment of 22 tons of ore from the Crown Mine, New Zealand. It proved to be of a very peculiar composition, and had resisted every attempt to treat it satisfactorily on the spot. The grinding, sampling, assaying, and analysis of such a large body of ore, together with numerous experimental trials, and finally, practical treatment on the large scale, involving an enormous amount of careful and detailed work, of which outsiders can have but a faint idea, was successfully accomplished, and resulted in a contract with the New Zealand Crown Mines Company, Limited, which the directors hope and believe will prove advantageous to the Cassel Company's shareholders as well as to the Crown Mines Company. As the circumstances connected with this important transaction will be fresh in the memory of the Cassel shareholders, and, as a detailed statement of the work accomplished in the treatment of the ore was sent to them all along with a prospectus of the Crown Mines Company, it will be unnecessary here to make more than a general reference to this subject.

The Directors, however, may point out one or two special features of interest. The Mining Engineer who was deputed by the Crown Mines Syndicate to report on the property, a gentleman of high standing in Melbourne, stated in his report that "That there can be no doubt or question as to the quantity or quality of the ores to be obtained in the claims under consideration; but, with the present appliances for extracting the bullion therefrom, I have no confidence that they will give that remuneration or profit your clients seek and desire"; and "I am satisfied the Mines would prove highly remunerative could some means be adopted to extract 90 or even 80 per cent. of the bullion the ore contained"; and in a letter accompanying his report he reiterated and emphasised his opinion in the following words: — "The whole secret of the profitableness or otherwise of the venture lies in the treatment of the ores...The present mode in use of treating these ores would be useless, and I cannot at present help you out of that difficulty."

The ore thus characterised, the Cassel Company were able to treat with perfect success, not only as regards the gold but the silver also. The whole of their operations were continually open to the inspection of the gentlemen composing the Crown Mines Syndicate, and were considered so entirely satisfactory, both in detail and results, that on the strength of them the contract with the Cassel Company was arranged and the Crown Mines Company formed. The value of this contract to the Cassel Company as an excellent introduction into the mining circles in New Zealand, and as a good advertisement for their process, is very great, and the Directors would here take the opportunity of referring to the amicable spirit which has throughout been displayed by the gentlemen connected with the Crown Mines Company. The Cassel Company's arrangements for working at the Crown Mines are well advanced. Their servants left for the Mines at the end of November, and it is expected that both parties (the Crown Mines Company and the Cassel Company) will be ready to commence active operations about March or April.

It will readily be understood that as the Company have gained much valuable experience in the treatment of different classes, and varieties of ore, sundry modifications and improvements in the details of working have been introduced, and the shareholders will be pleased to learn that the Directors are still able to say, even in face of the increasingly numerous parcels of ore sent them for treatment, that not one has yet been presented to the Company which they have been unable to deal with successfully.

The Directors having carefully considered the circumstances of Queensland, together with the advice of their agents there, decided upon re-opening the Company's establishment at Ravenswood as the quickest and surest means of introducing their process to mine owners on the spot. They therefore despatched a competent and trustworthy staff there, and by latest advices the works were being put into order, and a refractory ore from a neighbouring mine had been treated with an extraction of upwards of 90 per cent., and with possible business in prospect. The Directors have also made tentative arrangements for an agency in South Africa, and have despatched a representative there, from whose mission they anticipate good results.

A permanent arrangement of a satisfactory nature has been entered into with the syndicate proprietary of a very large mining property in New Zealand, under which the Cassel Company's process will be used by all the Companies into which the property may ultimately be divided, without any expenditure whatever on the part of the Cassel Company. Operations will be proceeded with as rapidly as possible, and if this extensive property turns out at all according to anticipations, the Directors feel assured that the Cassel Company cannot fail to benefit largely. {This "permanent arrangement of a satisfactory character," etc., we are informed refers to an arrangement entered into by the Cassel Company with The Ferguson Syndicate Co., Limited, in connection with the New Era Special Claim, etc., Waiorongomai. Ed, Te A. and O. N.}

The preliminary arrangements are about completed for the formation of a syndicate to acquire options of properties to be worked by the Cassel Company's process. As a basis of this syndicate, the interests of the Cassel Company in all the Companies which may be promoted by it are permanently and adequately conserved, and from the information and advices they have received the Directors entertain a sanguine hope that this enterprise will also in due time prove a source of revenue to the Company.

Attached to the report is a statement by the Company of the treatment of Crown mine ores, the summary of the 21 trials being as follows: Contents of ore treated (21 tons, 5cwt., 1qr, 5lbs), gold, 30ozs, 12dwts, 12grs.; Silver, 256oz, 9 cwts, 18grs. Actually extracted and recovered, gold, 26ozs, 14dwts, 11grs; silver, 219oz, 17dwts, 11grs. Total average extraction, gold, 87.25 per cent; silver, 85.72 per cent.³⁸³

³⁸³ <https://paperspast.natlib.govt.nz/newspapers/TAN18890202.2.10.1>

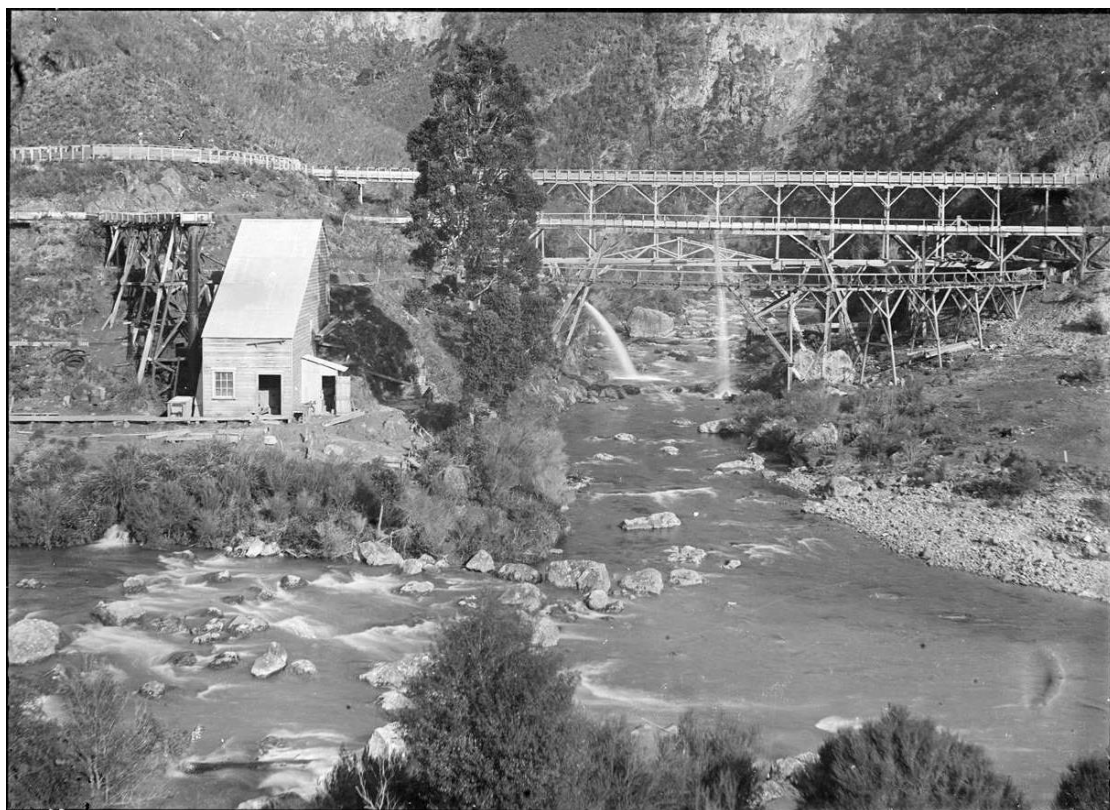
Te Aroha News, Volume VI, Issue 339, 2 February 1889, Page 2

6 February

At a meeting of the Ohinemuri County Council, held on Saturday last... The Crown mine, through Mr. Adam Porter, offered to lease the county tramway to Railey's battery. The decision was reserved.³⁸⁴

The tramway to Railey's belongs to the County. It is the "County Tramway".

Ivanhoe and Truro Co.'s battery and pan plant



This is a MM White photograph, No B3575.

This is the earliest photograph of this battery, Cox's 4 stamp battery and pan plant (so using mercury amalgamation, crushing wet³⁸⁵). It was erected end 1888, early 1889. And was started on or before 13 February.

This image is probably showing the battery under the ownership of the Woodstock Company, who took it over in 1893. The Crown flume was constructed May 1892³⁸⁶; a new 10 stamp battery was added August 1894³⁸⁷.

The photographer stood on the side of the new gorge road (completed 1890).

In the foreground is the Ohinemuri River, flowing to the right; the Waitawheta joins from centre. To the left of the battery can be seen the trestle and pipe delivering water to the pelton wheel at the corner of the battery (housed in the wooden box; discharge water entering the river at extreme right). This is

³⁸⁴ <https://paperspast.natlib.govt.nz/newspapers/NZH18890206.2.23>

New Zealand Herald, Volume XXVI, Issue 9280, 6 February 1889, Page 4

³⁸⁵ <https://paperspast.natlib.govt.nz/newspapers/NZH18911207.2.55>

New Zealand Herald, Volume XXVIII, Issue 8743, 7 December 1891, Page 6

³⁸⁶ <https://paperspast.natlib.govt.nz/newspapers/NZH18920504.2.47>

New Zealand Herald, Volume XXIX, Issue 8869, 4 May 1892, Page 6

³⁸⁷ <https://paperspast.natlib.govt.nz/newspapers/NZH18940804.2.60>

New Zealand Herald, Volume XXXI, Issue 9581, 4 August 1894, Page 6

connected to the Woodstock Furnace water race flume, which continues to deliver water across the Waitawheta to the Furnace. It is discharging surplus water via a by-wash.

Above this race is the Crown water race flume, delivering water to the new Crown battery. It was constructed May 1892. Note the flume skirting the ridge in a beautifully constructed arc, at left of image. This will be removed, the flume put through a tunnel, at a later date (1894). This to avoid conflict with an enlarged Woodstock battery.

Below the Woodstock flume bridge we see a bridge structure incorporating an A frame; this is the lower section of the Crown flume bridge (a double decker). It is intended to provide tramway connection across the river.³⁸⁸

Below this again is a tramway bridge, which is sagging a little. It may still be the original Ivanhoe bridge, built 1884, to deliver ore to their battery. It will be upgraded in 1894 to bring ore to the Woodstock battery, high at the back of the building. Before this date ore was transported over the water race bridge.³⁸⁹

The water discharging from lower again may be from the old Karangahake/Hauraki/Ivanhoe battery water race flume, with water from the Waitawheta. This battery was removed 1890, but perhaps not yet the flume. The tree obscures valuable information ☹. Water flow may be maintained in even an unused wooden flume, as allowing the timbers to dry out would probably render the flume useless thereafter.

Immediately in front of the building, heading to the left, may be a wooden launder taking tailings to storage pits. McCombie talked of "pitting" tailings³⁹⁰.

The kauri (?) tree to the right of the building remains for many years (it dies c.1901).

13 February

The battery and pan plant erected by Mr Jno. McCombie for the proprietors of the Ivanhoe and Truro claims, Karangahake, has now started. At present it consists of 4 head of stamps, one pan, and one settler, but another pan will shortly be placed in position. It is a neat little plant, and shows some ingenuity in its construction. Nearly the whole of the loss by floatage is prevented by a contrivance which catches the overflow of the tanks, and brings it back by means of a Californian pump to the stamper boxes. The plant is driven by a powerful Pelton wheel, with a fall of 38 feet of water. Water is obtained from the Woodstock race.³⁹¹

Cox's 4 stamp battery and pan plant started, erected and managed by John McCombie

20 February

The Ivanhoe and Truro Co.'s battery and pan plant started to work on Tuesday and is stated to be highly satisfactorily in its running. It is a small but compact plant, consisting of four head stamps one pan, and one settler. Room has been left for second pan which will shortly be put into its place. An ingenious method intended to save much of the floatage loss has been devised by Mr McCombie, the manager. The overflow of the tanks is caught in a tank outside the battery, and by means of a Californian pump (an endless belt with battens

³⁸⁸ <https://paperspast.natlib.govt.nz/newspapers/NZH18920504.2.47>

New Zealand Herald, Volume XXIX, Issue 8869, 4 May 1892, Page 6

³⁸⁹ <https://paperspast.natlib.govt.nz/newspapers/NZH18940630.2.5>

New Zealand Herald, Volume XXXI, Issue 9551, 30 June 1894, Page 3

³⁹⁰ <https://paperspast.natlib.govt.nz/newspapers/NZH18940630.2.5>

New Zealand Herald, Volume XXXI, Issue 9551, 30 June 1894, Page 3

³⁹¹ <https://paperspast.natlib.govt.nz/newspapers/THS18890213.2.11>

Thames Star, Volume xxi, Issue 6192, 13 February 1889, Page 2

attached, running in a box flume)³⁹², the whole of the overflow is brought back into the battery and goes right through again. The motive power is a Pelton 40 h p., the water supply being obtained from the Woodstock race, with a fall of about 38 to 40 feet.³⁹³

23 February

Mining News.

Chief of course amongst these disappointments were those experienced with respect to the La Monte and Parkes processes. Once more, however, hope is again in the ascendancy, and the result of new processes now being introduced for the first time into the district, are awaited with the greatest interest. The successful floating of the Crown Mines into a wealthy Company, having on the Board of directors men of very great influence and full of enterprise, who will give the property a thorough practical testing, is a matter for great satisfaction to the whole field.

Associated with the Crown Syndicate, in the development of their property, is another very strong Company, The Cassel Gold Extracting Company, who have succeeded in obtaining such splendid results at Home from Crown ore; particulars respecting which were recently published in these columns. Several representatives of the Cassel Company have already arrived, and no time will be lost in erecting the necessary plant, which, it may be added, is of a very simple character.

Captain Noah Coward, who recently took charge of the Crown mines, was specially sent out by the Home directors for that purpose, and is a gentleman of very great practical experience in all branches of mining, having been engaged in mining pursuits at Home and abroad, since he was fourteen years of age. Under Capt. Cowards supervision work in connection with the opening up and general development of the Company's property is steadily progressing....

Active preparations have been started, and are now in progress by the Cassel Company in connection with the erection of their plant, and also by the Crown Company for such plant as they have to provide in conjunction therewith.

Mr Percy Cox's Plant: Some particulars have already appeared in these columns regarding a small plant recently erected by Christchurch capital, principally for the treatment of ore from the Ivanhoe and Truro Licensed Holdings, which were some time back purchased at a sale in the Warden's office, Thames, by Mr Percy Cox of Christchurch, who, it will be remembered spent a considerable time at Waitoa, investigating the supposed gold discovery there, on behalf of Christchurch shareholders. Nothing daunted by the failure of the Waitoa field, Mr Cox had a good look round for himself, and being favourably impressed with the Karangahake portion of the district as a promising field for investment, purchased the mines named and has been carrying on work in connection therewith ever since, under the supervision of Mr John McCombie, who is well versed in mining matters generally in all

³⁹² For image see: <https://collection.maas.museum/object/236532>

³⁹³ <https://paperspast.natlib.govt.nz/newspapers/TAN18890220.2.11>

Te Aroha News, Volume VI, Issue 344, 20 February 1889, Page 2

portions of the Ohinemuri goldfield, and who was also engaged on behalf of the Christchurch syndicate to practically test the Waitoa find.

The plant erected for Mr Cox and his partners (Mr Cox being, however, by far the principal shareholder) has been constructed entirely under Mr McCombie's supervision, and in connection therewith he has introduced some novel features, the principal one being the provision made with the object of preventing 'float' loss, which is known to be very great in many ordinary stamper batteries. The plant already erected consists of four head of stampers, one pan and one settler; a second pan will however be in position within the next few days. The motive power is a Pelton wheel, having 35 feet fall (the water being obtained from the Woodstock race), and capable of giving as high as forty horse power if required. The plant started work on Thursday of last week, and so far is stated to be giving every satisfaction. The present amount of quartz treated is equal to an output of twenty tons a week, but the output will be doubled, so soon as the second pan is in position, one settler being sufficient for two pans. The quartz now being treated is from the Ivanhoe mine, about one hundred tons of ore from this mine has been broken out and now awaits treatment; whilst some sixty to seventy tons, from the Kenilworth, Woodstock, and other tributes is under offer.

No attempt whatever is made to save any of the gold by means of blankets, etc., the crushed ore running directly from the stampers into settling pits, of which there are two, and as soon as one is full the supply is diverted into the other whilst it is being emptied, and vice versa. A charge of half a ton of the crushed ore is put into the pan at a time, and there ground for four hours, during the last hour the 'muller' is raised and mercury added; the whole charge is then run into the settler and there treated for four hours, after which the mercury is syphoned off, and the charge run off by tapping the various plug holes in the settlers for that purpose, of which there are five about ten inches apart.

The manner in which it is sought to prevent, 'float' loss is as follows (and so far Mr McCombie states he is fully satisfied with the results): By means of a Californian pump, the water from the stampers as fast as it drains from the pits is raised and used over and over again, the same water in fact so to speak continually describing a circle. The pump referred to is an exceedingly simple affair; consisting of a number of slats of wood, fastened on a belt about fifty feet long at intervals about two feet apart, which revolves within a box, about six inches square; the slats fitting closely within the box, thus carrying up the water. We believe a pump of this description has long been used in California and America for a similar purpose; but with very varied results. The plant runs at the following speed per minute; stampers, 80, pans, 55, settler, 9. It is intended to thoroughly test the present plant for three months, and then, should results prove satisfactory to at once enlarge it to twice the present size.

The old Ivanhoe battery has not been working for some time past, that is not the stampers, but grinding of tailings is progressing daily, under the supervision of Mr W. Littlejohn.

Mr Alf. Shepherd we are glad to be able to state has wonderfully recovered from the effects of the fall from his horse some months back, and the results from which for some time were most serious.

Mr J. M. Chambers has this week been superintending the loading of some plant from the La Monte furnace house, which is being carted away, and in order to facilitate matters Mr Chambers has had a crossing cleared in the Waitawheta river [presumably Ohinemuri River], and the machinery is carted direct from the furnace house across the river on to the road, and thence to Paeroa wharf.³⁹⁴

2 March

Crown: Mr Moore is making good headway with the erection of the manager's residence, which he hopes to have completed about the end of next week.³⁹⁵

Is this Crown House? An AWN photo of 1898 shows Crown House. A photo of the house under construction is labelled 1900.

9 March

Crown.— The Company's Manager is pushing on the works in connection with both Mine and Battery, having a large number of hands employed... The Manager, Captain Coward, has moved into his new residence.

Mr Smeaton, the Company's Assayer, arrived here last week from Glasgow.

Mr Dickey, carter, has got the base of the stone-breaker to the top of the Spur above Railey's. It proved an awkward load on a bad road, weighing about three and a half tons; this completed all the heavy portions of the machinery. A start will be made at once to get the grinders into position.

The Cassel Gold Extracting Co's Manager is busy with the working drawings and specifications of their plant. Tenders will be invited soon for erection of buildings. Mr Cock has started on his contract for erecting two cottages, and expects to have them completed in four weeks.³⁹⁶

16 March

From our own Correspondent. Karangahake, Thursday.

Crown: The work of connecting the different levels in this mine is being pushed on rapidly... At the battery the men are employed in removing the stampers used in connection with Reilly's [Railey's] plant, to make room for the new grinding mill sent out from Glasgow.

The Cassel Gold Extracting Company's Manager is about to let a contract for excavating a site for the plant, for the erection of which tenders will also be called for in the course of a few days. Mr Cock (contractor for erecting cottages), has got most of the material on the ground, and expects to have the buildings roofed in by the end of the week.³⁹⁷

³⁹⁴ <https://paperspast.natlib.govt.nz/newspapers/TAN18890223.2.14>

Te Aroha News, Volume VI, Issue 345, 23 February 1889, Page 2

³⁹⁵ <https://paperspast.natlib.govt.nz/newspapers/TAN18890302.2.14.4>

Te Aroha News, Volume VI, Issue 347, 2 March 1889, Page 2

³⁹⁶ <https://paperspast.natlib.govt.nz/newspapers/TAN18890309.2.14>

Te Aroha News, Volume VI, Issue 349, 9 March 1889, Page 2

³⁹⁷ <https://paperspast.natlib.govt.nz/newspapers/TAN18890316.2.43.1>

Te Aroha News, Volume VI, Issue 351, 16 March 1889, Page 7

23 March

During the week the Cassel Gold Extraction Company have received from Auckland about 20,500 feet of timber, destined for the erection of their machine house; also about 40 tons machinery, iron, etc. Another 25,000 feet of kauri will arrive per next week's Kotuku, and about 80 tons more machinery and other goods ex Doric are expected by the same steamer.

Mr Cock, contractor for the building of the residences,. etc., is making rapid strides towards the completion of his contract. The Crown mine itself is being well handled by Capt. Coward and his able colleague, Mr G M. McGuire [McGruer?].³⁹⁸

25 March

At the Crown:

At the battery, the stampers formerly used in connection with the Railey plant have been removed, to make room for the new grinding mill sent out from Glasgow. A contract is soon to be let for the preparation of a site upon which to erect the Cassell Gold Extracting Company's machinery.³⁹⁹

30 March**Crown Battery under construction**

KARANGAHAKE.

(From our own Correspondent.) Crown. — Railey's battery (now the property of the Crown Co.), is rapidly disappearing, having to be removed to make room for the Lamberton Grinding Mills, about to be erected. The timber for the framing required is being sawn some distance up the Waitawheta river, and floated down to the battery site, by means of the water-race, at a small cost. The Manager expects to have the plant in working order by the end of June.

Cassel Gold Extracting Co.: This Company's Manager is pushing on the works with all speed, the cottages being built for the accommodation of the staff will be ready for occupation by the end of next week. A contract has been let to Mr C. S. Brown for excavating the site for the plant, and one for its erection to Mr O'Brien; the whole to be completed within two months from date.

Mr Dickey has four teams on the road, carting for the Crown and Cassel Companies. The building material for the Cassel Company's plant is being carted from Waitekauri. The machinery has been landed at Paeroa, and will be carted on to the site within the next few days.⁴⁰⁰

Lamberton grinding Mill⁴⁰¹

This description from AJHR 1890, referring to an installation at Te Aroha (Ferguson plant).

³⁹⁸ <https://paperspast.natlib.govt.nz/newspapers/TAN18890323.2.13>

Te Aroha News, Volume VI, Issue 353, 23 March 1889, Page 2

³⁹⁹ <https://paperspast.natlib.govt.nz/newspapers/NZH18890325.2.52>

New Zealand Herald, Volume XXVI, Issue 9320, 25 March 1889, Page 6

⁴⁰⁰ <https://paperspast.natlib.govt.nz/newspapers/TAN18890330.2.16>

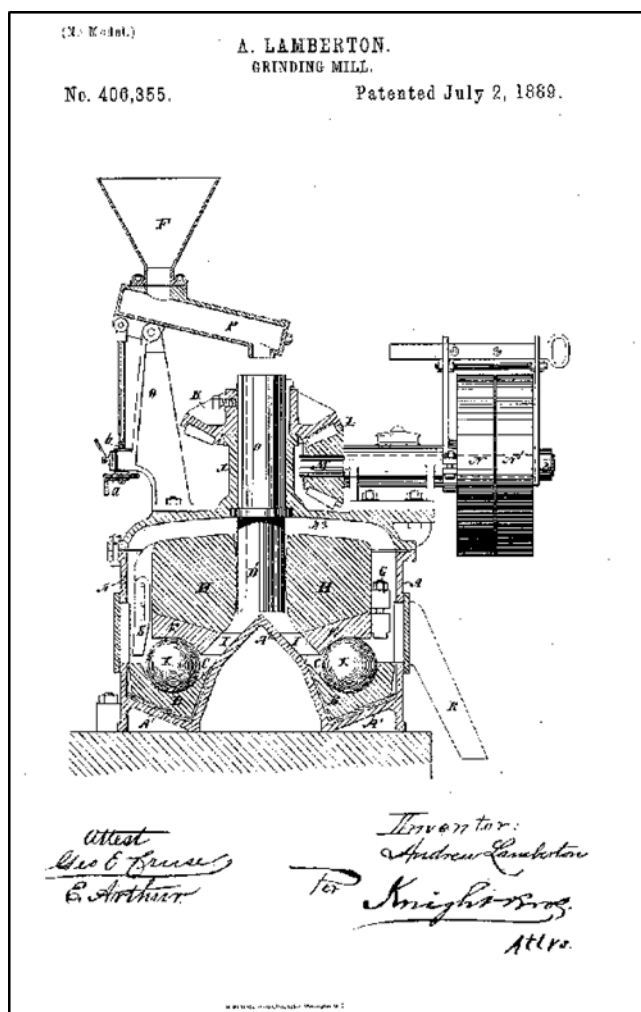
Te Aroha News, Volume VI, Issue 355, 30 March 1889, Page 2

⁴⁰¹ <https://patents.google.com/patent/US406355>

Lamberton Mill. —This consists of a cast-iron pan, having a convex circular top. It is about 3ft. 6in. in diameter, and about 2ft. 6in. deep. The convex top is bolted to the sides as well as the bottom of the pan. All the joints are made air-tight. In the inside of the pan there is a cast-steel false bottom with a circular groove for cast-steel balls to rotate in. These balls are 10in. in diameter, and there are ten of them in each pan. On the top of these balls there is a cast-steel disc-plate having a shallow groove on the under-side, which has the effect of keeping the balls steadily in their course while revolving. There is a hollow vertical shaft which passes through the cover of the pan and also through the disc-ring, and it is through the centre of this shaft that all the ore is fed into the mill. Above the disc-ring there are circular plates of cast-iron, which are merely used as weights so as to have a weight equal to 2 tons pressing on the balls. On the top end of the shaft there is a bevelled pinion, which is driven by another bevelled pinion placed on a short horizontal shaft having a fast-and-loose pulley on the outer end, and driven by a belt from an intermediate shaft. The disc-ring is made to rotate at the rate of from 100 to 110 revolutions per minute. The effect of this is that it sets all the balls rotating, and the centrifugal force causes the balls to press hard on the side of the groove in the false bottom next to the periphery, and no doubt will form a very effective grinding-machine; but it is questionable if the wear-and-tear on the balls will not be too great to justify their adoption. This has proved to be the case with the same class of mills at the Crown Claim, Karangahake, when wet crushing was carried on, where some six sets of balls were worn out in crushing 60 tons of ore; but Mr. B. Ferguson states that in crushing dry there is very little wear-and-tear. However, this has yet to be proved in dealing with the hard New Zealand ores.⁴⁰²

⁴⁰² <https://paperspast.natlib.govt.nz/parliamentary/AJHR1890-I.2.1.4.3>

GOLDFIELDS, ROADS, WATER-RACES, AND OTHER WORKS IN CONNECTION WITH MINING. (REPORT ON)., Appendix to the Journals of the House of Representatives, 1890 Session I, C-03. Page 47



6 April

Cassel Gold Extracting Co. The contractor for the erection of this Company's plant has already made a big show with his framing. The excavating of the site is not progressing very rapidly, the contractor having had to cover over the water-Race for a distance of 200 feet, to secure it from damage by boulders. The cottages are almost completed, and Mr Demster informs me that he expects to be able to take possession of them by the end of next week.⁴⁰³

24 April

Karangahake, Monday. Ivanhoe and Truro: The proprietors of this mine are keeping the battery going (one shift), on stuff from their own mine. An additional Mackay pan has just been erected by Messrs Price, Bros.

The old Ivanhoe battery is pounding away on a large parcel of low grade ore from White and party's (Ivanhoe) tribute. The stuff is easily broken, and half ounce to the ton would pay, judging, however, from the show on the plates it should turn out something better than half ounce.⁴⁰⁴

⁴⁰³ <https://paperspast.natlib.govt.nz/newspapers/TAN18890406.2.13>

Te Aroha News, Volume VI, Issue 357, 6 April 1889, Page 2

⁴⁰⁴ <https://paperspast.natlib.govt.nz/newspapers/TAN18890424.2.9>

Te Aroha News, Volume VI, Issue 362, 24 April 1889, Page 2

11 May

Ivanhoe and Truro: The Company's battery has been at a standstill for some days through the scarcity of water.

Crown G.M. Co.'s Mines The County tramway (which the Company have leased), is being put in working order, and connected with No. 2 level. At the battery the stone crusher, and two of the Lamberton grinding mills are in position.

Cassel Gold Extracting Company: Good progress is being made with the erection of the works for this Company. The excavation has been completed, and a start made to set up the frame of the building. The assay rooms are in a forward state, and will be ready for work in about a week's time.⁴⁰⁵

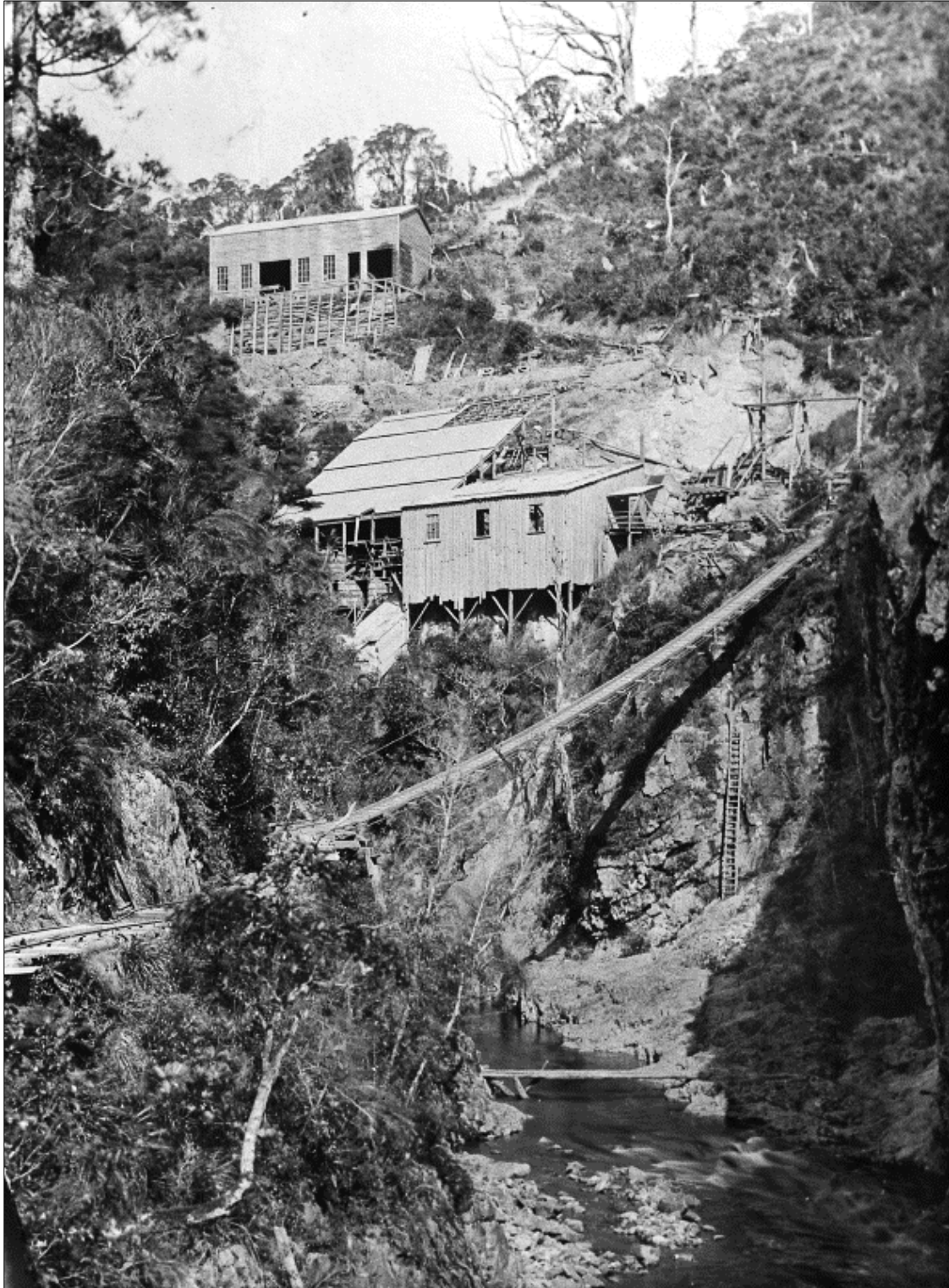
This would give an approximate date for the photograph showing the construction of the new plant on the old Railey's site; May 1889.

The County Tramway is going to be used at last.

The tramway at the top of the incline is at No. 2 level (becomes 6a?).

⁴⁰⁵ <https://paperspast.natlib.govt.nz/newspapers/TAN18890511.2.12>

Te Aroha News, Volume VI, Issue 367, 11 May 1889, Page 2



This image shows the construction of the Crown battery, and the Cassel plant further up the hill, replacing Railey's building/s. Date: May 1889⁴⁰⁶. Staples collection.

There is no hand rail on the bridge, a luxury that was added later. Workmen, not prepared to risk a fall from the bridge, cross the river on a low log bridge, and scale the cliff by ladder. The wire used to haul ore across the river can be seen. This wire, or one of the bridge wires, is present today.

⁴⁰⁶ <https://paperspast.natlib.govt.nz/newspapers/TAN18890511.2.12>

Te Aroha News, Volume VI, Issue 367, 11 May 1889, Page 2

There are rails on the tramway, though somewhat awry. There does not appear to be metal rails on the bridge, but there are slats fixed cross-wise to assist walking or pushing of ore carts. The Crown company will use this route, previously established by the Monastery mine company, to deliver ore to the site from their No.6, or river level, adit.

At least two builders are visible at the top of the Crown building.

Large trees are visible on the skyline, including some dead. The vegetation at the top of the site is sparse, after being cleared or burnt earlier.

What appears to be an access track can be seen on the ridge to right of Cassel building.

The lowest part of the Crown building is presumably above the pelton wheel shaft. Three wooden barrels can be seen beyond this in the unfinished portion of the building. One can be seen in the Cassel building. In front of the Cassel building appears to be a bank stabilization/retaining wall of logs.

Is the finished part of the building, with the three windows, a remnant of Railey's building?

There is no sign of the stone pillar seen in subsequent images. Was it the foundation of a step kiln, used to dry the ore prior to reduction?

How did the photographer get here? Most likely up the County Road, down Railey's sled track, across the swing bridge, and along the currently unused tramway glued to the cliff above the river.

1 June

Crown G. M. Co. This Company's Manager celebrated the Queen's birthday by having the grinding machinery set in motion. Everything worked well, but, the trial was too short to demonstrate the capabilities of the plant. The main driving belt (which formerly belonged to Railey's battery) proved to be rotten, and any further tests will have to be delayed until a new belt can be procured. The County Tramway has been put into working order and connected with No. 2 level, where a large tonnage of ore is lying in readiness for the mill....

Cassel Gold Extracting Company: The progress of this Company's works has been retarded through want of timber, the sledge track (never very good) being almost impassible since the last rain, consequently the builder is not making such good headway as he could wish. The assay and smelting rooms have been completed, and the Company's carpenters have made a start to put the tanks together. The Manager expects to have the work in full swing in about four weeks (if wet weather does not interfere with his calculations by retarding the work). A lot of carting has yet to be done and Railey's sledge track is not fit for either men or horses in wet weather...

Kenilworth: Moore and party's tribute: A small parcel from this tribute section has been disposed of to the Manager of the Christchurch Company's Battery [Cox] for experimental purposes.

Woodstock: Mr Heitman, Manager of this Company's mine, is having a parcel of ore broken out for shipment to London at an early date; he is also having the tramway connecting the mine with the hoppers put into working order.

New Plant: A small experimental plant is about to be erected in the Woodstock furnace house under the supervision of Mr Napier, the Cassel patent to be the process used, with a Lamberton mill for grinding purposes.

Ivanhoe Battery: The repairs to the water-race having been completed, this Battery is again at work on a parcel of tailings.

Christchurch Company's Battery [Cox]: This Company's mill is kept going steadily on quartz from their own mine.⁴⁰⁷

⁴⁰⁷ <https://paperspast.natlib.govt.nz/newspapers/TAN18890601.2.12.1>

Te Aroha News, Volume VI, Issue 373, 1 June 1889, Page 2

4 September**KARANGAHAKE.**

(From our own Correspondent.) Karangahake, Monday. Crown G. M. Co.: The Lamberton Mills have been kept steadily at work for the last week on test parcels from different parts of the mine, and are doing their work in a very satisfactory manner. I learn from Captain Coward that each mill is capable of reducing 15 tons of ore in 24 hours. The wet process has been adopted, and the tanks used for the Railey process are utilised for settling pits. No amalgamation has yet been done, the Cassel Company's plant not being quite finished. A numerous staff is engaged in breaking down quartz, large quantities of which is in readiness for the battery.

The connections from the surface to the low level (a depth of over 300 feet), are all complete. A branch line is being constructed to connect the low level with the County tramway. When this is done the cost of forwarding ore to the battery will be trifling.

Cassel Gold Extracting Co.: This Company have had many difficulties to contend with, bad weather, worse roads, and heavy timber; but now, I am glad to say, the works are rapidly approaching completion.

Gorge Road: The contractors for this work (Messrs Kelly and Polton), are making capital headway, being now within 1½ chains of the bluff.⁴⁰⁸

The tramway to what was Railey's is being called the County Tramway.

The gorge road is well under way. This is the road that becomes SH 2.

Mr Warden Northcroft's report.

KAKANGAHAKE.—In this district the Woodstock battery [Woodstock furnace house] is treating ore by the McKay pans; but the majority of the mine owners and miners are waiting to see what the Cassel Company's process can do. They are erecting a large plant at the Crown mine, but I fear the mistake so often made before of spending very large sums of money on works not immediately productive is being repeated. They are putting up buildings of a very substantial character, though it is not yet ascertained, as far as I can learn, whether or not the process is suitable to the class of ore they have to treat. They have also committed the same mistake so many others are chargeable with—of having erected their plant in the wrong place, at least that is the opinion held by many. If this (the Cassell Company's) process can do all that is claimed for it, and at the cost stated (12s per ton), Karangahake will more than treble its population under a year, and the bullion return increase itself fourfold, for there is a great quantity of very rich ore; —but of a refractory nature, which will cost about 15s per ton to mine and crush —fit for treatment by this process; therefore if their figures are correct, and they can do what they claim, the profit should be a very large one. Should it prove a success it will be found that the works should have been placed at the foot of the hill in the vicinity of the old La Monte plant, where the ore could have been easily brought to it. Now, should wet weather set in I am afraid they will have to

⁴⁰⁸ <https://paperspast.natlib.govt.nz/newspapers/TAN18890904.2.7.1>

Te Aroha News, Volume VII, Issue 399, 4 September 1889, Page 2

suspend operations, as I do not think they will be able to drag their plant and the necessary timber over the hills to where the works are being erected.⁴⁰⁹

County Tramway being used for Crown battery

Gorge Rd under construction⁴¹⁰

26 September

OHINEMURI.

Mining News.— I paid a visit to Karangahake during the week to see if I could not worry up something to report, and found as usual the population of that district assembled round the best claim there, to wit, the Tramway Hotel. The only work of any importance that is being carried on at Karangahake is in the Crown Mine, where about 30 hands are employed in various mining work, and some fair ore is being grassed under Captain Corrend [Coward] and his able lieutenant, Mr G. N. McGruer.

The Cassell Gold Extracting Company, which has its main works erected on the Crown Mine, is making rapid progress on the completion of its plant in this place, and should be ready for treating ore in a few weeks. This Company guarantees a return of 85 per cent on fire assay value to the Crown Gold Mining Company.

They speak as one in authority, as the manager of the plant, Mr McConnell, with his present assistants, were the same persons who treated a large tonnage of Crown ore at Glasgow about 18 months ago, during the Glasgow Exhibition. The Cassell Company has a small experimental plant in full swing in the old furnace house, and is now putting through a lot of Woodstock and Kenilworth ores. The plant is jealously guarded from reporters and outside barbarians generally, and no one outside of the manager knows how matters are. It is understood by the man in the street, however, that everything is satisfactory.

Tenders for the erection of a school building are to be called by the Board of Education next week.⁴¹¹

The Cassel Company are using the old furnace house for experimentation.

So the first commercial use of the cyanide process is at the Woodstock Furnace House. Much easier access here than up at the old Railey's site. This is well before the Cassel/Crown battery.

Talk of a school for Karangahake

During 1889 a new school was built at Karangahake...⁴¹²

⁴⁰⁹ <https://paperspast.natlib.govt.nz/newspapers/THA18890904.2.15>

Thames Advertiser, Volume XXII, Issue 6412, 4 September 1889, Page 2

⁴¹⁰ <https://paperspast.natlib.govt.nz/newspapers/TAN18890904.2.7.1>

Te Aroha News, Volume VII, Issue 399, 4 September 1889, Page 2

⁴¹¹ <https://paperspast.natlib.govt.nz/newspapers/WT18890926.2.18>

Waikato Times, Volume XXXIII, Issue 2685, 26 September 1889, Page 2

⁴¹² <https://www.ohinemuri.org.nz/historic-texts/karangahake-school-70th-jubilee/school-history>

School History. Karangahake School and District 70th Jubilee 1889-1959

27 September

Mr McCombie is still running his neat little pan plant for the Ivanhoe and Truro mines, but it is a private concern, and no information is to be had.⁴¹³

There was on exhibition yesterday in the window of Messrs. Frater Bros., three bars of bullion, weighing in all about 26oz, and representing in value about £28 10s, the produce of five tons of Waihi and Karangahake quartz treated at the test plant of the Cassel Company in Karangahake. The percentage saved is equal to 90 per cent. of assay value, and the cost is moderate; in fact, all that is now required is a certainty of sufficient quantity of ore of this grade to make the venture an assured success. The process is an entirely new one, being the application of cyanide of potassium in dilute solution to ore ground to a very fine state of division. The grinding is done by means of a Lamberton mill, the fineness of grinding being double that obtained by ordinary stamper battery. The bars of bullion will be on exhibition for a few days, so that those interested in mining may have an opportunity of seeing the results obtained from this new treatment. Parties desirous of having trial lots of not less than one ton put through the process may ascertain all particulars from the agent for the Cassel Company, Mr. Thomas Melville, High-street.⁴¹⁴

12 October**Cassel Gold Extracting Co. underway**

Cassel Gold Extracting Co.: A trial run of this Company's machinery took place to-day, when everything seemed to run in a satisfactory manner.

Christchurch Battery: This plant is kept going on stuff from the Company's own mines, which I learn is looking well.

Gorge Road: The contractors for this work (Messrs Kelly and Polton) are making capital headway, and I think by Christmas will be able to show the croakers that a good road can be got through the Ohinemuri Gorge. The contractors inform me that they are using the Rackarock [consists of potassium chlorate and nitrobenzene⁴¹⁵] explosive with good results.⁴¹⁶

24 October

Educational.—The Ohinemuri School Committee held its usual monthly meeting on Monday last, Messrs C. F. Mitchell (chairman), Robson, Phillips Coote, and Edwards (secretary), being present. It was reported that tenders were called for the school at Karangahake, and that the Board of Education would take over the Owharoa school...

⁴¹³ <https://paperspast.natlib.govt.nz/newspapers/THS18890927.2.18>

Thames Star, Volume XXI, Issue 6384, 27 September 1889, Page 3

⁴¹⁴ <https://paperspast.natlib.govt.nz/newspapers/NZH18890927.2.13>

New Zealand Herald, Volume XXVI, Issue 9481, 27 September 1889, Page 4

⁴¹⁵ https://en.wikipedia.org/wiki/Sprengel_explosive

⁴¹⁶ <https://paperspast.natlib.govt.nz/newspapers/TAN18891012.2.7.3>

Te Aroha News, Volume VII, Issue 410, 12 October 1889, Page 2

It was afterwards announced that Mr Albert Moore was the successful tenderer for the Karangahake school at a cost of £211.⁴¹⁷

2 December

Cassell Gold Extraction Company. The latter company's experimental plant, in the old Woodstock furnace building, has been closed down for the present, owing to the term for which the building and motive power were engaged having expired. During the run several parcels of quartz from various centres, were treated with very satisfactory results.⁴¹⁸

Summary 1889

Captain Coward takes charge of the Crown mine in January.

February; Ivanhoe and Truro Co.'s battery and pan plant gets underway, 4 head of stamps, one pan, and one settler. Pelton wheel 40 h p., the water supply being obtained from the Woodstock race. Major owner/shareholder is Mr Percy Cox of Christchurch, John McCombie manager.

The Crown and Cassel Companies make a start at the old Railey site.

May; the Crown Co. lease the County tramway.

June. "New Plant: A small experimental plant is about to be erected in the Woodstock furnace house under the supervision of Mr Napier, the Cassel patent to be the process used, with a Lamberton mill for grinding purposes. Ivanhoe Battery: The repairs to the water-race having been completed, this Battery is again at work on a parcel of tailings."⁴¹⁹

In September the Lamberton Mills are used wet, but Cassel plant not finished.

"Gorge Road: The contractors for this work (Messrs Kelly and Polton), are making capital headway, being now within 1½ chains of the bluff."⁴²⁰

Also in September the Cassel Company are using the old Woodstock furnace house for experimentation.

During 1889 a new school was built at Karangahake...⁴²¹

AJHR 1890

Published 1890, but largely reporting on 1889.

GOLDFIELDS, ROADS, WATER-RACES, AND OTHER WORKS IN CONNECTION WITH MINING. (REPORT ON).

Presented to both Houses of the General Assembly by Command of His Excellency.⁴²²

⁴¹⁷ <https://paperspast.natlib.govt.nz/newspapers/WT18891024.2.37>

Waikato Times, Volume XXXIII, Issue 2697, 24 October 1889, Page 3

⁴¹⁸ <https://paperspast.natlib.govt.nz/newspapers/NZH18891202.2.55>

New Zealand Herald, Volume XXVI, Issue 9537, 2 December 1889, Page 6

⁴¹⁹ <https://paperspast.natlib.govt.nz/newspapers/TAN18890601.2.12.1>

Te Aroha News, Volume VI, Issue 373, 1 June 1889, Page 2

⁴²⁰ <https://paperspast.natlib.govt.nz/newspapers/TAN18890904.2.7.1>

Te Aroha News, Volume VII, Issue 399, 4 September 1889, Page 2

⁴²¹ <https://www.ohinemuri.org.nz/historic-texts/karangahake-school-70th-jubilee/school-history>

School History. Karangahake School and District 70th Jubilee 1889-1959

Mr. H. A. Gordon, F.G.S., Inspecting Engineer,

to the Hon. T. Fergus, Minister of Mines. Sir, — Mines Department, Wellington, 1st June, 1890.

Page 4. Karangahake through Gorge. —

This is a deviation of a portion of the main road from Paeroa to Tauranga. At present the road goes over a high hill [this must be the Rahu? Butler's never gets used?], and is very costly to maintain during the winter months, - as the ground is of a soft clayey nature and there is no metal in the vicinity; besides, the road is constructed with very steep grades, and becomes almost impassable in winter. A road is now being constructed through the gorge of the Ohinemuri River, which, when completed, will be almost level. The expenditure on this work up to the end of March last was £503 3s. 1d., and the liabilities on the works in progress amount to £494 16s. 11d.

Recently another plant has been erected on the same site where Mr. Railey's battery stood, at the side of the Waitawheta Creek, by the Crown Company, which is partially formed with English capital. This plant consists of a stone-breaker and a Lamberton mill, together with Railey pans and settlers, as well as a large plant erected by the Cassel Company to extract the bullion from the pulverised ore by dissolving the precious metals in a solution of potassium-cyanide and precipitating them by zinc.

The Lamberton mills are quite a new reducing-machine in this colony, but, as the principle is fully described in the description of the plant belonging to the Mr. Ferguson's Syndicate Company, at Te Aroha, a further description is not required here. The only difference in the mill used here was that a forty-mesh grating was used for a screen, and the ore crushed wet. The manager, Mr. Coward, who came out from England a couple of years ago for a home syndicate to report on some of the mines in Coromandel, seems to have had no experience with the working of these mills, which were never intended to be used for wet crushing; and the consequence was that the wear-and-tear on the balls with wet crushing was very great, and they did not last any time. He also made the same mistake as Mr. Railey in using water to pulverise the ore, as a large percentage of the sulphides was carried away with the water, and, moreover, the plant first erected by the Cassel Company could not treat the pulverised ore in a wet condition, consequently the pulverised material was treated in the Railey pans, which proved a complete failure to extract a fair percentage of the average assay-value of the ore. The Cassel Company then constructed a plant to treat the ore in a wet state, but this was not completed when Mr. Coward resigned the managership; but the new manager is to crush the ore in a dry state, and get it treated in the first plant erected by the Cassel Company.

Cassel's Process.

Tanks.—The ore, after being dried and crushed so as to pass through a fine screen, is conveyed to the percolation-tanks, which are made of kauri timber 4in. thick, each tank being 9ft. wide by 12ft. long and 3ft. 6in. in depth. The

⁴²² <https://paperspast.natlib.govt.nz/parliamentary/AJHR1890-I.2.1.4.3>

GOLDFIELDS, ROADS, WATER-RACES, AND OTHER WORKS IN CONNECTION WITH MINING. (REPORT ON)., Appendix to the Journals of the House of Representatives, 1890 Session I, C-03

planks in the bottom, sides, and ends of the tanks are held together by screw-bolts passing through the timber, forming, as it were, wide slabs. Afterwards the bottom and sides are rebated about $\frac{1}{2}$ in. in depth, to take the sides and ends, and are held together with screw-bolts of 1in. in diameter.

Filter-bed.—A filter-bed is formed in the bottom of each tank. This bed is made by first putting on a coating of coarse pebbles over the bottom, then a layer of smaller ones, sizing them down to about $\frac{1}{4}$ in. or $\frac{1}{8}$ in. in diameter. On the top of this battens of $1\frac{1}{2}$ in. in thickness and $2\frac{1}{2}$ in. in width are laid on the flat about 1ft. apart, having the spaces between them filled up with clean sharp river-sand, smoothed off on the top. The filter-bed is about 6in. in thickness.

Charging the Tanks.—To insure the best possible percolation, the ore is carefully charged so that there shall not be any lumps amongst it, and when a depth of from 4in. to 5in. has been put in and evenly spread over the tank, it is thoroughly wetted, by means of a watering-can, with a solution of cyanide of potassium; afterwards another layer of ore is put on and sprayed the same as before, and so on with each successive layer until the tank has received its full charge, a sufficient space being left between the last layer of ore and the top of the tank to receive the whole of the potassium-cyanide solution necessary for dissolving the whole of the gold and silver.

Potassium-cyanide Solution.—The quantity of solution necessary is about one-half the weight of the ore to be operated on and the amount of potassium-cyanide varies, according to the composition, from one-quarter to three-quarters of 1 per cent. That is, for every ton of ore 112 gallons of solution is required, which means that from 2.8lb. to 8.2lb. of potassium-cyanide is required, according to the composition of the ore, to make the necessary strength of the solution to one ton of ore. This solution, after being filtered through the ore, is made up to the necessary strength and used again; so that, although the first tank requires this amount of potassium-cyanide, very little is required for the next tank.

Filtering.—During the charging of the tank the discharge-pipe is closed, but on the charge being completed it is opened, when generally the liquor flows freely for a short time. The first liquor discharged, which may amount to twenty or thirty gallons, is returned back to the tank, as it had not sufficient time to act on the gold and silver. The tap in the discharge-pipe is so regulated that the solution shall not pass through the ore in less than thirty-six hours, as it has been found by experiments that it takes this time to get the gold and silver in solution. When the whole of the solution has passed through, it is deprived of the gold and silver it contains, as will be shown further on, and then used a second time; and when this has all been filtered from the ore a washing of pure water is made. The last two washings may be allowed to pass through as quickly as possible, and may be assisted by artificial suction. Indeed, the faster these two pass through, the more perfect the operation. After these washings, the tailings should be practically free from gold and silver, and are removed from the tank. Unless with very free-percolating ore, the filter-bed has to be removed after each charge, as the sand gets impregnated with slimes to such an extent as to render it unfit for filtration.

Precipitation of the Gold and Silver.—The precipitation of the gold and silver from the potassium-cyanide solution is effected by means of metallic zinc,

which should be used in such a state as to expose the greatest amount of surface to the solution. This is best gained by granulated zinc, or zinc reduced to the state of fine ribbons, such as zinc-turnings. To obtain the best granulated zinc for this purpose the metal is melted at a low temperature, and poured from a height of from 10ft. to 12ft. into a tub of cold water. It is then sifted with a sieve having holes of about $\frac{1}{8}$ in. square, and only that which will not pass through the sieve is used, the finer portion being remelted.

The solution from the percolating-tank may, if thought fit, be directly passed through the towers containing the zinc, or it may be run into an intermediate tank, which is considered the better plan.

Precipitating-towers.—The precipitating-towers will be better understood by referring to the annexed sketch. There may be any number, but eight or ten are found sufficient. These towers are made of wood. They are slightly barrel-shaped, and stand about 17in. high, and are 5in. in diameter at the ends. Each tower is fitted with a false bottom, B, which is of thin perforated sheet-iron, having small holes. The inject-pipe leading from the tank, which is a $\frac{3}{4}$ in. gaspipe, passes under the false bottom. The towers are filled with granulated zinc, or zinc-turnings, above the false

39 C.—3

bottom to within 1in. of the eject-pipe, E, and the liquor passes up through the zinc and goes from the top of the first tower to the bottom of the second, and so on through the whole of the series. All the top and bottom pipes which are in the towers are joined together by an india rubber tube, D, so that any one of the towers may be removed from the series and be replaced by another by simply slipping back the india rubber over C and E on both sides of the tower to be removed.

When once the flow is regulated the operation goes on day and night uninterruptedly, and requires little or no attention. If the ore operated on be rich in either gold or silver the precipitate will form rapidly in the first tower, and will retard the flow of the solution. When this happens to be the case the first tower is removed, in the manner already described, and the whole series moved forward, so that the second tower now becomes the first, and another tower is placed at or near the end of the series. The exhausted solution is tested periodically by boiling down a known quantity to dryness and assaying the residue. Mr. Napier, who has been conducting experiments with this process for the Cassel Company, and who kindly supplied me with the particulars in connection with this mode of treatment, informed me that in analysing the exhausted solutions he never found more than a few grains of gold to the ton of solution. By boiling down a known quantity and assaying the residue the strength of the exhausted solution is ascertained, and it is made up to the necessary strength by a fresh solution of potassium-cyanide, to be used on fresh ore. The loss in this way is said to be very little.

Recovering the Bullion from the Towers.—The contents of the charged towers are washed into a small tank. They are then emptied on to a sieve of about $\frac{1}{16}$ in. mesh and washed, the fine precipitate, which has the appearance of black mud, passes through, and the unconsumed metallic zinc remaining in the sieve is returned to the towers to be used again for precipitation. When the fine metallic mud has sufficiently settled the greater portion of the wash-water is decanted or siphoned off. Sulphuric or muriatic acid is then added to the

residue, which dissolves any zinc which may have passed through the sieve. This is then well diluted with water and allowed to stand for some hours, then filtered through a calico filter and washed with hot water until all the zinc salts are washed out. The residue is then dried, and melted with suitable flux into bullion. The following table shows the results obtained by the Cassel process at the Karangahake trial plant:—

Date.	Assay-value of Ore per Ton.						Extracted per Ton.						Percentage Extracted.		Percentage of Potassium-cyanide used on Ore treated.	Locality of Ore treated.
	Gold.			Silver.			Gold.			Silver.			Gold.	Silver.		
1889.	Oz.	dt.	gr.	Oz.	dt.	gr.	Oz.	dt.	gr.	Oz.	dt.	gr.				
July 6	0	19	4	10	1	17	0	16	14	7	2	0	86.52	70.4	0.50	Kenilworth, Karangahake
" 13	0	19	14	10	1	17	0	17	23	7	9	1	91.7	73.8	0.50	" " "
Sept. 23	1	12	16	14	14	0	1	11	1	11	7	0	95.0	77.2	0.50	" " "
Oct. 9	1	12	16	17	12	0	1	7	9	11	9	3	83.9	62.2	0.40	" " "
" 19	1	12	16	16	6	16	1	6	4	9	6	1	80.1	56.9	0.25	" " "
Aug. 1	1	17	13	1	17	13	1	14	7	1	4	12	91.2	65.1	0.50	Silverton, Waihi.
" 3	1	17	13	1	17	13	1	12	16	1	2	21	87.1	60.6	0.50	" " "
" 8	2	2	4	2	4	2	1	19	18	1	12	16	94.2	74.3	0.25	" " "
" 26	2	2	11	2	4	2	2	0	20	1	1	6	96.0	47.7	0.25	" " "
" 27	0	11	10	3	11	20	0	9	10	1	19	4	82.4	54.4	0.25	Martha, Waihi.
Sept. 13	1	12	16	5	14	8	1	7	19	4	3	8	85.0	72.8	0.25	Mixture of Kenilworth,
" 16	1	19	4	6	4	3	1	15	22	4	18	0	91.8	79.0	0.40	Silverton, and Martha.

Each of the above tests was made on one ton of ore. It will therefore be seen from the foregoing table that the quantity of potassium-cyanide required is not large, and that one-quarter of 1 per cent. in the solution gives nearly as good results as the larger percentage; and, as this is not all consumed in the operation, the expense of the reagent is not great. Admitting that every ton of ore requires 4lb. of potassium-cyanide, the cost of the reagent is about 6s. per ton.

The only plant of this description in the colony is erected at Karangahake in conjunction with the Crown Company's mine. It seems this company entered into an agreement with the Cassel Company to supply a certain quantity of pulverised ore regularly, and of a certain minimum value, and the Cassel Company on their part were to give the Crown Company a certain percentage of the assay-value. The ore was to be delivered in a dry state; but, as Mr. Coward, the manager, deemed it more advisable to crush the ore in a wet state, the process proved a failure. They had to construct another plant to treat the wet material, as they found the amount of slime in the wet-crushed ore destroyed its porosity, so that the solution in the vats they had previously constructed would not permeate through it. To obviate this another method was adopted.

A plant was constructed having circular vats, with a vertical shaft and a number of arms placed in the centre of the vats. These shafts were set in motion, and acted as agitators as soon as the charge and the cyanogen solution was placed in them. After these agitators had been working amongst the ore and solution for a sufficient time to allow all the precious metals in the ore to be dissolved, the pulp was drawn off and forced into a filter-press by a force-pump, the press being similar to that used in breweries for pressing the liquor out of hops after they have been boiled in water. The liquor coming from the filter-press passed through the zinc-towers, as already described, and the ore was taken out of the press and again charged into a second circular vat with a cyanogen solution, which had to undergo a similar operation with the

agitators, and was then forced through a second filter-press, and the liquor sent through the zinc-towers. The ore was again taken out of the press and put into a third vat with agitators; but in this operation nothing but clean water was used to wash the ore thoroughly, after which it was again put through a filter-press and the zinc-towers, and both the liquor and ore was then thrown to waste.

This new plant has not been tried to see how it will do, and, as the intention is to pulverise the ore in a dry state, the original method will be adopted. The new method may be capable of extracting a good percentage of the gold and silver if the ore is crushed dry; but it will be found that, crushing the ore in a wet state, the pulp will not give the same assay-value as the raw ore coming from the mine, on account of the water carrying away a portion of the sulphides. The Cassel process for the treatment of complex ores coming from Spain to Glasgow is said to prove a great success in extracting a large percentage of the precious metals, but it has not been sufficiently tested here to establish its value on the ores found in the North Island.

Woodstock, and Kenilworth Companies.—These companies have agreed to amalgamate their properties and form a new company, with 55,000 shares of 10s. each, on the following basis: The Woodstock shareholders to receive 28,750 shares; the Kenilworth shareholders 23,818 shares fully paid up, and 2,432 shares to be held in reserve, to be afterwards disposed of by the directors of the new company as they may deem most advantageous. This amalgamation will be the means of forming a good company, as the amalgamated mine can be worked more advantageously than by the previous system. During last year scarcely any work was done in the Woodstock Mine, but seven tributers have been employed in the Kenilworth Mine, and 45 tons of ore was sold on assay-value for £1,660, and 45 tons are stacked which is said to be worth from £30 to £40 per ton. The ore in these mines contains a large percentage of silver in proportion to the gold.

Ivanhoe and Truro Mine.—There have been twelve men employed in this mine, and a considerable amount of prospecting has been done. From the different lodes and leaders 449 tons of stone has been crushed, which yielded 374oz. of gold.

Adeline Amalgamated Company.—This company hold the ground formerly belonging to the Adeline, Dubbo, and Diamond Companies, and, although not doing a great deal of work, they are carrying on prospecting, and so long as this is legitimately done every encouragement should be given them. According to their annual balance-sheet for the year ending the 7th of August last, the expenditure amounted to £633, of which £218 was for wages, but whether the balance of the expenditure was in working the mine the balance-sheet does not show.

Table below, List of Works, is from page 127

Locality and Nature of Works.	Total Cost.	Amount of Contribution paid by Mines Department.
NORTH ISLAND.	£ s. d.	£ s. d.
ROADS (SUBSIDISED).		
<i>Coromandel County.</i>		
Improving road to Iona and Just in Time Companies' Mine	200 0 0	133 6 8
Making and improving track from Tokatea towards Kennedy Bay	320 0 0	213 6 8
Golden Belt Track	100 0 0	50 0 0
Tokatea Road (repairs)	300 0 0	150 0 0
Making and improving track from Golden Belt to Tiki	239 3 3	159 8 10
Making road from Ring's Bridge to Kapanga Mine	150 0 0	100 0 0
Making road to Kapanga Mine	132 0 0	88 0 0
Temporary track from Tokatea Saddle to Waikoromiko	50 0 0	33 6 8
Continuation of track from Success Company's Mine to top of main range	80 0 0	53 6 8
Completion of road from Tokatea Saddle to Tokatea Battery	50 0 0	33 6 8
Widening road from Matawai to Vaughan's Claim	357 0 0	238 0 0
Improving track, Mercury Bay to Waitai	100 0 0	66 13 4
Continuation and improving Waikoromiko Track	150 0 0	100 0 0
Emily Battery to Rocky Creek	60 0 0	40 0 0
Track, Bismarck Battery to Kennedy Bay	200 0 0	133 6 8
Road up Manaia	675 10 6	450 7 0
Extension of Vaughan's and Vizard's Tracks	150 0 0	100 0 0
Vizard's towards Marebel	200 0 0	133 6 8
Extending and widening Waitaia Road	100 0 0	66 13 4
Makarau to Waiiau	1,600 0 0	1,066 13 4
Waikawan to Tiki	500 0 0	333 6 8
Paul's Creek to Cabbage Bay	200 0 0	133 6 8
Waikawan Creek Track	100 0 0	50 0 0
McLaughlin's Road	100 0 0	50 0 0
Manaia to McGregor's new find	100 0 0	50 0 0
Manaia to Tiki	500 0 0	250 0 0
Old saw-mill towards Matawai	200 0 0	100 0 0
Extension of Paul's Creek Track	300 0 0	150 0 0
	7,213 13 9	4,525 15 10
<i>Thames County.</i>		
Making new road from Ohinemuri River to Karangahake Quartz-mine	650 0 0	433 6 8
Dray-road to connect Otanui Mines with crushing-battery at Maungawherawhera Creek	710 0 0	473 6 8
Improving roads from Waitekauri Road to Katikati Road	250 0 0	166 13 4
Improving road up Karaka Creek to Lucky Hit Company's Mine	263 1 0	175 7 4
Improving road to upper mines, Waitahi	258 18 10	172 12 7
Karangahake to battery	300 0 0	200 0 0
Ralph's Battery, Waitekauri	399 1 0	199 10 6
Otanui Road to mines	299 18 0	199 18 8
Road to Wick's Battery	70 0 0	46 13 4
Rocky Point Road, Tararu	300 0 0	200 0 0
Thames Borough boundary to hematite mine	350 0 0	233 6 8
Widening road from bridge over Hape Creek to Otanui Mines	183 17 0	122 11 4
Track, Karangahake Goldfield	784 1 0	522 14 0
Kauaeranga Valley to Otanui	470 7 0	313 11 4
Tapu Road to mines	81 17 9	54 11 10
Tauranga Road to Karangahake Bridge-site	341 5 0	227 10 0
Karangahake Bridge	229 6 6	152 17 8
Track up Maungakerikeri Creek	93 4 4	62 2 11
Thames Borough boundary to Hape Creek No. 2	600 0 0	300 0 0
Upper Karaka Road	179 13 0	119 15 4
Repairing flood damages, Waitahi, Moanataiari, Karaka, and Collarbone Roads	350 0 0	175 0 0
Sea-beach to Waiomo	750 0 0	375 0 0
Te Papa Gully Road	75 0 0	37 10 0
New Find to Waiomo Battery	110 0 0	55 0 0
Rocky Point Road	350 0 0	175 0 0
Waitahi towards Mercury Bay	522 11 0	261 5 6
Te Mata Road	178 17 6	89 8 9
	9,150 18 11	5,544 14 5
<i>Ohinemuri County.</i>		
Jubilee Mine Track	118 0 0	59 0 0
Track up Tui Creek	306 0 0	153 0 0
Prospecting-track, Whangamata and Waitekauri	200 0 0	166 13 4
Tramway, Karangahake to Railey's Reduction-works	400 0 0	200 0 0
Strengthening bridges, Waihi Road	200 0 0	133 6 8
Paeroa to Hikutaia	400 0 0	200 0 0

WARDENS' AND WATER RACE MANAGEES' REPORTS.

No. 8. Mr. Warden Northcroft

to the Under-Secretary of Mines. Warden's Office, Thames, 26th April, 1890.

Page 138

The MacArthur-Forrest Process, or Cassell's Company.—This process is based on the affinity which cyanogen has for gold and silver, and on the

facility with which it dissolves these metals, when free or in combination. The operation may be carried out in two ways, by percolation or by agitation. By percolation: If the ore be very clean quartz, with little clayey matter, it is, after being ground fine enough to pass through a sixty-mesh screen, charged into large vats (capable of holding 5 or 6 tons) covered on the bottom with some porous material to form a filter. On top of the ore thus charged is run a weak solution of cyanide of potassium, the strength of which is determined by the richness of the ore under treatment. When the whole of the solution has passed through, the ore is washed with a weak solution from a former operation, and, thirdly, with pure water. The gold and silver are now in solution, and are precipitated by allowing the solution to pass through towers or boxes filled with zinc in a very finely-divided state. The bullion is precipitated in the form of a fine black powder. When the precipitating-vessels are charged with the metallic precipitate it is freed from the unconsumed zinc by washing; the zinc is used over again, and the powder, which is usually mixed with a certain quantity of zinc, is digested in weak sulphuric or muriatic acid, which dissolves the zinc, but leaves the gold and silver. These are collected on a cloth filter, washed, and then dried and smelted into bar bullion. Secondly, agitation: For ores which contain a large quantity of clay, which renders percolation difficult, or with auriferous pyrites, the ground ore is charged into large agitators provided with stirrers. To every ton of ore is added about 100 gallons of water, having dissolved in it about one-half of 1 per cent. of its weight of cyanide of potassium (but the exact quantity has to be determined by experiment previously). The mixture is then stirred for some six or eight hours, according to the nature of the ore. At the end of this time the machinery is stopped, and the contents passed through filter-presses to press out the gold-and-silver solution. By this operation the ore is pressed into solid cakes, and, as they still contain some gold and silver, they are thrown into another agitator, with a very weak solution of cyanide of potassium, or weak solution from a previous operation, and agitated for some time, and again passed through the filter-press. This operation is once more repeated with pure water, when the ore should be exhausted. The liquors containing the gold and silver are treated as in the percolation process to obtain the bullion.

The results obtained at the Karangahake trial plant on the Silverton, Martha, and Kenilworth ores were highly satisfactory as far as yield was concerned, the extraction being 90 per cent. of the gold and over 70 of silver; but I cannot give the cost of treatment, nor do the company's people know, because the experiments were only made with the view of ascertaining what the process could do with our ores. With some it was highly successful; from others it failed to extract anything, such as the "tin" ore, containing sulphide of zinc, and it failed or was found unsuitable for the Woodstock tailings.

A plant has been erected in the Waitawheta Gorge, in a most inaccessible and out-of-the-way place, and the only excuse I have heard for putting it there is, that the instructions from Home were to the effect that it was to be erected on or near the Crown Mine, and for that mine's use. It is quite patent that where it now is it cannot be used for more than two or three mines; whereas, had it been built where the old La Monte plant stood, it could, in the event of its proving a success, and being able to do what the promoters claim it can, have treated all the ore in the Karangahake part of the district.

No. 4. Mr G. Wilson, Inspector of Mines,

to the Under Secretary of Mines. Inspector of Mines Office, Thames, 17th April, 1890

Page 148. Karangahake.

Ivanhoe and Truro Mine (Mr. John McCombie, manager).—Work has been steadily carried on in this mine during the year. About 400ft. of driving has been done on different reefs and leaders, and 300 fathoms of reef stoped out. The owners have crushed 329 tons of quartz for 292oz. of gold, and the tributers 120 tons for 82oz. of gold. Ten wages-men and two tributers were employed.

Woodstock Mine (Mr. John McCombie, manager).—Very little work has been done in this mine, and no quartz has been crushed. One man was employed.

Kenilworth Mine (Mr. John McCombie, manager).—This mine has been worked entirely by tributers. Forty-five tons of quartz was sold on assay-value for £1,660, and 40 tons of ore is now stacked, estimated to be worth from £30 to £40 per ton. Seven tributers were employed.

Crown Mine (Mr. G. M. McGruer, manager).—This mine is now well opened up from three levels, and another level is being driven at a greater depth, gold having been discovered in a large reef near the Waitawheta Stream. One hundred and sixty fathoms of reef has been stoped out, and 100 tons of quartz forwarded to the mill and crushed, but the treatment of the "pulp" has not been yet completed. The crushing-mill consists of a stone-breaker and two Lamberton mills, which crush dry ore, in which state the crushed ore is handed over to the Cassell Company for extraction by their process. Forty men have been employed.

Several other claims, including the Monastery, Priory, Specimen Hill, and Adeline Amalgamated, have been partially worked, but no returns of quartz crushed or gold got can be obtained. Ten men are employed.

1890**2 January**

The Board of Education is treating the Ohinemuri district extremely well. Not only have they built a new school in Karangahake...⁴²³

New school at Karangahake

So built in late 1889.

6 January

Prospects for the New Year are not over bright here. Work in the Crown is proceeding, but very languidly, and the outlook is gloomy. The mine does not appear to be shaping at all well, and the fact that there has been a great mistake made in putting up such an expensive plant as the Cassell, where it can only be of use to this one mine, is becoming daily more patent. White and Co., tributers in the Ivanhoe, are making arrangements to run a large lot of general dirt through this battery. McCombie's plant on the Ivanhoe-Truro, which is being worked for a Christchurch syndicate, has been doing fairly well and will continue at work.⁴²⁴

29 January

KARANGAHAKE. (From our own Correspondent.)

Crown.—Owing to changes in the management of this mine only a small number of hands are employed at present. The late manager (Capt. Coward) left on Wednesday last. I have not yet learned who is to be his successor, but think the directors will have no need to go out of the district for a thoroughly competent and trustworthy man to take charge of their mine and battery.

The Cassel Company's works are at a standstill (or almost so) pending fresh arrangements being made in the Crown mine. In the meantime they are cleaning up all quartz left at the Karangahake Experimental plant, which will be treated at the Crown works.

Woodstock.—I understand that a tribute has been let in this Company's mine, but as yet I see no work doing. I hear that the Woodstock and Kenilworth are to be amalgamated under the title of the Woodstock United G. and S. M Company.

Christchurch Syndicate.—Four men are employed in this Company's mine. The Battery is idle.

Ivanhoe Battery.—A parcel of ore from the Maria lode (Woodstock), belonging to Messrs McLoughry and Cornes has just been cleaned up for a return of 26ozs 13dwts. 11 tons were crushed. The battery is now working on tailings.⁴²⁵

“Karangahake Experimental plant”; this must be from the Woodstock furnace house.

⁴²³ <https://paperspast.natlib.govt.nz/newspapers/WT18900102.2.26>

Waikato Times, Volume XXXIV, Issue 2726, 2 January 1890, Page 2

⁴²⁴ <https://paperspast.natlib.govt.nz/newspapers/THS18900106.2.21>

Thames Star, Volume XXI, Issue 6467, 6 January 1890, Page 2

⁴²⁵ <https://paperspast.natlib.govt.nz/newspapers/TAN18900129.2.9>

Te Aroha News, Volume VII, Issue 441, 29 January 1890, Page 2

20 February

At Karangahake, Mr G. A. McGruer takes full charge of the Crown mine, vice Capt. Coward returned Home.⁴²⁶

School Buildings — The architect for the Board of Education, Mr Allright, arrived at Paeroa on Tuesday, and inspected the new Karangahake school and the large addition to the Paeroa school, passing both contracts. The additional space given to the Paeroa school has all been taken up since the vacation, there being now 158 on the roll.⁴²⁷

Mr G. A. McGruer takes full charge of the Crown mine**10 March**

The old Ivanhoe battery at Karangahake, recently under the control of Mr. W. Littlejohn, has been bought by the owners of a Puriri claim, and Mr. Alex. Hogg is about to shift it to Puriri. The Cassell Gold Extracting Company have not yet started operations, but will shortly do so.⁴²⁸

24 March

The old Ivanhoe Battery, which is, or was the most complete plant of its kind in the district, has been sold for removal to Puriri, where it is to be re-erected on behalf of an Auckland syndicate.⁴²⁹

Ivanhoe Battery sold for removal to Puriri

That is the last mention of the “old Ivanhoe Battery”. Gone, after 14 years.

⁴²⁶ <https://paperspast.natlib.govt.nz/newspapers/WT18900220.2.15>

Waikato Times, Volume XXXIV, Issue 2747, 20 February 1890, Page 2

⁴²⁷ <https://paperspast.natlib.govt.nz/newspapers/WT18900220.2.15>

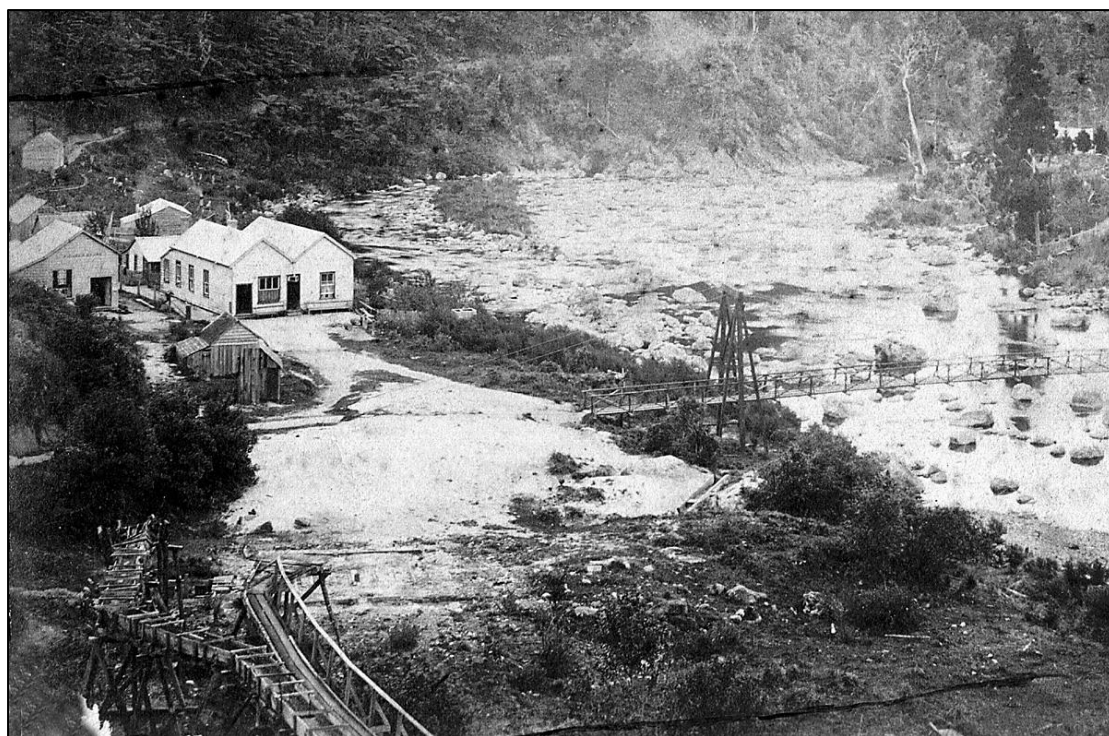
Waikato Times, Volume XXXIV, Issue 2747, 20 February 1890, Page 2

⁴²⁸ <https://paperspast.natlib.govt.nz/newspapers/NZH18900310.2.5>

New Zealand Herald, Volume XXVII, Issue 8199, 10 March 1890, Page 3

⁴²⁹ <https://paperspast.natlib.govt.nz/newspapers/NZH18900324.2.74>

New Zealand Herald, Volume XXVII, Issue 8211, 24 March 1890, Page 6



Staples collection.

Photograph taken from up the bank, across the Waitawheta River.

There is no Crown Company water race flume shown; it was built during 1892.

Bottom left of the image are the water race flume and tramway bridge which served the battery. On close inspection, a rectangular shape is visible on the ground just to the right of the end of the tramway.

Foundation of the battery building? To the left of this, at the end of the water race, some structure excavated into the ground. Turbine/pelton wheel pit?

The white sandy area appears to be tailings(?). To the right of this appears to be a wooden ground flume; tailings discharge?

Like photographing dolphins, we have photographs of where the battery was. This image not long after the battery was removed. Late 1890, or 1891?

29 March

At Karangahake, Messrs Wyatt and party, the successful tenderers for the removal of the old Ivanhoe battery to Puriri are making their preliminary arrangements. Mr N. Dickey is carting brick to the Cassell gold extracting works, where a roasting furnace is in course of erection. I understand that the Lamberton Mills do not work satisfactorily by the dry process unless the ore is absolutely dry, all the native moisture having to be wasted out.⁴³⁰

1 April

Crown (Karangahake).—The new find on the river level promises extremely well, as gold is showing freely. Mr McGruer has the majority of the staff there. The level is seven hundred feet below Captain Coward's.⁴³¹

⁴³⁰ <https://paperspast.natlib.govt.nz/newspapers/THA18900329.2.18>

Thames Advertiser, Volume XXIII, Issue 6571, 29 March 1890, Page 2

⁴³¹ <https://paperspast.natlib.govt.nz/newspapers/AS18900401.2.33>

Auckland Star, Volume XXI, Issue 76, 1 April 1890, Page 5

Crown: new find on the river level**5 April**

At Karangahake, Messrs Clement Moore and party, in the Kenilworth tribute, are getting some magnificent ore, which is improving as it is sunk upon. The new river level in the Welcome portion of the Crown mine, lately opened up by Mr G. N. McGruer, has also an excellent show. The reef is a very large one, and carries visible gold. Hitherto the bullion from the Crown has been of very poor quality, silver predominating, but the returns from this reef should show reverse results.⁴³²

At Karangahake, the Crown mine has much improved. The new river level, opened by Mr G. W. McGiven [McGruer], shows well, gold being seen freely. This level is 700 ft. lower than the lowest opened by Capt. Coward. A drying floor, or furnace, is being prepared, as it has been found that the Lamberton Mill will not act so well on the ore while the latter contains any moisture whatever.⁴³³

Although called the River Level, this is No. 4 level, above what will later be No. 6 level, which then gets called the River Level. A bit confusing. See 24 November below. Also see the document Crown River Level Adit, which explores this in more detail.

23 April

KARANGAHAKE. (From our own Correspondent.)

Crown Reduction Works: Since my last a large tonnage of ore has been put through the Lamberton Mills, and is now being treated by the Cassel Gold Extracting Co's percolating process with very satisfactory results. Since the wet weather has set in the quartz coming from the mine cannot be ground dry without the aid of a furnace, so a start has been made to erect one, which would be in working order in a couple of weeks, if the County Council would mend their ways so that the material could be carted on to the ground. The furnace will be similar to that of the Ferguson Syndicate, Waiorongomai. Grinding has (for the present), been suspended, the late heavy rains having caused the river to rise above the tail-race, this will happen frequently during the winter months, as the tail-race is only a few feet above fine weather water level. In the meantime Mr Hutcheson is taking advantage of the stoppage of the machinery, to strengthen the framing of the lower and mill floors (which were considered to be rather light for the work they had to do), as well as giving a general overhaul to the whole of the machinery, so as to have everything in tip top working order on starting again. At the mine Mr McGruer has made a start to open a level on a large reef close to the Waitawheta river, at a depth of 600 feet below Capt. Coward's low level. A small parcel of the ore has been treated at the Company's works for a yield of something like L16 per ton. The parcel was a fair sample of the reef, having been broken out right across the face, so that altogether the 'find' promises to be of great

⁴³² <https://paperspast.natlib.govt.nz/newspapers/THA18900405.2.18>

Thames Advertiser, Volume XXIII, Issue 6577, 5 April 1890, Page 2

⁴³³ <https://paperspast.natlib.govt.nz/newspapers/WT18900405.2.20>

Waikato Times, Volume XXXIV, Issue 2766, 5 April 1890, Page 2

importance, and will materially enhance the value of the Company's property. I understand that a tramway to connect this part of the mine with the reduction works is to be proceeded with at once [this will be by crossing the Waitawheta River, an connecting to the Monastery tramway].

The old Ivanhoe battery has been pulled down, and is now being carted to Puriri, where it will be erected on the Prospector's claim.

Ivanhoe and Truro: In this mine work is going on as usual, the battery running one shift of 12 hours on Company's stuff.⁴³⁴

3 May

KARANGAHAKE. SPLENDID RETURN FROM SILVERTON (WAIHI) ORE. (From our own Correspondent.)

Crown: A start has been made to connect the new find with the reduction works. This will be done by means of a ground tramway of about 20 chains, utilising the old Monastery line (which property the Crown Company have recently purchased). The ore will then be sent on to the stone-breaker floor by means of a hoist similar to that now being used for hoisting the ground ore to the Cassel Company's works. Mr McGruer informs me that the reef in the face of the drive maintains its great size, and the quality has improved considerably....

The work of connecting the mine with the battery is expected to be completed in four weeks time.

At the Battery everything is going on smoothly. Several small parcels were put through last week. A parcel from Littlejohn's Tribute (Waihi) was put through worth L420 per ton, and a small parcel from the Imperial (Karangahake) worth L17 8s per ton. The carters are busy getting the material for the furnace, hoppers, etc., on to the ground, and the manager hopes to have everything in working order by the time the mine manager has his connections completed.

Kenilworth (Moore's Tribute) : This party are still on good dirt, but are rather puzzled as to what they are to do with it. The Crown Company are not in a position to treat it without the aid of a furnace, and when the furnace is ready for work they will have plenty of ore from their own mine to keep the plant going night and day...

I understand the Warden is about to make another raid on Karangahake. It is high time he did, as the Crown and the Ivanhoe are about the only two mines being properly worked in the district.⁴³⁵

17 May

PAEROA.—This day. The influenza epidemic has made its appearance at Karangahake. A number of men in the Crown mine are down with it.⁴³⁶

⁴³⁴ <https://paperspast.natlib.govt.nz/newspapers/TAN18900423.2.12>

Te Aroha News, Volume VII, Issue 465, 23 April 1890, Page 2

⁴³⁵ <https://paperspast.natlib.govt.nz/newspapers/TAN18900503.2.11>

Te Aroha News, Volume VII, Issue 468, 3 May 1890, Page 2

⁴³⁶ <https://paperspast.natlib.govt.nz/newspapers/THS18900517.2.10>

Thames Star, Volume XXII, Issue 6577, 17 May 1890, Page 2

21 June

KARANGAHAKE. (From our own Correspondent.) Woodstock United G. M. Co.: The management of this Company have at last made a start after some years of idleness...

Crown: The work of connecting the new reef with the Company's Battery is almost completed, and a good sized paddock of payable rock is ready to be sent along the line.

At the battery a drying furnace has been erected which will be in use in the course of a few days. A great many alterations and additions have been made to the plant, and the Manager hopes to have the mills in full swing by the end of next week.

The Cassel Gold Extraction Company being dependant upon the Crown for supplies of ore, are (of course) idle just now.⁴³⁷

Drying furnace erected Crown battery

One, maybe two, step furnaces erected.

AJHR 1891. The ore, as it comes from the mine, is taken and passed through a Blake's rock-breaker, where it is reduced to about a maximum of 1½in. diameter. It is then dried on kilns having an inclination of 1 in 1 and a series of small steps to prevent the ore from falling down before it is properly dried. After being thoroughly dried it is pulverised in the Lamberton mills, which have a crushing-capacity of about 1½ tons each in eight hours to such a fineness that the ore passes through a thirty-mesh grating. From this the ore is handed over to the Cassell Company to treat by their process.⁴³⁸

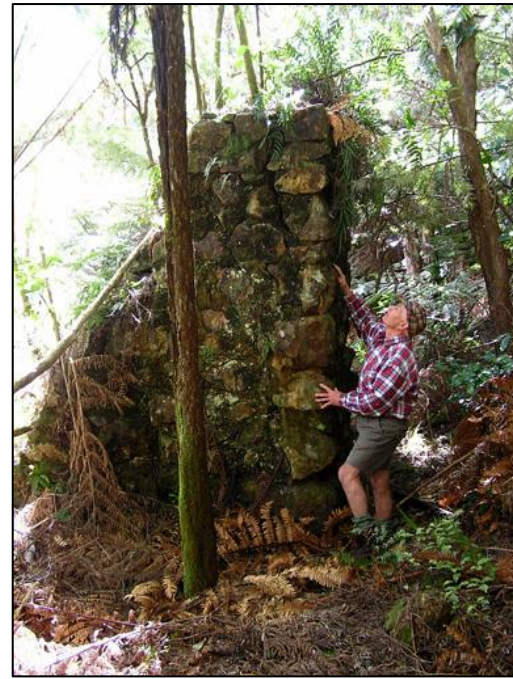
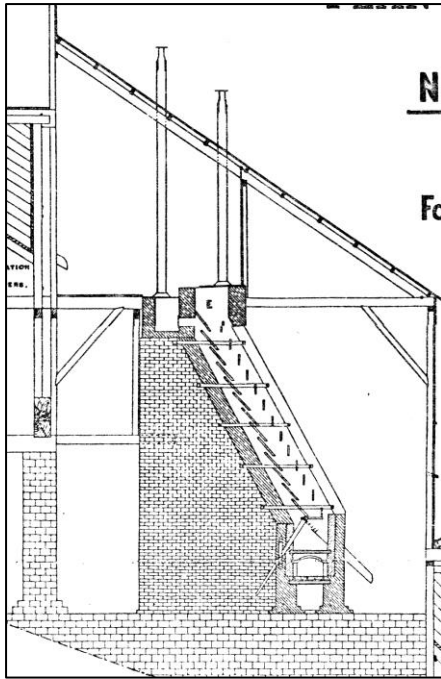
Similar furnaces are built at the new Crown battery, a plan drawing of which may show us what they looked like. They are erected against a steeply sloping brick/masonry wall, which can still be seen at the ruins of the battery today. A similar masonry wall/obelisk is still present at the Railey/Crown battery site. David Wilton photographed Merv Grafton beside it in 2007, but offered no explanation.

⁴³⁷ <https://paperspast.natlib.govt.nz/newspapers/TAN18900621.2.11>

Te Aroha News, Volume VII, Issue 482, 21 June 1890, Page 2

⁴³⁸ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1891-II.2.1.4.6>

GOLDFIELDS' ROADS, WATER-RACES, AND OTHER WORKS IN CONNECTION WITH MINING., Appendix to the Journals of the House of Representatives, 1891 Session II, C-04. Page 35



To left is a detail cropped from “Plan of 40 Head Dry Stamper Battery” 1893, and to right is the image taken at the Railey/Crown battery site, 2007⁴³⁹

This description from AJHR 1890, referring to an installation at Te Aroha (Ferguson plant) may be similar.

Drying-furnace. —This furnace is built with brick on an inclination of about 1 in 1, being 20ft. in length on the slope, having a width of about 3ft. and a depth of 6m., and in its length it has thirteen steps, which prevents the ore from running down too fast. On the back of the steps there is a flue coming up from the furnace-box, which is placed at the bottom, and on the top end of the flue there is an iron chimney or funnel to carry away the smoke, in which a damper is placed to regulate the draught. On the front side of the drying-furnace there are as many cross-plates of iron as there are steps, and these cross-plates stand on edge and keep the ore in position while drying. When the ore is sufficiently dried the door at the bottom of the furnace is opened, and the material is run over a second grizzly, and all that does not pass through falls into a hopper, and passes through a second stone-breaker and is reduced to about the size of walnuts; thence it passes into a hopper, which feeds the Lamberton mill.⁴⁴⁰

25 June

In the Crown mine (Karangahake) Mr McGruer has finished a connection between the new Waitawheta reef and the mill. The drying floor is completed,

⁴³⁹

<https://web.archive.org/web/20191223012229/https://thetresury.org.nz/RaileysBattery/RaileysBattery.htm>

⁴⁴⁰ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1890-I.2.1.4.3>

GOLDFIELDS, ROADS, WATER-RACES, AND OTHER WORKS IN CONNECTION WITH MINING. (REPORT ON)., Appendix to the Journals of the House of Representatives, 1890 Session I, C-03. Page 47

and the new gear, ex s.s. Coptic, for the Lamberton mills arrived per s.s. Ruby yesterday. The new reef is driven on about 70ft, and looks well all the way.⁴⁴¹

Crown new find connected with the reduction works

19 July

Ivanhoe and Truro (Christchurch Syndicate's): The battery is at present engaged in reducing a parcel of stone for the Adeline Company, when that is completed a start will be made on stuff from their own mine.

Crown Mines Company: The level on the Welcome reef has been driven a distance of eighty feet without a break, which is rather unusual in this locality, where 'heaves' and 'breaks' so frequently occur. The reef is a compact body of quartz and carries gold throughout. At the battery the mills are kept steadily at work on stuff from the upper levels, and everything is working smoothly and well. As soon as the connection between the battery and Welcome reef is complete, a large parcel will at once be forwarded for treatment.

Miners' Union: The Ohinemuri branch of the Miners' Union are to hold their general meeting at Owharoa, on Saturday, 19th inst. I learn that about seventy members have already joined.⁴⁴²

13 August

A VISIT TO KARANGAHAKE GOLDFIELDS.

The CROWN MINE & THE CASSELL'S PROCESS OF GOLD SAVING.

OUR OWN REPORTER. Taking advantage of a little spare time at my disposal on my late trip to Waihi I took the opportunity of seeing something of the Karangahake district of Ohinemuri, in order principally to see the operation of the Cassell's gold-saving process, about which so much has been heard and so little known. The plant is erected on the Crown mine, and the route to it from the Tramway Hotel at Karangahake is over a steep precipitous road or sleigh track to the top of the hill, and a much more precipitous descent utterly impassable for horses, and barely passable for men. Altogether, it is a ragged road, and how machinery was ever brought on to the site would be a mystery to those who are unacquainted with the insuperable difficulties which have been overcome by the spirit of enterprise induced by the search for gold.

THE CROWN MINE.

This mine or lease comprises 105 acres of the most broken and precipitous country which it is possible to imagine. It is owned by a Glasgow syndicate, and operations on it have been carried on for some years, with varying success. A large amount of money and labour has been expended in tunnelling at and above the road level about 1000 feet above the creek level, but recently at a much lower level there has been opened up a valuable lode known as the Welcome reef, which has proved on trials to be worth about £15 per ton. It is not necessary to describe the great extent of aerial tramways that have been constructed [did they initially cable their ore across the river?] or the

⁴⁴¹ <https://paperspast.natlib.govt.nz/newspapers/THS18900625.2.10.1>

Thames Star, Volume XXII, Issue 6610, 25 June 1890, Page 2

⁴⁴² <https://paperspast.natlib.govt.nz/newspapers/TAN18900719.2.14>

Te Aroha News, Volume VIII, Issue 490, 19 July 1890, Page 2

numerous crosscuts that have been put in on both sides of the river; but it may be as well to state that in the bed of the river itself, the reef exposed is 20 feet in width. Where the lode is now worked, fully 1000 feet [305 m] beneath the upper levels, it is four to five feet thick. Like many other mining ventures, the Crown Company has had a somewhat varied experience. Mr. G. M. McGruer, the present manager, who took charge of the mine on the 1st of March, has been in the district for eight years, and has prospected in every part of it. He took charge of the mine on behalf of the Glasgow shareholders in place of Mr. Coward, who had been sent out to take charge of the mine, but who finally reported that the mine was a failure. Fortunately, the company was not disheartened, and when Mr. McGruer took charge he not only adopted a new system but opened up new works, developing the fine reef which is now on hand. There is a crushing plant erected on the mine, a pan - grinding process without stampers, which is manifestly inadequate, and at the time of my visit it was rendered helpless by a landslip which nearly crushed it into the river. Men were busily engaged clearing away the landslip from the back of the crushing plant, but it will take some time to place it in working order, as the foundations have been shifted and the plant moved, besides which the back of the house is crushed in. Thus all crushing operations were suspended.⁴⁴³

Crown battery operating as a pan - grinding process without stampers

Land slip at battery

A land slip nearly clears the site (see also the entry for 24 November).

Cassell plant complete

The article continues:-

CASSELL COMPANY'S GOLD-SAVING PROCESS.

A plant known as the Cassell gold-saving process, patented throughout the world by a Glasgow company, is erected on the mine quite close to the Crown battery, and almost on the same level at the side of a very precipitous hill about 50 feet above the river level. The best site may not have been selected - and the general opinion in the district is that it has not - but the best has been made of the situation, and on the whole it seems well adapted for a process which requires a series of platforms for its working. I found Mr. John McConnell, the general manager of the Cassell Company's works, and he very kindly conducted me over the plant, explaining to me the various processes used for extracting gold, and I was greatly surprised and astonished at the great simplicity. There is no crushing, no grinding. The whole process is not only most effective but inexpensive, and there is no costly machinery to maintain. With the confidence of a man who has nothing to conceal, and who thoroughly understood his work, Mr. McConnell led me through the plant. There is certainly nothing very artistic in the structure, but that does not matter, as it is sufficient for its purpose. There are, I may explain, two distinct plants, one being the agitating process, the other the filtering process, but in both the system of gold-saving, or rather the agents used for that purpose, are the same, the chief agent being chloride [cyanide] of potassium. This reduces

⁴⁴³ <https://paperspast.natlib.govt.nz/newspapers/NZH18900813.2.56>

New Zealand Herald, Volume XXVII, Issue 8383, 13 August 1890, Page 6

the gold to a solution which is passed through a series of boxes charged with zinc, which absorbs the particles and forms the bullion. There being no crushing process, the ore is reduced to the requisite fineness in the Crown battery, and delivered to the Cassell's plant ready for treatment. If it is to be treated by the agitator process, the ground ore is put into the agitator vats, of which there are seven, and into each is placed the necessary charge of chloride of potassium. From each of the vats a pipe fitted with a stop-cock leads the mixed matter into the receiving vats, and after a sufficient time the stuff is forced into a filter press. This is a series of upright plates, operated on by a powerful screw, and is capable of holding 15cwt at each charge. The crushed ore is compressed between the plates, and forced through cloth. The solution runs into a trough, and the tailings pass into other vats lower down, where they are washed, and passed through another press of a similar description after which the process of washing is repeated and the tailings again passed through a third filter press. The solution finally passes into and through a series of small iron boxes charged with zinc reduced to thin shavings so as to present the greatest possible amount of surface, and by the time it reaches the last box, which it does in a peculiar worm-like fashion, the process of saving is completed, and all that remains to be done is to extract the bullion from the zinc, which is a very simple chemical process. The only mechanism necessary is that required to keep the agitators in motion, and the plant is capable of treating 20 tons of crushed ore per day, while the labour required is almost nil.

The other process, that by percolation, is still more simple, and Mr. McConnell informs me is quite as effectual. It consists of two lines of large oblong wooden boxes, each capable of holding 7 tons of crushed ore with the necessary amount of reagent. The bottom of the box is perforated and covered with what is known as sand filter. This consists of a layer of rubble of about the size of a hen's egg, a second layer of finer rubble, and on top of all a layer of common sand. The ground ore is simply tipped into the box with the reagent, and the manipulation is ended. The reagent forms the gold into a solution, which penetrates through the filter, and is conveyed by a series of pipes into nine boxes similar to those already described. The cost of treatment by either of the processes varies from 8s to 15s per ton of crushed ore. Dry ore is most suitable, but wet ore can also be treated effectually.

In answer to my question as to what percentage of gold and silver was saved by this process, Mr. McConnell replied, "Oh, you had better see the book; that will tell you" and taking me to his laboratory, he there showed me his assay and result book. On looking over this I found that the average saving was 95 per cent. I found some as high as 98½, and some as low as 90, but on taking a general average I found that the saving was 95 per cent.; and this is as near the possible as ever has been achieved in the treatment of refractory ores on a large scale. If such a plant were allied, say, to such a magnificent crushing plant as that of the Waihi Gold Mining Company, the great proportionate saving of bullion would make itself more appreciable; and I could only regret that such splendid gold-saving appliances have not been erected in a more suitable position.

In conclusion, I have most sincerely to thank Mr. McConnell for the trouble he took to make me acquainted with the working of the two processes, as well as with the results, and for the great courtesy with which he received me. It was

unfortunate that owing to the landslip which disabled the Crown crushing plant, I did not see the Cassell's plant in operation, but that could not be helped under the circumstances.⁴⁴⁴

18 August

Paeroa, Saturday. The slip on the Crown Company's plant at Karangahake is now cleared away, and the work of reduction will shortly be recommenced. The Welcome or McGruer's reef has been cut on the eastern side of the river, and is looking well.⁴⁴⁵

Meaning northern side?

17 September

Tenders Wanted by the Cassel Gold Extracting Co., Ltd., for the erection of works in Karangahake. Also for the construction of water race connection with same. Plans and specifications can be seen at the Company's works, Crown mine, Karangahake, from 20th to 27th SEPTEMBER, 1890...
John McConnell Manager.⁴⁴⁶

Plans for new Crown plant

Plans already underway for the new plant downstream from Battery Flat.

The Welcome or "McGruer's" reef, on the northern or Monastery section of the mine, is also being mined.

2 October

KARANGAHAKE. (from our own correspondent.)

Crown.— The Lamberton mills in connection with this mine are now started for the first time since the slip occurred, and are working smoothly. Mr. Hutchinson has charge of this portion of the plant. In the mine the major portion of Mr. McGruer's time has been devoted to the Welcome or "McGruer's" reef, on the northern or Monastery section of the mine. Here recently a crosscut has been put in at a low level—about 200 feet lower than Mr. Hogg's level [top of the Monastery cableway] —and the Welcome reef has been cut. This proves to be from four to five feet wide in this section, and prospects in a most satisfactory manner. Gold shows freely all through the stone, and assays taken by Mr. Smeaton, the Cassel Company's assayer, show as high as £1070 per ton, the gold predominating, and being of good quality. I understand that about 100 tons from this reef are to be put through the Lamberton mill and the Cassel plant, and it is the proposition of Mr. McGruer to then bring the plant down from its present inaccessible eyrie to the township flat. The prospects of the Crown mine were never better than to-day.

Cassel G.E. Co.'s Plant.—Tenders for the erection of the new Customs mill closed on Saturday. These tenders are for the construction of a quite separate

⁴⁴⁴ <https://paperspast.natlib.govt.nz/newspapers/NZH18900813.2.56>

New Zealand Herald, Volume XXVII, Issue 8383, 13 August 1890, Page 6

⁴⁴⁵ <https://paperspast.natlib.govt.nz/newspapers/NZH18900818.2.54>

New Zealand Herald, Volume XXVII, Issue 8337, 18 August 1890, Page 6

⁴⁴⁶ <https://paperspast.natlib.govt.nz/newspapers/THS18900917.2.17.1>

Thames Star, Volume XXII, Issue 6681, 17 September 1890, Page 3

plant to that of the Crown, the intention being to erect a large plant on the land known as Shepherd's farm, for the convenience of those desiring to sell their ore instead of treating it themselves. The Cassel Company's process is undoubtedly the ideal one for our upper country ores, and will, without doubt, receive in its new phase a large modicum of support. The tenders will be cabled to the Glasgow directors, and the result known about Friday next. The site taken up is about five acres in area.

Abbey. — The owners of this ground, through which the Welcome reef runs, are putting on a staff of men immediately, on the strength of the prospects in the Crown. The Abbey is under offer to the Crown Company per Mr. Melville now in Glasgow.

Ivanhoe. — Mr. John McCombie is keeping steadily at work here. As the ground is the private property of Messrs. Cox and Co., of Christchurch, no information is to be obtained for publication concerning the returns, which are said to be payable. Mr. McCombie has his compact little mill nearly always at work. A section of the Welcome reef also runs through the Ivanhoe claim.⁴⁴⁷

9 October

CROWN (Karangahake). This company's battery at Karangahake is once more in full swing, working two shifts. The ore now being treated is from the upper levels of the mine, and is estimated to be worth from £10 to £12 per ton. A start will be made this week to treat a large parcel from the Welcome reef, of which there is an unlimited quantity of good payable ore to hand. The reef still continues to look well, and some of the stone from the Monastery section is very rich.⁴⁴⁸

OHINEMURI

At Karangahake, the Welcome reef is still proving itself a splendid gold producer. It does not require any assaying to test it, having proved itself by the good old fashioned pan test. Assays, however, have been taken by Mr Smeaton, the Cassell Gold Extracting Company's chemist, and have returned up to £1,070 per ton. The general stuff should be worth £40 per ton, and the Cassell plant has commenced to treat a 100 ton parcel.

The new Cassell Gold Extracting plant; a quite distinct one from the one built on the Crown mine, will be commenced shortly. Tenders were received on Saturday last, by Mr McConnell, the Company's manager, and the successful tenderer for the labour, both of carpentering and excavating was Mr Cock, whose price was £580 labour only. Mr Dickey took the contract for carting from Paeroa on a sliding scale. The new plant will cost about £2,500, and will be an immense boon to the place...

Work has been commenced in the Grand Junction claim, an eminently well situated one, through which the Welcome lode runs the full length of the

⁴⁴⁷ <https://paperspast.natlib.govt.nz/newspapers/NZH18901002.2.40>

New Zealand Herald, Volume XXVII, Issue 8376, 2 October 1890, Page 6

⁴⁴⁸ <https://paperspast.natlib.govt.nz/newspapers/THS18901009.2.30>

Thames Star, Volume XXII, Issue 6700, 9 October 1890, Page 4

claim. The new Gorge road goes right through this ground, and ore can be landed at the Cassell Company's for about 2s 6d per ton.⁴⁴⁹

The Grand Junction claim must be on the northern side of the Ohinemuri River, and new road. See entry for 7 January 1891.

A feature that may be the adit can be found immediately below the highway, a little upstream from the eastern slip road access to the Karangahake reserve/carpark area. Walking along the slip road towards Waihi, the end of an Armco barrier is reached; immediately below this point, in the river bank. It is very steep here; exploration has not been done.

25 October

At Karangahake some good ore is being grassed in the Adeline, and the Crown Goldmining Company are getting rock in the northern section of the mine which is the best general stone I have ever seen in Ohinemuri. It should be worth full and bye about £100 per ton, and appears to be consistently good from wall to wall of the 3ft reef. As the mine is owned in Glasgow, this will not create a boom--except perhaps in adjoining claims, for which we ought, to be thankful. My experience of booms in Ohinemuri is that they are most disastrous.⁴⁵⁰

13 November

Road Works.—The new road to Owharoa from Karangahake is now fit for horse traffic, and is an excellent job. It is on the river level, and has cost about £1200. Messrs Kelly and Co. have just taken a contract for £83 to cut off certain sharp corners. When this is done and the culverts have been perfected, this road will be fit for any sort of wheeled or other traffic.⁴⁵¹

The new road to Owharoa from Karangahake is now fit for horse traffic

This is the gorge road, our current SH2.

24 November

Mining at Karangahake.

DESCRIPTION OF NEW ZEALAND CROWN MINES.

(From Our Own Correspondent.)

I was astonished at the amount of work which had been got through since my last visit to this Company's mine. The manager, Mr G. N. McGruer, kindly showed me over the workings. No. 4 level is somewhere about 700ft below Captain Coward's low level (No. 3), or close upon 1500 ft on the underlay of the reef. The level has been driven a distance of 150 ft on a reef averaging about 5ft in thickness, and worth close on £10 per ton. A rise is being put up half way in, which will open up a block ready for stoping, sufficient to keep the Company's mills fully employed for some months to come.

⁴⁴⁹ <https://paperspast.natlib.govt.nz/newspapers/WT18901009.2.13>

Waikato Times, Volume XXXV, Issue 2846, 9 October 1890, Page 2

⁴⁵⁰ <https://paperspast.natlib.govt.nz/newspapers/WT18901025.2.32>

Waikato Times, Volume XXXV, Issue 2853, 25 October 1890, Page 2

⁴⁵¹ <https://paperspast.natlib.govt.nz/newspapers/WT18901113.2.19>

Waikato Times, Volume XXXV, Issue 2861, 13 November 1890, Page 2

No. 5 level is 80ft below No. 4, and has been driven upon about 40ft. The reef here looks quite as well as in No 4, and is larger if anything. On the north side of the river, in the Monastery section, the same reef has been cut at the level of No. 5, from which some rich stone was broken out in my presence. From the outcrop of the reef immediately above the tunnel some stone was taken which assayed £1100 per ton. "Why don't they beat out this rich stone?" I have heard some people ask; but that is no easy matter, owing to the steepness of the spur through which the leader runs. If it cannot be got at from the top, however, it can from below, only it will be some time before it can be reached, as the level at which the reef has been cut is over 100 ft below where the rich stone is showing on the surface.

The late manager, I understand, reported to his directors that there was no payable gold below No, 3. The present manager can report that he has a leader in hand that will keep their mills profitably employed for years to come, at a depth of 1500 ft on the underlay of the reef below No. 3 level. Surely this ought to open the eyes of the directors as to the comparative capability of colonial managers and experts sent out from the Old Country. Mr McGruer has reason to be proud of the position in which he has (through skill and energy) placed the company's property. "Facts are chieftains that winna ding."⁴⁵² The company's grinding plant has been kept steadily at work night and day for the last couple of months on payable ores, and were the number of mills doubled, there would be plenty of stuff to keep them going, and better than all the gas and blow of which there has been not a little in this locality. Last month's wages and all other working expenses of the mine and battery were paid out of the bullion extracted from the reef pronounced by Capt. Coward as a rank duffer and utterly worthless. Surely the directors (not only of the New Zealand Crown Mines, but other English companies), will in the future place more confidence in the capabilities of colonial managers.

After I had visited all the workings inside the mine, I had a look at the mode of forwarding the quartz to the battery, which, is situated twelve chains [241 m] higher up the river. The ore, on leaving the mine, is conveyed along a short ground tramway (which had to be hewn out of the solid rock), and dumped on to a platform, where it is filled into the boxes of the aerial tram, and passed over the river, dumped into the trucks, and run along a ground tramway 10 chains [201m] long, from whence it is hoisted into the hoppers on the level of the stonebreaker.

After I had seen the stuff taken from the mine and landed at the battery, I made my way to the company's works, where on my arrival I was taken in hand by the manager, Mr Hutchison, who kindly showed me everything that was to be seen, as it is now, as it was, and as it should be. It seems to me that the works in connection with both mine and battery are a series of mistakes from the beginning. The quartz has to be brought up the river and hoisted a height of nearly 100 ft; then on going through the mills it has again to be hoisted a height of 80ft before it can be treated by the Cassell process. A large amount of money has been expended on the company's plant (somewhere about £7000 I believe), enough to have erected a tip-top plant on the flat, and

⁴⁵² From Burns' poem A Dream from 1786. "facts are fellows that will not be overturned"
<https://hangingtogether.org/?p=431>

put a tramway up the Waitawheta Gorge to the mine as well. Notwithstanding all this expenditure, I question if the works, as they stand, would be assessed at a greater value than £700, instead of £7000. It is fortunate that the company have a manager not easily daunted, for the trials that he has had to undergo would have broken the heart of a cast iron man. No sooner was one part secure than another mishap occurred. In fact, but for the foundation of the main shaft laid down by Mr Railley for his grinding plant, the whole thing would have been in the Waitawheta twelve months ago; but a Scotchman never knows when he is beaten (or at least he won't own to it), so Mr Hutchison started from the rock with his strengthening timbers, and worked upwards, making everything secure. Now the machinery is running smoothly and well, but after all this work the plant is of too limited capacity to deal with such a reef as the company's manager has in hand, and there is no possibility of adding to it in its present position. About 30 tons per week is the utmost that can be done, with the two Lamberton mills which are used for pulverising the ore, working two shifts of eight hours each. On account of the mills heating they have to be allowed to cool down four hours between each shift. The mills do their work well, but do not do enough of it. A very few men will be able to break out sufficient quartz to keep them going, but now that the Welcome reef has been proved to be payable, I have no doubt that the directors will have the plant moved to a more suitable position with grinding capacity increased.—Te Aroha News.⁴⁵³

27 December

At Karangahake, the Crown is paying its way, and would do better if the Glasgow talent that runs the mine had erected suitable crushing plant instead of the coffee-grinders they have at work. Foreign management of mines is never likely to produce dividends. Adeline tributaries are doing fairly well, while those in the Woodstock are collecting a big mineral stock for the holiday crushing.⁴⁵⁴

The coffee-grinders are the poorly performing Lamberton mills.

Summary 1890

January. New school at Karangahake⁴⁵⁵

February. Mr G. A. McGruer takes full charge of the Crown mine, vice Capt. Coward returned Home.⁴⁵⁶

March. Ivanhoe battery sold, to be removed to Puriri. Gone, after 14 years.

April. Crown has a new find on the river level, promises extremely well. The level is seven hundred feet below Captain Coward's.⁴⁵⁷

⁴⁵³ <https://paperspast.natlib.govt.nz/newspapers/THS18901124.2.21>

Thames Star, Volume XXII, Issue 6739, 24 November 1890, Page 4

⁴⁵⁴ <https://paperspast.natlib.govt.nz/newspapers/TO18901227.2.15>

Observer, Volume 27, 27 December 1890, Page 9

⁴⁵⁵ <https://paperspast.natlib.govt.nz/newspapers/WT18900102.2.26>

Waikato Times, Volume XXXIV, Issue 2726, 2 January 1890, Page 2

⁴⁵⁶ <https://paperspast.natlib.govt.nz/newspapers/WT18900220.2.15>

Waikato Times, Volume XXXIV, Issue 2747, 20 February 1890, Page 2

⁴⁵⁷ <https://paperspast.natlib.govt.nz/newspapers/AS18900401.2.33>

Crown River level (No.4) adit established.⁴⁵⁸

June. Drying furnace erected Crown battery.⁴⁵⁹

Crown river level adit (No.4) connected to battery by connecting to the “old Monastery line”.⁴⁶⁰

August. Land slip at battery.⁴⁶¹

Cassel plant complete.⁴⁶²

September. Plans underway for new plant downstream from Battery Flat.⁴⁶³

13 November “Road Works.—The new road to Owharoa from Karangahake is now fit for horse traffic, and is an excellent job. It is on the river level, and has cost about £1200. Messrs Kelly and Co. have just taken a contract for £83 to cut off certain sharp corners. When this is done and the culverts have been perfected, this road will be fit for any sort of wheeled or other traffic.”⁴⁶⁴

AJHR 1891

Published 1891, but largely reporting on 1890.

GOLDFIELDS' ROADS, WATER-RACES, AND OTHER WORKS IN CONNECTION WITH MINING.⁴⁶⁵

Presented to both Houses of the General Assembly by Command of His Excellency.

Mr. H. A. Gordon, F.G.S., Inspecting Engineer

to the Hon. R. J. Seddon, Minister of Mines. Mines Department, Wellington, 8th June, 1891. I have the honour to submit my annual report, for the year ending the 31st March last...

Page 2

Ohinemuri County. Road, Karangahake Gorge. —A new road was constructed through the Karangahake Gorge to the Rahu Crossing, for which a grant of

Auckland Star, Volume XXI, Issue 76, 1 April 1890, Page 5

⁴⁵⁸ <https://paperspast.natlib.govt.nz/newspapers/AS18900401.2.33>

Auckland Star, Volume XXI, Issue 76, 1 April 1890, Page 5

⁴⁵⁹ <https://paperspast.natlib.govt.nz/newspapers/TAN18900621.2.11>

Te Aroha News, Volume VII, Issue 482, 21 June 1890, Page 2

⁴⁶⁰ <https://paperspast.natlib.govt.nz/newspapers/TAN18900503.2.11>

Te Aroha News, Volume VII, Issue 468, 3 May 1890, Page 2

⁴⁶¹ <https://paperspast.natlib.govt.nz/newspapers/NZH18900813.2.56>

New Zealand Herald, Volume XXVII, Issue 8383, 13 August 1890, Page 6

⁴⁶² <https://paperspast.natlib.govt.nz/newspapers/NZH18900813.2.56>

New Zealand Herald, Volume XXVII, Issue 8383, 13 August 1890, Page 6

⁴⁶³ <https://paperspast.natlib.govt.nz/newspapers/THS18900917.2.17.1>

Thames Star, Volume XXII, Issue 6681, 17 September 1890, Page 3

⁴⁶⁴ <https://paperspast.natlib.govt.nz/newspapers/WT18901113.2.19>

Waikato Times, Volume XXXV, Issue 2861, 13 November 1890, Page 2

⁴⁶⁵ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1891-II.2.1.4.6>

GOLDFIELDS' ROADS, WATER-RACES, AND OTHER WORKS IN CONNECTION WITH MINING., Appendix to the Journals of the House of Representatives, 1891 Session II, C-04

£1,000 was given. A further subsidy of £100 on the pound-for-pound principle was also authorised to complete the work, of which £23 has been paid.

Road, Karangahake to Mines. —A track was constructed several years ago from the flat up to the old Hauraki Claim, and thence round the side of the range. This track requires to be widened in places, which is estimated to cost £200; of this amount a subsidy has been authorised to the extent of £100.

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Karangahake through Gorge. —This road is now completed, and cuts off a long piece of very bad road going over the range [Rahu road?]. The cost of construction was £1,000, which has been paid; but the County Council has, since the contracts were completed, expended a further sum to metal the worst portions.

Quartz Workings North Island, Auckland District

Page 34

Mining operations at Karangahake are not carried on so briskly as they might be, but the difficulty here is the treatment of the ore, which contains a great deal of silver, which cannot be recovered by the ordinary wet-crushing batteries. Although the Cassell Company have a leaching plant erected on this field it is in connection with the Crown Company's crushing plant, and they cannot treat ore from outside parties unless arrangements are made with the Crown Company to either crush it or to send the pulverised ore to them. The position in which the plant is erected prevents the latter being done unless at a great cost; but the Cassell Company are contemplating erecting a crushing plant in connection with leaching-vats, &c, on the flat alongside the Ohinemuri River, below the township. If this is done it will be fully employed by the claimholders on this field.

There is some very rich ore in the Woodstock Mine; but it cannot be treated at present. During last year 27 tons was treated at the crushing-battery on the flat [the furnace house?], which only gave 71oz. of bullion; while 60 tons of ore was sold at the mine, which realised £3,000, or an average of £50 per ton. There are several large lodes in this mine of low-grade ore, which no doubt will all be worked when a plant is erected in the locality to treat the ore in a satisfactory manner.

Adeline Amalgamated Company. —This company during last year has only had three tributers at work. Very rich gold-bearing quartz was obtained from this mine about four years ago; but the shot of gold seemed to run out, or, at least, it has never been picked up again. Last year 76 tons of stone was crushed, which yielded 257oz. gold. The great drawback to this locality is that the cost of transit from the mine to a crushing plant precludes any low-grade ore being worked.

Crown Company. —This company have opened out a low level on what is known as the Welcome Reef. This level commences at the side of the Waitewheta Creek, about 500 ft. below the level of the Crown workings. When I visited the mine in December last this level was constructed for about 100 ft. on the reef or lode, which is from 2ft. to 4ft. in thickness, and which the manager estimated was worth from £7 to £10 per ton. This lode has also been cut on the north, or opposite, side of the creek, and an adit constructed on the lode for about 50ft., which shows the same character of ore,

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and is about the same thickness as that on the south side. This company use two Lamberton mills for pulverising the ore; but these mills are not suitable for grinding quartz—the wear-and-tear is far too great for the work done. The ore, as it comes from the mine, is taken and passed through a Blake's rock-breaker, where it is reduced to about a maximum of 1½in. diameter. It is then dried on kilns having an inclination of 1 in 1 and a series of small steps to prevent the ore from falling down before it is properly dried. After being thoroughly dried it is pulverised in the Lamberton mills, which have a crushing-capacity of about 1½ tons each in eight hours to such a fineness that the ore passes through a thirty-mesh grating. From this the ore is handed over to the Cassell Company to treat by their process.

Cassell Plant.

The only plant erected in the colony by the Cassell Company is at the Crown Company's crushing plant at Karangahake, where they treat the pulverised ore by their process. A description of the plant was given in my last report, so that there is no occasion to again refer to the details. On my visit to the company's works in December last the manager (Mr. McConnell) informed me that by the process from 85 to 93 per cent, of the bullion was extracted, and this has been borne out by the work done during last year, as will be shown hereafter in a statement giving the results of treating the Crown Company's ore. From all that can be seen or learnt respecting this process of treatment, it is by far the best that has yet been introduced into the colony for extracting a large percentage of the bullion from the ore at a moderate cost. At the same time it may be said that the minimum value of the ore sent for treatment must not have a less assay-value than £2 per ton, as the cost of drying the ore, pulverising, and leaching cannot be less with a good plant than about £1 3s. per ton, to which must be added the royalty which the company demands for the use of their patent, which is 10 per cent, on all ore up to a value of £8 per ton, and 15 per cent, on all ore over that value.

If this process be the means of extracting, say, 85 per cent, of the assay-value of the bullion in the ore, then a comparison might be made with ordinary crushing-batteries, which would give about 40 per cent, of the value of the bullion. Suppose the ore to have an assay-value of £2 per ton, then, by the Cassell process, £1 14s. would be recovered, at a cost of about £1 6s. 5d.—that is, including royalty—and by the other process the value of the bullion extracted would be 16s, which would be recovered at a cost not exceeding 8s. per ton. The profit by the former is 7s. 7d. per ton, while by the latter and more crude method, although only 40 per cent, of the bullion be saved, the profit is 8s. per ton, or 5d. per ton more than by the Cassell process. If ore containing an assay-value of £8 per ton were treated, the profit by the Cassell process would be £4 19s. 6d., and by the ordinary method £2 16s. It will therefore be seen that there is a limit to the low grade of ore that can be treated economically by the Cassell process, and for rich ores their process would enhance the value of the mines from which such ores are obtained.

In dealing with the question of using Cassell's process, there are several things to take into consideration —namely: (1.) That it cannot be economically used where the assay-value of the ore does not exceed £2 per ton. (2.) The royalty now asked by the company for the use of their process. (3.) The conditions

under which the use of the process is offered by the Cassell Company in addition to paying royalty.

With regard to the latter, the conditions under which the Cassell Company wish to bind those who arrange to use their process is that all the cyanide of potassium must be purchased from them. This is a condition far more objectionable than the payment of a heavy royalty. At the present time, in introducing the process, it is to the advantage of the company to charge as little for cyanide of potassium as possible, in order to show that ores can be treated at a reasonable cost; but once the process is fully established, and different companies have erected plants to adopt it, the price of cyanide may rise to such an extent as to greatly increase the cost of treatment.

For moderately rich ores or ores of a complex nature, this process is well adapted and more economical than any other hitherto introduced, and it has the advantage of dissolving and precipitating gold and silver in one operation, which chlorination cannot effect, and, besides, the cost of chlorination greatly exceeds that of this process. Mr. J. S. Mac Arthur, who, in conjunction with Dr. Forrest, secured the patent rights for this colony, read a paper before the Society of Chemical Industry on the Cassell process, in which is given an interesting account of the action and use of cyanide of potassium in comparison with chlorination.

No. 4. Mr. George Wilson, Inspector of Mines,

to the Under-Secretary of Mines, Wellington. Sir, — Inspector of Mines' Office, Thames, 4th May, 1891. I have the honour to forward the following report on mines in the Hauraki Mining District, with a schedule showing returns of quartz crushed and yield of gold and number of men employed for the year ending the 31st March, 1891:

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Ivanhoe and Truro (John McCombie, manager).—The work done in this mine has been driving a cross-cut 160 ft., at a depth from the surface of 150 ft.; and a level on the reef 350 ft., at a depth of 100 ft. from the surface. Two winzes were sunk, 70ft. and 30ft.; and 100 fathoms of reef stoped out.

Woodstock (Mr. John McCombie, manager). —This mine comprises the ground formerly known as the Kenilworth and Woodstock. A low-level cross-cut has been driven from the Woodstock low level to cut the Kenilworth Reef. The length of this drive is 300 ft., and the reef has been cut from 2ft. to 3ft. in thickness, giving good prospects. Tributaries have been working on this reef at the higher level. Twenty-six tons of quartz yielded 71oz. of bullion, and 60 tons were sold at 45 per cent, on the assay-value, which was £50 per ton.

Crown Mine (Mr. Geo. N. McGruer, manager). —The chief work carried on in this mine has been in driving on the reef opened near the Waitawheta Stream. This has been driven on both sides of the stream. The prospects are very encouraging. The mill, which is erected on the side of a hill, and some distance above the Crown workings, is found to be unsuitable for treating large parcels of quartz; and it is intended to construct a tramway down Waitawheta Gorge to the flat, where a better plant is to be erected. The Cassells Company works, which are adjacent to the mill on the Crown Mine, are found to be too inaccessible; and I understand it is their intention also to move their plant down to the flat, where it will be near the main road, and

convenient for receiving any parcels of quartz brought from different parts of the Hauraki District. Their method of extracting gold and silver from quartz is apparently very satisfactory.

Adeline Amalgamated.- —This mine is chiefly worked by tributers. Several other licensed holdings are worked in this district, but no returns of any consequence have been obtained.

CENSUS, 1891.

APPENDIX TO THE JOURNALS OF THE HOUSE OF
REPRESENTATIVES, 1891 SESSION II, H-17A⁴⁶⁶

Karangahake Riding:- 249 Persons, 138 Males, 111 Females.

⁴⁶⁶ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1891-II.2.4.2.10>

CENSUS, 1891., Appendix to the Journals of the House of Representatives, 1891 Session II, H-17a

1891**7 January**

A good gold bearing reef has been found in the Grand Junction mine, Karangahake, on the newly made road.⁴⁶⁷

17 January

A TOUR OF THE GOLDFIELDS. OWN REPORTER, TE AROHA.

KARANGAHAKE. Mining operations had only been resumed in a few of the mines in Karangahake when I visited the district, and none of them except the Crown mine were in full operation. This mine is owned by a Glasgow Company, and on it the famous Cassel plant is erected, and is in full operation, but arrangements are now being made for its removal to a more suitable site lower down the river, a site having been purchased for the purpose from Mr. Alfred Shepherd. I next saw Mr. McConnell, the manager of the process on the new site, the night before he met with the serious accident from which he is now suffering [thrown from his horse, severely injured and concussed⁴⁶⁸], and he seemed thoroughly pleased with it, but is awaiting further instructions before commencing its removal. He expected, however, that when Mr. Melville arrived something definite would be arranged. At present only the percolating process is being used, as it is less expensive than working the agitators. The stuff treated is of a payable character, and Mr. McGruer, the mine manager, has opened up the low level in a systematic manner, the whole of the quartz supply being now obtained from this level. Of course all ores, before being treated by the Cassel process have to be crushed to a very fine pulp, and this is done the Crown Company's own battery which is close beside the Cassel works. It consists of the ordinary battery and pan process, but it is not a very powerful machine, and greater power will be required when the more extensive Cassel works are erected. The reef is a fine permanent body of stone, and at the present low level it has proved to be richer than in any of the upper levels.

The Ivanhoe had only just resumed working with a few men and crushing has not yet been started, but Mr. McCombie, the manager, expects to be in a position to start in a few days. This company has a small but very compact little crushing plant erected on the flat near the Tramway Hotel [no, across the Waitawheta River]. It has four stampers driven by water power, and a very excellent method of amalgamating by means of pans and mixers, which has proved admirably adapted for saving the very fine gold contained in this as well as all the other reefs of the Karangahake district, but still, at least half the gold is lost.

The Adeline has also commenced work with a few men under the management of Mr. Shaw, who has been newly appointed to that position, and the tributers

⁴⁶⁷ <https://paperspast.natlib.govt.nz/newspapers/THA18910107.2.11>

Thames Advertiser, Volume XXIII, Issue 6809, 7 January 1891, Page 2

⁴⁶⁸ <https://paperspast.natlib.govt.nz/newspapers/NZH18910124.2.23>

New Zealand Herald, Volume XXVIII, Issue 8472, 24 January 1891, Page 4

of the Woodstock and Kenilworth have also resumed operations. This party are working the same lode which yielded such handsome returns when it was worked by Mr. Shepherd, and it is paying them fair wages. Negotiations for the sale of this company's property had been commenced some time ago, but they seem to have fallen through, and the only work now being done in the claim is confined to the operations of the tributers.

An important discovery has just been made in a 30-acre area recently taken up by Mr. Shepherd on the steep range or spur on which the Kenilworth and Woodstock are situated, but it is higher up the range, just under the trig, station—a point nearly 1800 feet above the level of the Ohinemuri river. In prospecting about an old drive was discovered, and this has now been cleaned out and repaired, and a tramway laid in it. There is no recollection in the district as to when this drive was put in. It must have been many years ago, but the importance of the discovery consists in the fact that the drive is in 176 feet, along a really fine looking reef, eight feet thick. The existence of this reef was not known when the area was taken up recently, nor has it, so far as can be ascertained, been found in any of the other mines; but as the whole of the reef system of the other mines goes through the new area (which, I omitted to state, has been named the **Talisman**) it may prove to be a continuation of the Crown reef. A steep climb up that range brought me to the workings, where I found two men at work. They had cleaned the drive out, laid rails through it, erected a blacksmith's shop, and partially cut out a quartz paddock, although how they managed to get a truck, anvil, bellows, and rails up that steep hill, where the hands have to assist the feet in climbing, it is difficult to imagine. However, it has been accomplished, and everything is now ready for operations on the reef. Mr. McConnell has tested ores from various portions of the reef, and the lowest test yield £6 10s per ton, while the highest gave as much as £43 2s to the ton, so that it will be seen that the discovery is a most important one if the gold can be saved; but the success of the venture is entirely dependent on the erection of the Cassel plant on the spot already referred to. The ore could readily be got down by means of a wire tramway to the main road leading along the side of the range from the Crown mine to the flat. The discovery is considered one of great importance to the whole district, more especially as the face of the drive is estimated to be within 30 feet of the line of a rich run of gold which years ago was successfully worked by Noble and party nearer to the top of the range.

The great drawback to the whole of the district is the refractory nature of the ores; and the only process so far by which they can be successfully treated is the Cassel's plant, which gives percentages of from 90 to 98 per cent. of the assay value of the ores. It may easily be judged therefore that the near prospects of the erection of this plant on a situation where it will be available for all, has restored the confidence of those who are interested in the district.⁴⁶⁹

⁴⁶⁹ <https://paperspast.natlib.govt.nz/newspapers/NZH18910117.2.49>

New Zealand Herald, Volume XXVIII, Issue 8466, 17 January 1891, Page 6

Talisman claim established (re-established?)**26 January**

THE CASSEL GOLD SAVING PROCESS. INTERVIEW WITH MR. THOMAS MELVILLE.

Mr. Thomas Melville, the local agent for the Cassel gold saving process, the patents for which are held by a Glasgow company has just returned from a trip to Glasgow where he has been in conference with the directors of the company, and where he saw the process of gold extraction in full operations at head quarters.

In the course of an interview with Herald reporter Mr. Melville said...

With regard to the plant now in operation at Karangahake, the Glasgow firm was now convinced that it must be removed from its present inaccessible position on the Crown mine to the site which they have purchased on the flat from Mr. A. Shepherd for the purpose, so that it might be available for the whole district; but before doing so they would like to feel satisfied as to what arrangements would be made by the County Council as to the cost of a road. They felt that the county councillors and mine owners on the Waitawheta gorge should assist in the formation of a practicable road. The estimated cost of this would be from £1000 to £2500, and the Cassel's Company would be prepared to pay half the cost. "But," added Mr. Melville, "no time should be lost, and advantage should be taken of the summer weather to make this road. As you are aware, the low levels of the reefs have so far proved the richest, and there are a large number of these, the payable character of which has been amply proved in the Woodstock and Kenilworth mines; but if the County Council and the mine owners do not come to our assistance, I am doubtful as to whether the company will for the present at least see their way to the removal of the plant. I intend to visit Karangahake shortly, and probably will open negotiations with the County Council of Ohinemuri in respect of this road during my visit. It is of the greatest importance to the welfare and advancement of the district that the plant should be removed to the flat, so that it may be available for all the mines in the district, instead of being as at present practically confined to the Crown mine: and I hope such arrangements will be made as will enable us at once to commence its removal and erection."⁴⁷⁰

The "road" must be the tramway up the Waitawheta; a major undertaking.

31 January

We understand that all the men employed in the Crown mine, Karangahake, have been paid off. This is the result of some disagreement between the Cassel and the Crown Companies as to which company should have possession of the bullion. The present arrangements appear to be unsatisfactory to the colonial shareholders.⁴⁷¹

⁴⁷⁰ <https://paperspast.natlib.govt.nz/newspapers/NZH18910126.2.65>

New Zealand Herald, Volume XXVIII, Issue 8473, 26 January 1891, Page 6

⁴⁷¹ <https://paperspast.natlib.govt.nz/newspapers/NZH18910131.2.18>

New Zealand Herald, Volume XXVIII, Issue 8478, 31 January 1891, Page 4

14 February

The Yellow Dirt Industry. (By Obadiah, the Scribe.)

At Karangahake, British bungling is still the order of the day. The Crown is shut down, owing to the Cassel people collaring all the bullion, under instructions from head-quarters, and leaving the mine manager without a shilling for wages or expenses. Strange people, these Glasgow bodies!⁴⁷²

17 March

KARANGAHAKE NOTES.

(By Aboriginal.[McCombie]) "WHAT' do you do with your corpses?" is the substance of a remark passed by a recent visitor to the site upon which is built the Crown and Cassell Company's plants, as well as the cottages of their respective employees, and the remark is not to be wondered at when the general surroundings are taken into consideration, for it takes a real live man to negotiate the apology for a track that connects with the main line of traffic. Just picture to yourself a number of people accustomed to the bustle and life of a populous city, such as Glasgow being transported to an inaccessible spot like the Waitawheta Gorge, where the ranges rise abruptly on both sides to a height of fully 1000 ft without a break on their thickly-wooded sides, and where the sun is never seen before 10 a.m; and, disappears again at 4 p.m:—especially when the days are on the wane. When approaching the place a strong sulphurous—smell attacks one's olfactory organs. At first it was thought this was proceeding from Cassell Company's laboratory, where sulphuretted hydrogen is used when experimenting with the ore, but subsequent enquiry elicited the fact that it was the outcome of the anathemas that are offered up morning, noon, and night for the "expert" who ordained the existing state of affairs.

Certainly I am under rather than over estimating the amount when I say that a sum of L10,000 has been literally frittered away in the erection of buildings, machinery, &c., in connection with the plants belonging to the respective companies, "Frittered away" are very mild terms, and I use them advisedly, for the whole concern is almost valueless, chiefly on account of its location, and the money spent thereon might just as well have been cast into the sea for all the benefit its expenditure is ever likely to confer either on the shareholders or the district generally. At present there is a dispute on the board between the Crown and Cassell's Company about money matters, and pending its settlement, work in the mill and mine is almost at a standstill. It is expected, however, that an amicable arrangement will speedily be effected and that a joint effort will then be made to establish a plant on the flat, near to the township, where it ought to have been built in the first instance. Failing a combination for the above named purpose it is on the cards that Cassells Company will, on its own account, erect a Customs Plant, in the locality already named, where they have already secured a suitable area of 20 acres, together with the requisite rights for tramway and water race purposes.

So far as the Cassells Company's process for the extraction of gold and silver from the matrix is concerned, it has been very clearly demonstrated, beyond

⁴⁷² <https://paperspast.natlib.govt.nz/newspapers/TO18910214.2.46>

Observer, Volume XI, Issue 633, 14 February 1891, Page 15

the shadow of a doubt, that there is no other process in operation equal to it for the treatment of ore peculiar to the mines in the Ohinemuri district, as well as that obtainable from other mining centres on the Peninsula. Within the past twelve months ore from various mines, located in different parts of the goldfields, from Cape Colville to Te Aroha, has been sent here for treatment, and in every instance the results have been highly satisfactory. In some cases the bullion returns amounted to the full assay value of the ore. Illustrative of this take the parcel of ore containing something over 200 tons sent from the Silverton Mine, Waihi, for treatment. It assayed over £400 per ton and the Cassell Company bought it at 80 per cent on that value, which I venture to assert is the highest percentage that has ever been obtained on the assay value of ore clear of all expenses, during the history of gold mining in the colony. The bulk of the ore amounting to about 400 tons treated by this process has yielded over 90 per cent of its assay value at a cost of 13s 6d per ton, and then the ore had not been ground to the required degree of fineness. As it is a well-known fact that there is no other known process available that would redeem 50 per cent on the assay value of similar ore, it will readily be seen how important it is such a valuable adjunct to our goldmining industry should be located at a point where it will be within range of all parts of the district.

The Woodstock United Company's mine is situated west of and next to the Crown mine, and on the left hand side of the Waitawheta river, which, as before stated is a natural crosscut, exposing to view a section of the reef system of the whole district, and at a depth of 1,700 ft beneath the highest point of the mountain range upon which the mines are situated. The country embraced within this company's area rises from the river level so abruptly as to present a slope of about 1 in 1, and it may thus be realised how admirably it is adapted for mining purposes. There are quite a number of reefs running throughout the whole length of the ground, but, as yet, only three of these have had anything like an appreciable amount of work done upon them, and they have all given up very satisfactory returns.

The No. 1 lode, averaging 8ft in thickness, has been worked upon in one section of the mine to a depth of 120 ft below its outcrop, and as a result, 800 tons of ore have been broken therefrom, yielding 1,600ozs of bullion, which realised 30s per ounce on the average, and then not more than 30 per cent of the assay value of the ore was recovered. West of and running almost parallel with the No. 1 lode is the one known as No. 2, averaging 4ft in thickness, and out-cropping in many places throughout the whole length of the mine. In the early days of this field a large tonnage of ore was broken out from this lode and treated by the battery process for very poor returns. As time went on a new level was started 200 ft under the surface workings; and about 400 ft above the level of the Waitawheta river, which flows round the northern boundary of the mine. Here about 400 tons of ore have been, from time to time, broken out and sold on its assay value, which proved it to be an all round return of £13 per ton. The No 3 lode, which is about 12ft wide, when taken all through the workings, is situated about midway between the No 1 and 2 lodes., and so far the bullion returns prove it to be the richest lode in the district. It was discovered by a party of tributers some two years ago, since when a section of it has been worked out to a depth of 150ft below the first point of intersection, and this block is still in the hands of tributers who have done very well out of their venture. From the tributers' section alone about 200 tons of

ore have been grassed up to date, and the average, assay value of the lot was over £70 per ton. Owing to the want of suitable appliances for its treatment locally this ore was sold at prices ranging from 30 to 40 per cent on its assay value, and shipped to foreign ore markets for disposal. During the past month this lode has been met with in a crosscut, which is 120ft lower down the hill than the lowest point in the tributers' workings. Here it is fully 2ft wide and average samples taken from the bulk of it have assayed at the rate of £12 per ton, with strong indications of improvement going southwards, in which direction driving is now in progress upon it. Although it is a well-known fact that the lodes traversing this property carry both gold and silver right down to the water level—400ft beneath the present workings—no effort has ever been made to develop them at that point, and therefore the value of the mine in this respect is still an unknown quantity. Want of capital is the reason assigned for this state of affairs, but if one-half the money that has been expended in experiments on the treatment of ore, in this connection, had been devoted to the opening up of the mine by means of low levels, it would have been better for all concerned. On this subject, however, I shall have more to say in my next.⁴⁷³

28 March

Gold Mine and Market. (By Obadiah the Scribe.)

Crown, Karangahake. — Company reformed, with the intention of freezing out Colonial shareholders, none of whom have been consulted in the matter. They are now bailed up with —‘Your money or your shares,’ after the company fooling away £10,000 on a plant that nobody this side the Whau would give as many shillings for. The gold scattered about by English engineers and Scotch directors would salt a dozen mines sufficiently to pay dividends, but from the day the mine was sold up till now no shareholder in the colony has got a statement of affairs, and now they have the choice of paying 5s per scrip or forfeit. Is this the way in which Glasgow M. P. scriveners always treat those who trust them?⁴⁷⁴

9 May

GOLDFIELDS ROADS. Mr. McCombie writes as follows in regard to the proposed road through Waitawheta Gorge, Karangahake :—

It is time the people interested in the mines at Karangahake bestirred themselves in order that the necessity for carrying out the abovenamed work should be brought prominently under the notice of the Government. In the past there was a want of unity amongst miners and mine owners generally as to the advisability of constructing this road, but the march of events here during the past twelve months has convinced those who were most prejudiced that it is the one thing required to bring the place to the front as a bullion producer of no mean capacity. To begin with, the results attendant upon the operations in the Crown Mine afford undeniable evidence of the fact that the reefs at the

⁴⁷³ <https://paperspast.natlib.govt.nz/newspapers/THA18910317.2.15>

Thames Advertiser, Volume XXIV, Issue 6868, 17 March 1891, Page 2

⁴⁷⁴ <https://paperspast.natlib.govt.nz/newspapers/TO18910328.2.29>

Observer, Volume XI, Issue 639, 28 March 1891, Page 6

lowest obtainable level, bar sinking, are better defined, richer in bullion, and more permanent in general character than is the case wherever they have been tested in the upper workings. The No. 5 tunnel in the Crown Mine is only 50 feet above the level of the water in the Waitawheta river, and about, 800 feet below the No. 1 level...

The same statement will apply to all the other mines in the district so far as present developments have gone. Take the Woodstock and Ivanhoe mines for example. In both properties, near to the surface, the principal reefs are disturbed by irregularities, uncertain in course and underlie, and poor in bullion results. As these lodes descend the respective hill slopes, upon which the mines are located, they become richer in bullion, larger in size, and better defined—bearing out all I have already said regarding the parallel lodes in the Crown mines.

The great deterring element to the systematic development of the mines here generally is the want of road or tramway accommodation through the Waitawheta Gorge, which, by the way, forms a natural crosscut, inasmuch as it trends right across the reef system, having its course almost at right angles to the general strike of the lodes, and consequently affording splendid facilities for tunnelling purposes. From the river to the highest point on the Karangahake range the distance is about 1300 feet, and there are innumerable lodes plainly visible outcropping in various places between the two points. These could all be worked more satisfactorily and with better results than is the case at present if the Gorge in question were made accessible by means of a road or tramway suitable for the transport of ore from the mines to the flat, where the Cassel's Gold and Silver Extraction Company purpose erecting works very shortly. The completion of this road would not only facilitate the working of the mines, thereby increasing the demand for labour, as well as the output of bullion; but it would also afford the only practicable means of approach to the magnificent kauri forests which clothe the banks of the Waitawheta river, about four miles beyond the mines, and which are said to contain about fifty million feet of timber. The estimated cost of constructing this road is £1000, of which Cassel's Company have, I believe, expressed their willingness to contribute one-half; and, as our local body has more than it can do to keep main lines of traffic in repair, we must of necessity look to the Mines Department for the balance...⁴⁷⁵

13 May

HON. R. SEDDON'S VISIT TO THE THAMES.

HIS IMPRESSIONS OF THE GOLDFIELDS.

UPPER THAMES. From the Thames he went to Paeroa and Waihi and Karangahake. There was very little work done at the latter place. He had no opportunity of inspecting Cassel's process, but saw Mr. McConnell, manager. There was no process to touch it, but the charges were so high that it was cheaper to lose the extra gold, and to go on with the old wet process.⁴⁷⁶

⁴⁷⁵ <https://paperspast.natlib.govt.nz/newspapers/NZH18910509.2.40>

New Zealand Herald, Volume XXVIII, Issue 8562, 9 May 1891, Page 5

⁴⁷⁶ <https://paperspast.natlib.govt.nz/newspapers/NZH18910513.2.53>

New Zealand Herald, Volume XXVIII, Issue 8565, 13 May 1891, Page 6

1 July

Mr George McGruer, manager of the Crown mine, Karangahake, is working on splendid ore in the Monastery or No. 5 section. The picked stuff is worth about ½oz to the pound. Promoters' shares in the surrounding claims have advanced. From to-morrow the Crown and Cassell Cos.' interests become identical in Karangahake, the two companies having amalgamated so far as regards Karangahake.⁴⁷⁷

MINE MANAGER S REPORT. Woodstock United Mine, Karangahake, 22nd June, 1891, To the Directors Woodstock G.M. Co., Auckland.

The work of repairing the horse grade section of tramway, as well as the large hopper, is almost complete, and the end of this week should see the aerial line of tramway in thorough working order. Should the iron rails come to hand quickly, the tram line throughout will be ready for ore transit early in the ensuing month, by which time there will be a fair-sized tonnage of ore ready for treatment. Mr. Jackson is now here making a survey of the lode out-cropping on the tram line, in order to ascertain whether it is likely to be identical with the one known as No. 3, and his plan will be forwarded in a few days time. In any case the tramway lode contains a very fair percentage of high grade ore, which could very easily be turned to account when the hoppers are ready for its reception.⁴⁷⁸

The Crown and Cassel companies have amalgamated**9 July**

At Karangahake, the Crown Gold Miners' Company have now sole control of the Cassel Extracting Company's works, so far as Karangahake is concerned, and I understand that arrangements are to be at once made to bring the plant from its present site to the flat, where it will be accessible from all parts. Mr. McGruer is getting some extraordinarily good ore in the No. 5 level, some of the stuff being well worthy of the name of specimens. A large piece with a band of gold an inch wide, which traverses its full length, is to be sent to the Glasgow directorate. The reef from which this ore is being grassed runs through the Abbey, Grand Junction, and Cornucopia claims, all of which are now being worked.

Mr. Shaw, of the Adeline, has been doing excellent work with the small staff at his command. He has been driving through a very hard belt of country latterly, and hopes soon to be through it. Considering the nature of the country, Mr. Shaw has done surprising work, and is just the sort of manager required for this district. Our experience of the imported article has been disastrous, and the prestige of several of our local mines has much suffered by the manner in which some of these kid-gloved mis-managers have handled them.

The Woodstock and Kenilworth mines are progressing as usual, and the tribute paid to Mr. McCombie, the manager of the former, by his directors, is quite

⁴⁷⁷ <https://paperspast.natlib.govt.nz/newspapers/THS18910701.2.9.1>

Thames Star, Volume XXIII, Issue 6922, 1 July 1891, Page 2

⁴⁷⁸ <https://paperspast.natlib.govt.nz/newspapers/NZH18910701.2.63>

New Zealand Herald, Volume XXVIII, Issue 8607, 1 July 1891, Page 6

deserved by that gentleman. Two men are working on the Abbey, a rich piece of ground ? and so soon as there is a possibility of getting dirt to the Cassel plant a very large number of men will be put on in various mines.

Regarding the scare about the wholesale forfeiture of claims lately made so much of, there has been nothing to frighten us here. The Warden and Inspector are two men who know every inch of the ground and its circumstances, and in the Warden's administration of the law mining people here have every confidence. A firm hand is kept; but at the same time every sort of fair play has been and is being given to those who evince any desire to prospect and work their ground.⁴⁷⁹

10 July

Warden's Court. Applications adjourned:-

New Zealand Crown Mines Company, tramway, 42 chains [845 m] in length, Karangahake.⁴⁸⁰

This for the tramway up (down) the gorge; the Waitawheta Road. The AJHR 1892 states about 80 chains [1609 m]. This may include the section from Battery Flat up to the top of the battery. The GIS gives a total length of 1700 m.

17 July

At Karangahake, the Crown Gold and Silver Mining Co. have just obtained a protection order from the Warden's Court to work with ten men only in the mine for a period of four months. This has been done with the object of removing the Cassel Reduction Works from its present site on the hill down to the flat, where it will be more central and accessible to the adjoining mines. The Crown Co. have just completed the purchase from the Cassel Co. for the sole right of using the latter's gold-saving process for a radius of three miles from the Karangahake trig station, the terms being £300 cash per annum and 15,000 shares in the Crown Co., paid up to £1.

In the Woodstock mine, operations are now conducted solely on behalf of the company, the tributers having vacated through the expiration of their tribute terms. The final settling up with them gave the company a sum of £467 14s, as percentage on its share of the ore broken latterly by the tributers. The company now intends to go in and systematically work their mine, and pending other arrangements, it is probable the ore broken out will be shipped to Germany for treatment. Operations in the Adeline and Kenilworth are proceeding as usual, and work is also proceeding in the Abbey, Grand Junction, and Cornucopia claims.⁴⁸¹

6 August

Mr G. McGruer, manager of the Crown mine at Karangahake, has received instructions to erect the new Cassel plant on the Karangahake flat

⁴⁷⁹ <https://paperspast.natlib.govt.nz/newspapers/NZH18910709.2.55>

New Zealand Herald, Volume XXVIII, Issue 8614, 9 July 1891, Page 6

⁴⁸⁰ <https://paperspast.natlib.govt.nz/newspapers/NZH18910710.2.48>

New Zealand Herald, Volume XXVIII, Issue 8615, 10 July 1891, Page 6

⁴⁸¹ <https://paperspast.natlib.govt.nz/newspapers/NZH18910717.2.52.13>

New Zealand Herald, Volume XXVIII, Issue 8621, 17 July 1891, Page 3 (Supplement)

immediately. The old plant will be left where it stands, and the County Council are using their utmost endeavor to construct the Waitawheta road, which will connect the Crown, Woodstock, and other mines with the new plant. The Crown Co. offer £500 towards the work.⁴⁸²

The tramway up the Waitawheta gorge is being called the Waitawheta Road.

McGruer gets go-ahead to erect new Crown plant

10 August

Woodstock United (Karangahake). — Operations in this mine are at present confined to stoping north and south upon the No. 3 lode north and south of the main crosscut at the low level.

...The tramway which is being made to connect the low level with the aerial line will be completed about Wednesday next, after which the ore on hand will be sent down to the furnace buildings, where it will be put through the stonebreaker and sampled for assay purposes...⁴⁸³

Not clear where this is. This is 1891, the No. 3 level tramway and cableway not established until late 1893 (see below).

18 August

The best news we have had in this district for some time was made known by Mr George McGruer, manager of the Crown Company, this week. He has received instructions from his directors in Glasgow to at once proceed with the construction of the new mill and Cassel plant on the site known as Shepherd's flat, Karangahake, together with the water race and tramway from the mine to the plant. The new works will consist at first of 20 head dry stampers (provision being made for 40 eventually) and the appurtenances of the Cassel Company's process. This will mean an immediate expenditure of about £10,000, exclusive of the road which will have to be made, which will cost another £1200. The Crown Company is offering the Ohinemuri County Council £500 towards this work, and the latter body is endeavouring to get a Government subsidy in addition, in order that the work shall be thoroughly done. The old plant will remain in its situation, as the gear belonging to it is not considered good enough to re-erect, in the new plant.⁴⁸⁴

20 August

At the Warden's Court:-

N.Z. Crown Mines Co., water race at Karangahake, granted;

Crown Mines Co., tramway at Karangahake, do [ditto].⁴⁸⁵

⁴⁸² <https://paperspast.natlib.govt.nz/newspapers/THS18910806.2.8>

Thames Star, Issue 6953, 6 August 1891, Page 2

⁴⁸³ <https://paperspast.natlib.govt.nz/newspapers/NZH18910810.2.24>

New Zealand Herald, Volume XXVIII, Issue 8641, 10 August 1891, Page 5

⁴⁸⁴ <https://paperspast.natlib.govt.nz/newspapers/WT18910818.2.37>

Waikato Times, Volume XXXVII, Issue 2979, 18 August 1891, Page 4

⁴⁸⁵ <https://paperspast.natlib.govt.nz/newspapers/THS18910820.2.9>

The water race will be on the true left bank Ohinemuri, dam a little below present day eastern rail tunnel portal. The tramway is the Waitawheta Road, up the gorge.

21 August

A terrible accident happened on Tuesday at the Cassell Company's Reduction Works at Karangahake. The foreman of the works, Mr James Tegart [Taggart?], was leaning over a cylinder containing a very strong solution of cyanide of potassium, when he overbalanced and fell in. He was quickly removed, but died immediately.⁴⁸⁶

3 September

Poor unfortunate Karangahake suffered another mishap last week, the Cassell Company's big dam being carried away. This stops all work in the machinery department, although the mine will still continue to work full-handed. The Government have declined to assist in the matter of the road, and it is quite likely that the Crown Company will construct it themselves. They have already contributed £500 towards the work.⁴⁸⁷

Crown/Cassel dam destroyed

This is the old Railey's dam, now powering the Crown battery on the same site. In the report below it is called an "accident". Some sort of human error, rather than flood damage? However, this suggests flood damage:-

...August of the same year, when, during a heavy fresh in the river, part of the dam was carried away, and caused operations to be suspended with this plant for some months. After repairing the dam they resumed crushing.⁴⁸⁸

They do repair it, to keep the battery going a bit longer, and so as to operate an air compressor at the site after the battery is removed.

10 September

KARANGAHAKE. (from our own correspondent.) Tenders are now invited for the construction of the road through the Waitawheta Gorge, which forms a sort of crosscut on the reefs in this district, and which affords the lowest obtainable starting points for tunnelling purposes. Tenders are also about to be invited for the different works in connection with the new plant which is to be erected for the Crown Company on the flat, where it will be available for the mines at Waihi, Owaharoa, and Waitekauri.

Crown Mine.—Just before the accident to the dam, which necessitated a cessation of work in the present plant, 32 tons of ore were treated from different sections of the mine with the following result: —Monastery section,

Thames Star, Volume XXIII, Issue 6965, 20 August 1891, Page 2

⁴⁸⁶ <https://paperspast.natlib.govt.nz/newspapers/WOODDEX18910821.2.8>

Woodville Examiner, Volume VII, Issue 743, 21 August 1891, Page 2

⁴⁸⁷ <https://paperspast.natlib.govt.nz/newspapers/WT18910903.2.32>

Waikato Times, Volume XXXVII, Issue 2986, 3 September 1891, Page 3

⁴⁸⁸ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1893-I.2.1.4.5>

THE GOLDFIELDS OF NEW ZEALAND: REPORT ON ROADS, WATER-RACES, MINING MACHINERY, AND OTHER WORKS IN CONNECTION WITH MINING., Appendix to the Journals of the House of Representatives, 1893 Session I, C-03

5 tons 6cwt; assay value, £30 9s per ton. No. 4 level, 6 tons; assay value, £4 10s per ton. No. 5 level, 12 tons; assay value, £16 16s per ton. No. 5 level, 6 tons; assay value, £19 2s per ton. No. 5 level, 3 tons; assay value, £19 per ton. The percentage extracted by Cassel's process was 95 per cent. on the assay, and the total value of the bullion recovered from the above named lots was £570 sterling.

Woodstock United.— 10-ton parcel of ore from the No. 3 lode at the low level has just been subjected to pan treatment, for a return of 36oz of melted bullion, valued at 51s per ounce. This lot was a fair average of a 30-ton lot which had been fairly well sampled, and its assay value proved to be £18 sterling per ton. It will thus be seen that the percentage of bullion extracted is a little above 50 per cent, on the assay value of the ore, but the whole of the tailings and slimes have been saved in pits, with a view to having them subjected a second time to pan treatment, from which the manager expects to extract another 10 per cent. on the original assay value of the raw ore.⁴⁸⁹

29 September

Karangahake, Monday. Woodstock United.— treatment of a 25-ton parcel of general ore from the No. 3 lode low level, was completed at Mr. Cox's mill last week for a return of 100oz 15dwt melted bullion, value £2 12s 4d per ounce, and the all round results are £12 per ton or thereabouts.

Mr. J. A. Pond, Colonial Analyst, who is one of the directors, tabulated a statement of assays of this ore made before and after treatment, and as the results are very interesting to mining and mill men generally, I have succeeded in obtaining a copy of them for publication... [see the article for these details]

Crown Mine.—Mr. Adams is now here making a survey, and taking the levels for the water-race, which is to be brought in from the gorge of the Ohinemuri river to a point a little below the township, where the above-named company intend erecting their ore reduction works. Next mail the manager, Mr.

McConnell, expects to receive from his directors in Glasgow full particulars with regard to future developments, and it is more than likely that we shall have during the coming summer a very lively time of it. When once this plant is an accomplished fact a new vista of prosperity will open out for the place, which only requires suitable appliances for the treatment of the ore peculiar thereto, in order to bring it to the front as a gold and silver mining centre of no mean importance.

Ivanhoe. —Prospecting operations have now been started at the southern end of this property, about 300 feet above the level of the Waitawheta river, where there are several very large lodes outcropping. One of these, measuring fully 10 feet in thickness, is now being cut through, and very fair prospects of gold have already been obtained therefrom. A party of tributers are also at work in the eastern section of the mine, and they are meeting with very encouraging results.

Adeline.—Trezise and party, tributers, have just worked out a small block for a parcel of ore amounting to about 20 tons, which they think will pay them for their trouble. Pending the results of the plaint for forfeiture against this claim

⁴⁸⁹ <https://paperspast.natlib.govt.nz/newspapers/NZH18910910.2.10>

New Zealand Herald, Volume XXVIII, Issue 8668, 10 September 1891, Page 3

in the Warden's Court, the tributers are afraid to do any more dead work lest the ground should pass into the hands of persons with whom they could not agree as to terms.

Specimen Hill.—[east of Karangahake trig] In this mine there is a party of tributers working, who have opened out on an 18 inch leader, which prospects handsomely, and upon which they are now about to start permanent mining operations.⁴⁹⁰

Woodstock are putting ore through Mr Cox's four stamp battery. McCombie manages both concerns.

5 October

Mr George McGruer, mine manager for the Crown Mines Co., was married on Tuesday afternoon last, the 29th ulto., to Theresa Eliza, the eldest daughter of Mr A. McLoghrey, a settler of many years' standing in the neighborhood of Karangahake.⁴⁹¹

19 October

Talisman (Karangahake) -A distance of 254 ft has now been opened up on the line of reef, which shows a dimension of eight feet thick. Of this distance 176 ft have been driven by the present proprietors, and now a good class of ore is coming to hand, nice colours of gold being seen at every time the reef is broken down. Mr Shepherd also informs us that assays of the ore have been completed by Mr Smeaton of the Crown Co's mine, and that they ran between £4 15s per ton and £92, This is very encouraging and should tend to induce the proprietors to fully develop their property, which, we understand, they are determined to do.⁴⁹²

25 November

NOTICE. Tenders are invited by the N.Z. CROWN MINES CO., Ltd., for the CONSTRUCTION of a TRAMWAY through the Waitawheta Gorge, Karangahake. Plans and Specifications can be seen either at Crown Co.'s Works, Karangahake or at the office of Mr Adams, surveyor, Thames. Intending tenderers can be shown over the ground by Mr McGruer, who, while the contract is open, will be in Karangahake each morning up till 10 o'clock. The length of the Tramway to be constructed is THIRTY CHAINS [604 m] of Solid Rock Cutting.

All tenders must be sent in not later than THURSDAY, 10th December, 1891. The lowest or any tender not necessarily accepted. For the N.Z. Crown Mines Co., Ltd., John McConnell, Manager.⁴⁹³

⁴⁹⁰ <https://paperspast.natlib.govt.nz/newspapers/NZH18910929.2.43>

New Zealand Herald, Volume XXVIII, Issue 8684, 29 September 1891, Page 6

⁴⁹¹ <https://paperspast.natlib.govt.nz/newspapers/THS18911005.2.5>

Thames Star, Volume XXIII, Issue 7005, 5 October 1891, Page 2

⁴⁹² <https://paperspast.natlib.govt.nz/newspapers/THA18911019.2.6>

Thames Advertiser, Volume XXIV, Issue 7050, 19 October 1891, Page 2

⁴⁹³ <https://paperspast.natlib.govt.nz/newspapers/THS18911125.2.17.3>

Thames Star, Volume XXIII, Issue 7049, 25 November 1891, Page 3

27 November

TENDERS wanted for REPAIRING N.Z Crown Mines Co.'s DAM. Plans and specifications can be seen at Crown Co.'s works, Karangahake.⁴⁹⁴

7 December

UP-COUNTRY DISTRICTS. (from our own correspondent.) Paeroa, Friday. KARANGAHAKE.

Within the past ten days things generally here have had an upward tendency, and there now is every prospect of the place lifting its head above the cloud of depression which has hung over it for some time past. I do not know of any other goldmining district in New Zealand which has had so many ups and downs—mostly downs. The ore peculiar to the place, being refractory in character, refused to yield up its treasures to any of the old methods of bullion extraction, and new systems had to be sought for and adopted. Like most new departures in every sphere of life, failure dogged the footsteps of almost every process that has been brought to bear on the treatment of this ore for the last ten years. Owing to the extremely rich ore obtainable from the principal mines, the attention of all the leading metallurgists of the world has from time to time been attracted to this place. Some of them patented processes specially devised for the treatment of local ore, amongst them being the late Mr. Parkes, who had a world-wide reputation as a skilled metallurgist, and an inventor of no mean ability. Nevertheless his efforts were not crowned with success, and, like his predecessors, he retired from the contest fairly defeated. The latest and most successful attempt to deal with this ore is by the "McArthur-Forrest Cyanide Process," which has been in general use here for the last two years. During that period about 400 tons of ore have been treated at a cost of less than 15s per ton, and the average bullion extraction has been over 80 per cent, on the assay value of all the ore subjected thereto. Within the ensuing twelve months a large plant for the treatment of ore by the above-named process will be in full operation on the flat below the township, where it will be available for mines from all parts of the district, and I venture to predict a season of unparalleled prosperity thereafter.

Crown Mine. The contractors for clearing the new mill site have nearly finished their work, and fair headway is being made by the party of men who took the contract for the excavations. Tenders, returnable on the 10th instant, are invited for constructing a tramway—from the mine to the new mill—through the Waitawheta gorge, in which there will be some heavy cuttings; and the whole of the work, which includes laying down the permanent way, is to be completed in four months from date. A fresh start has been made in the mine, where a large staff of hands is now employed in starting a new low level, and forming a section of the tram line in order to avoid the costly and laborious system of transmitting ore for treatment heretofore. In the early part of this week a contract was let to repair the dam, with a view to utilising the water for driving the machinery in the old mill, which, it appears, is about to be worked again pending completion of the new plant.

⁴⁹⁴ <https://paperspast.natlib.govt.nz/newspapers/THS18911127.2.16.5>

Thames Star, Volume XXIII, Issue 7051, 27 November 1891, Page 3

Woodstock United. — Stopping out the No. 3 lode in this mine is still in progress. In the seventh stope, which is about 40 feet in length, the lode varies considerably in character and quality. Going southwards of the No. 1 rise it averages nine inches in thickness, whilst its width northwards of the same point is fully three feet from wall to wall. One of the many features peculiar to this lode is that the ordinary methods of testing ore—namely, by mortar and dish, afford no reliable evidence whatever as to its intrinsic value. There is no distinguishable difference in the quality of ore valued at £2 per ton and that valued at £200 per ton—so far as dish prospects are concerned. According to the dish, both classes of ore are about the same in quality, and the difference is only ascertainable after making an assay test. I mention this matter particularly because it is more than likely that similar bodies of ore have ere this been passed over as valueless by both miners and prospectors, and the hint contained herein may cause such bodies to be more minutely overhauled in the future.

Adeline.—Several parties of tributers are now at work in this mine, which will get a thorough prospecting at their hands, and they expect to be well rewarded for their trouble. About ten days ago Tresize and party treated a 13-ton lot of ore in Mr. Cox's mill for a return of 37oz of melted bullion, valued at 40s per ounce. Before treatment this ore was reduced in the stone breaker, after which it was mixed, sampled, and its assay value proved to be £11 per ton. It will thus be seen that something like 60 per cent, on the assay value was redeemed, chiefly by pan amalgamation, because the amount of bullion saved on the plates was very small comparatively.

Talisman.—Prospecting operations in this mine are still being continued, and the shareholders are meeting with very encouraging results. In this mine a large block of gold and silver bearing ore is already opened up, but as it is refractory in character nothing can be done with it to turn it to profitable account pending the completion of the works in progress for the Crown company.

Ivanhoe.—Sheehan and party, tributers in this mine, have just started to treat a parcel of ore amounting to about 60 tons, which is shaping for a good return. This stuff was rejected when the surface portion of the mine was worked upon years ago, because it would not pay for reduction by the ordinary battery system, but it yields handsomely when submitted to pan treatment.⁴⁹⁵

26 December

KARANGAHAKE.

Crown Mines Co.—Messrs Kelly and party, contractors for the construction of the Waitewheta Gorge Road have made a solid start with their job, and have-commenced work on Section A, putting a number of men on small sections in order to get the work through in contract time. Mr G.N. McGruer is engineer for this work, and between this and his ordinary mine management he has his hands full. The outside work in the mine is principally finished, and a fresh start has been made underground. Nos. 4 and 5 levels are being driven ahead, and No. 6 also, the latter towards the Junction ground.

⁴⁹⁵ <https://paperspast.natlib.govt.nz/newspapers/NZH18911207.2.55>

New Zealand Herald, Volume XXVIII, Issue 8743, 7 December 1891, Page 6

Shaw and party, contractors for excavating the battery site, are getting on splendidly, and are giving every satisfaction to the manager. They expect to be through shortly.

As will be seen by our advertising columns, tenders are invited for the construction of a water race which will come down the Ohinemuri River, and be one mile long. At the junction of the rivers it will meet the tramway, and they will then run together. The section of tramway to be made from the Woodstock is thirty chains [604 m]. Tenderers will be waited on at Karangahake at 10 o'clock every morning after January 4th.⁴⁹⁶

“The section of tramway to be made from the Woodstock is thirty chains” is the section requiring “solid rock cutting”. “From the Woodstock” presumably meaning upstream from the end of the Woodstock tramway beside the Waitawheta. Another section will be required, from the bottom of the Woodstock tram, sloping up along the side of the Ohinemuri riverbank to the top of the new Crown battery.

The water race will be a wooden flume from a dam just below the future eastern portal of the railway tunnel.

29 December

NEW ZEALAND CROWN MINES COMPANY (Limited).

TENDERS are invited by the N. Z. Crown Mines Co, Ltd, for the entire CONSTRUCTION of a WATER RACE and TRAMWAY measuring respectively Eighty [1 mile, or 1609 m] and Thirty Chains [604 m] in length. Plans and specifications can be seen at Crown Co.'s Works, Karangahake, or at the office of Mr Adams, Surveyor, Thames, on and after 4th JANUARY, 1892, on and after which date while the contract is open intending tenderers will be waited on in Karangahake up till ten o'clock each morning and shown over the ground. All tenders must be sent in not later than MONDAY, 11th January, 1892.

The lowest or any tender not necessarily accepted.

For the New Zealand Crown Mines Co., Ltd. John McConnell, Manager.⁴⁹⁷

AJHR 1892

Published 1892, but largely reporting on 1891.

THE GOLDFIELDS OF NEW ZEALAND: REPORT ON ROADS, WATER-RACES, AND OTHER WORKS IN CONNECTION WITH MINING.

APPENDIX TO THE JOURNALS OF THE HOUSE OF REPRESENTATIVES, 1892 SESSION I, C-03⁴⁹⁸

⁴⁹⁶ <https://paperspast.natlib.govt.nz/newspapers/OG18911226.2.6.2>

Ohinemuri Gazette, Volume 1, Issue 2, 26 December 1891, Page 3

⁴⁹⁷ <https://paperspast.natlib.govt.nz/newspapers/THS18911229.2.13.2>

Thames Star, Volume XXIII, Issue 7069, 29 December 1891, Page 2

⁴⁹⁸ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1892-I.2.1.4.3>

THE GOLDFIELDS OF NEW ZEALAND: REPORT ON ROADS, WATER-RACES, AND OTHER WORKS IN CONNECTION WITH MINING., Appendix to the Journals of the House of Representatives, 1892 Session I, C-03

Presented to both Houses of the General Assembly by Command of His Excellency.

Mr. H. A. Gordon, F.G.S., Inspecting Engineer,

to the Hon. E. J. Seddon, Minister of Mines. Sir,— Mines Department, Wellington, 28th July, 1892.

Page 2

Karangahake Hill. —This work consists of widening and metalling the hill-track between the site of the new bridge across the Ohinemuri River, at Karangahake, and the old Hauraki Mine.

Later mentions of this bridge suggests that it is intended for opposite the new Crown battery. The hill track would be the present Crown Hill road up to the County Road? This bridge may be the “Crown workers’ bridge”, mentioned later. In 1904 the combined road/rail bridge was erected. A new suspension bridge (the Traffic Bridge) is installed beside the existing bridge to Battery Flat in 1898

The cost is estimated at £200, of which £100 was authorised as a subsidy; of this amount £16 9s. has been paid.

Road, Karangahake through Gorge. —This road was completed early last year, but it has not yet been metalled. There seems to be a good deal of traffic on this road, as it is now greatly cut up, and will be very bad this winter unless something is done towards metalling it. A direct grant of £1,000 was given towards its construction, and afterwards a subsidy of pound for pound to the extent of £100, all of which has been paid.

Road, Owheroa to Waihi. —This is for the construction of a deviation to avoid the steep hill between the Ohinemuri River and the Waitekauri Creek. The road is in course of construction, and will cost, when completed, about £600. A subsidy of pound for pound has been authorised to the extent of £300, none of which has yet been paid.

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Karangahake.

This field is looking better than it has done for many years. There are not the same number of claims taken up as in former years, but those that are now held are likely to prove remunerative. The Crown Company, which is principally formed with English capital, has at the present time the richest lode, in proportion to its dimensions, there is in the colony. This company induced the Cassell Company to erect a plant to treat their crushed ore by the cyanogen process, which has proved, so far as experiments have been made with the quantity of ore treated, to extract a higher percentage of bullion than any other process hitherto tried in any of the Australasian Colonies. The Crown Company have now purchased the Cassell Company's plant, and are erecting new reduction works and a large cyanogen plant alongside of the Ohinemuri River, about 15 chains lower down than the township.

Some two years ago a new lode was discovered in the Crown Company's property, which was far richer than anything found on their old workings. They are now engaged in constructing three levels, the upper one is termed No. 4, and it is about 120 ft. above the No. 6 level. The upper levels on which the company was floated did not yield anything like the quantity of bullion expected from them, and at one time it was almost thought the venture would

prove a failure; but some two years ago a new lode was discovered at each side of the gorge of the Waitawheta Creek, about 10 chains lower down than their crushing-plant. This lode showed by assay to contain rich ore, but the financial position of the company when the lode was discovered would not admit of prospecting operations being largely carried on. Last year a considerable amount of work was done on this lode; three levels are being constructed, one about 20ft. above the level of the creek on both sides of the gorge, and one on the southern side of the creek, about 120 ft. above the lower level, having an intermediate level between. The lode in the lower level is from 6ft. to 10ft. wide, but only from 4ft. to 5ft. of the lode next the hanging wall is taken out, the portion of the lode next the foot-wall being low-grade ore. On the upper level the lode is taken out from 2ft. to 4ft. wide, but the quality of the ore is not so good here as at the lower level; the deeper they get the ore appears to get richer. Some of these levels are now constructed for a distance of 200 ft. on the south side of the creek, and 70ft. on the north side, the lode having a northerly and southerly direction, and dipping at an angle of about 55° to the westward. At the time of my visit gold could be freely seen in the stone in any face, in these levels and the manager, Mr. McConnell, informed me that the value of the ore treated by this company during the three months prior to my visit averaged £15 per ton.

The present crushing-plant consists of two Lamberton mills which crush from twenty tons to twenty-five tons of ore per week, working two shifts of eight hours each; and the value of the bullion extracted for the three months previous to my visit was £1,550, £1,500, and £1,250 respectively, making a total value of £4,300 worth of bullion extracted from about 288 tons of ore. The lode consists of hard compact quartz having scarcely any mullock mixed with it, this makes the ore easily treated by the Cassell process. The greatest difficulty in treating ore with cyanogen solution is the question of filtration, as ore producing much slime makes filtration a slow process. The company have commenced to erect a new plant on the flat alongside the Ohinemuri River, about 15 chains below Karangahake Township, and have constructed a tramway through the gorge of the Waitewhata Creek to connect the mine with the new plant. Judging from the present appearance of this company's mine it is likely to form one of the best mining properties in the colony.

Woodstock and Kenilworth Company. —This company's ground adjoins the Crown Company's western boundary; but the lode is entirely different, and the ore is also of a different character, there being far more silver than in the Crown lode, and it is not nearly so large, being only from 6in. to 2ft. in thickness. For two years previous to last year, the mine was let on tribute, and two hundred tons of ore was taken out, which Mr. McCombie, the manager, informed me had an assay-value of £12,000, but it only realised about 50 per cent. of this value. At the time of my visit six men were employed in the mine, and the lode they were working on had a thin clay seam or parting in the centre; on one side of this seam the ore was greatly oxidized, and the manager stated that the assay-value of this was from £15 to £20 per ton, while on the other side of this parting the ore contained a great deal more mineral, and had an assay-value of from £40 to £50 per ton. The company have a small plant of their own, where they treat some of the oxidized ore, but the refractory ore is stacked waiting the erection of the new plant belonging to the Crown Company, which is being erected as partially a custom plant. There is little

doubt that when this new plant is erected, many of the former claims that were previously given up will be taken up again and made pay for working.

Ivanhoe and Truro Mines. —These were formerly two distinct mining properties, but they are now amalgamated and held by Mr. C. Percy Cox, who has been carrying on prospecting operations only for some time. The same line of reef passes through this ground as that now being worked by the Crown Company, and yielding bullion to the average value of £15 per ton for the last three months' work. The same lodes also that are being worked in the Woodstock Mine pass through the ground. Large boulders are found on this property very rich in bullion, but the lode has not been yet discovered where these boulders have come from. The only lode worked in the Ivanhoe Mine is that termed No. 2, which has an average thickness of about 4ft. It has been worked to a depth of 200 ft., and about £18,000 worth of bullion taken from it.

GOLDFIELDS AND WATER-RACES (REPORTS ON, BY WARDENS, INSPECTORS OF MINES, AND WATER-RACE MANAGERS).

APPENDIX TO THE JOURNALS OF THE HOUSE OF REPRESENTATIVES, 1892 SESSION I, C-03A⁴⁹⁹

No. 3.

Mr. Warden Northcroft

to the Under-Secretary of Mines, Wellington. Warden's Office, Thames, 19th May, 1892. I have the honour to forward herewith statistical returns for the Hauraki Mining District for the year ending 31st March last, and also the following report on the mining industry in this locality:

Page 5

Karangahake, Owharoa, Waitekauri, and Komata.

Karangahake at present is a very busy place owing to the extensive operations being carried on at the Crown Company's mine on tramway, water-race, and excavations for their new plant. The water for the race is taken from the Ohinemuri River, and carried 85 chains [1708 m] in the ordinary fluming to the plant. It will be a very complete and capable race, and has taken over 180,000 ft. of kauri timber in construction. The tramway is 80 chains [1609 m] in length, running from the Crown Mine to the site of their reduction-works, and has been a difficult and trying undertaking, a great deal of the cutting being the face of the Waitawheta Gorge cliff, but it can now at any time be extended up the valley; and, as the company intend to crush and treat for the public as well as their own mines, it will be of great advantage to the whole district. The Crown Mine is well opened up, and, so far as one can judge, should be a good paying mine. Their lode is a strong one, and so far, improves as it goes down. They certainly deserve to succeed, for they have done more to advance and open up this district than was ever before attempted. They have not confined themselves to opening and developing quartz-lodes, but have built a tramway and water-race, and are erecting a plant and constructing

⁴⁹⁹ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1892-I.2.1.4.4>

GOLDFIELDS AND WATER-RACES (REPORTS ON, BY WARDENS, INSPECTORS OF MINES, AND WATER-RACE MANAGERS)., Appendix to the Journals of the House of Representatives, 1892 Session I, C-03a

works of a magnitude never before undertaken in this district. The other mines in this part of the district are waiting till the Crown plant is finished, when they hope, by using the Cassell process, to save the largest percentage of the precious minerals contained in their ores. Should this process be able to do all that is claimed for it there will be a large increase in mining in this locality before my next annual report.

No. 4. Page 6

Mr. G. Wilson, Inspector of Mines,

to the Under-Secretary of Mines, Wellington. — Inspector of Mines Office, Thames, 14th May, 1892. I have the honour to forward the following Report on mines in the Hauraki Mining District for the year ending 31st March, 1892.

Page 13

Karangahake District.

Ivanhoe and Truro Mines, 42 acres (Mr. C. P. Cox, owner; Mr. John McCombie, manager). — Six men were employed, and 136 tons of ore were treated for a return of 119oz. of gold. The reef worked on was about 3ft. in thickness. Two prospecting cross-cuts were driven a distance of 230 ft. and 112 ft. respectively, and a considerable amount of surface trenching done. The battery consists of four heads of stamps, two pans, and one settler driven by a Pelton-wheel. Provision is made to allow the slimes to settle, and use the water over again.

Woodstock United Mine, 30 acres (Woodstock United Gold-mining Company, owner; Mr. John McCombie, manager). — The average number of men employed during the year has been six. About 200 ft. of driving has been done on the lode at two or three different points, and the quantity of ore broken out and dealt with was 149 tons. Of this lode 51 tons were sold at a figure ranging from 50 per cent, to 72½ per cent, on its assay-value, which proved it to be worth £2,431; and the purchaser shipped it to Freiberg for treatment there. A parcel of 98 tons was reduced by battery and pan amalgamation for a return of 280oz. of gold, and this result was slightly over 50 per cent, on the assay-value. The lode from which this stuff was obtained averages 18in. in thickness, and there are now to grass about 20 tons of ore, ranging from £15 to £50 per ton in value, as the result of the stoping operations upon it.

Crown Mines, 116 acres (New Zealand Crown Mines Company, owner; Mr. John McConnell, general manager; and Mr. G. McGregor, mine manager). — Fifty-five men on the average have been employed. Two hundred and two tons of quartz and three tons of tailings were treated by the Cassell process for a return of 1,186oz. 10dw. of bullion, value £1 14s. 11d. per oz. The quartz was obtained from the low levels opened on the reef on either side of the Waitawheta Stream. This reef averages from 4ft. to 7ft. in thickness. The depth of the lowest level from the county road is 600 ft.; and 378 ft of driving on the reef, 80ft. of rising, and 61 fathoms of stoping have been done. The quartz from the low level is conveyed to the battery with great difficulty. It has to be hauled across the Waitawheta Stream on a wire tramway, run along a ground tramway, and then hauled by a wire tram again across the stream up to the mill.

This suggests there was a cableway. From No.4? Or from the river level adit before they put the bridge in? There was a suggestion of this earlier.

It appears not to be self-acting, so from No. 6 level?

The company have decided to construct a tramway and erect a new crushing-plant on the left bank of the Ohinemuri River, about 80 chains from the mine. The excavation for a ground tramway is nearly completed, only one bridge over the Waitawheta River being required. The particulars of the new crushing and treatment plant are given in the description, by Mr. McConnell, attached. The plant at present in use consists of three Lamberton mills, a stone-breaker, furnaces, and fifteen agitating vats, ten solution-pumps, three Felton presses, three solution-tanks, and six towers, &c.

The following is a rough description of the new plant being erected by the New Zealand Crown Mines Company, Limited :—

Water-power: By means of a 4in. by 2in. [4ft. by 2ft?] fluming, the water will be taken from a point in the Ohinemuri River, above Karangahake, and conveyed to the battery, a distance of 80 chains, giving a fall there of 70ft., by which, with two Pelton-wheels, 140-horse power will be obtained. The Peltons are 7ft. in diameter overall, and the water-column 44in. by 150 ft. in length.

Crushing Machinery: One Lamberton stone-breaker, capable of reducing 70 tons of ore per day, fine enough for feeding into stamps. Twenty head of dry stamps, 9cwt. each, which will reduce 30 tons of ore per day sufficiently fine to pass through a 60-mesh screen (3,600 holes to the square inch). The crushed ore will be conveyed from the stamps by means of a revolving tube, and deposited in the store-hoppers, either in connection with the percolation, or agitation-plant.

Page 14

Percolation-plant: This plant will consist of thirty or more tanks, each capable of holding a charge, according to their size, of from 6 to 20 tons of finely-pulverised ore. The bottoms of these tanks will be covered with a sand-and-gravel filter. The method of treatment is roughly as follows: The finely-pulverised ore is trucked from the store-hoppers and tipped into the tanks. A dilute cyanide solution is run on to the top, and allowed or assisted to percolate through the body of the ore. As fast as it percolates it is carried away from underneath the filters on the bottoms of the tanks by means of iron pipes, and allowed to run through a series of boxes filled with zinc turnings. The cyanide in solution having a much stronger affinity for gold and silver than the baser metals, dissolves these precious metals in its course through the ore, and again deposits them in the form of a black slime on to the zinc turnings. This bullion, in the form of black slime, is easily collected and melted down into bars. Treatment by percolation requires no power and little labour.

Agitation-plant: This plant will consist of twelve or sixteen wooden tubs fitted with revolving paddles, and capable of holding a charge of three tons of ore each; also three filter-presses, with force-pumps connected, for filtering ore after treatment. This method of treatment is simply agitating the ore and cyanide solution together in tubs or other vessels by means of revolving paddles or otherwise, until the gold and silver is dissolved. The solution is

then filtered, and the bullion deposited on the zinc turnings as already described.

For some time operations have been delayed at the present plant [old Railey's site] through the bursting of the dam, but since repairs have been made and crushing resumed, they have crushed and treated 240 tons of Crown ore by the McArthur-Forrest process, and recovered 92 per cent of the average value.

Adeline Amalgamated Mine has been worked by tributers, and 21 tons of quartz crushed yielded 77oz. 13dwt. of gold. An average of three men were employed.

Several other licensed holdings have been worked, but no great returns have been obtained.

1892

26 February

At Karangahake the excavations in progress in connection with the Crown Gold Mining Company's new reduction plant are being advanced with all possible speed, and the erection of the plant itself will be commenced ere long. In the mine two new low levels are being driven north and south respectively of the Waitawheta River, both of which are proceeding along the hanging wall of the lode, which is being broken out to an average width of six feet without any sign of the footwall, while the precious metal is freely visible in various places throughout the whole of the quartz broken. The general ore varies in value from £16 to £30 per ton, so that it will be seen it is of a highly remunerative quality.⁵⁰⁰

12 March

Fire near McCombie's battery

There have been recently several narrow escapes from disastrous fires in the district, caused by persons wantonly or negligently setting fire to dry bush, or scrub. One was within an ace of destroying Mr McCombie's battery at Karangahake, and but for the expenditure of the whole of last Sunday by Mr McCombie and others, about £2,000 worth of property would have been destroyed. The newly-made pack track to the railway works has been all but rendered useless, and a lot of costly work has been destroyed. In reference to this we have been asked by the police to draw the attention of those it may concern to Section 6 of the Police Offences Act, 1884, which reads:— "Any person who wilfully sets on fire any timber, bush, scrub, grass, fern, flax, or other vegetation upon land not his own property or in his own occupation, is liable to a penalty not exceeding ten pounds, or to imprisonment for a period not exceeding three months." The frequency and openness with which the surrounding bush is being fired leads to the opinion it is being done in ignorance of the law. A strict watch will in future be kept for such offender.⁵⁰¹

"McCombie's battery"; presumably this refers to the Cox 4 stamper. "The newly-made pack track to the railway works"; the work being done on the Te Aroha to Paeroa section of the railway?

26 March

The Crown, Karangahake, is turning out a lot of bullion. Their Cumberton grinders [Lamberton mills], warranted to crush 10 tons per day, manage to get through about nine tons per week, but I suppose the patentee does not work them. The whole of the work for the new plant has been contracted for, and is now being pushed on with, but it will take some time before the new plant will be at work. Present prospects— thanks to Glasgow talent —look as if the new plant would be paid for out of profits...⁵⁰²

⁵⁰⁰ <https://paperspast.natlib.govt.nz/newspapers/NZH18920226.2.8>

New Zealand Herald, Volume XXIX, Issue 8811, 26 February 1892, Page 3

⁵⁰¹ <https://paperspast.natlib.govt.nz/newspapers/OG18920312.2.11>

Ohinemuri Gazette, Volume 1, Issue 13, 12 March 1892, Page 5

⁵⁰² <https://paperspast.natlib.govt.nz/newspapers/TO18920326.2.53>

2 April

Mines Department, Wellington, 14th March, 1892. The Chairman Ohinemuri County Council,

Sir, I have examined the plans and specifications forwarded for bridge over the Ohinemuri River at Karangahake, and cannot approve of them, as they are faulty....

Goiss's contract for road formation from bridge site at Karangahake to Hill Road is being proceeded with rather slowly, and I don't think will be finished within contract time.⁵⁰³

Is this for a second suspension bridge, beside and downstream from the first? This Traffic Bridge will be wider, to accommodate wheeled traffic. It does not get built till 1898!

Or the Crown workers' bridge? This one, I think.

23 April

KARANGAHAKE. J. W. Shaw and party have turned over the finish of their contract for the excavation of the site of the new Cassel process battery to other hands. The manager's house is now all but finished on the new site. The County track along Cornes' gully looks like being nearly finished, and good headway is being made with the portion of the water-race from the Tramway. Hotel to the new battery site.

McCormick's contract for the Woodstock race is still in hand.⁵⁰⁴

Cornes' Gully track is the present Crown Hill Road.⁵⁰⁵

30 April

Karangahake School. —This school has been conducted very satisfactorily by the head teacher, Miss Paterson. The Board has let a contract for building a residence for the teacher, which was much needed. The residents have subscribed the sum of £7 10s towards fencing in the school reserve, and the Board gives £2 to £1 for this work. A contract has been let and will be completed in a week or so. At the proper season the residents intend planting this reserve with trees, etc. When this is done it will be a very ornamental place.⁵⁰⁶

In 1892 Miss Patterson (who later married Mr Guthrie), became the first full-time head teacher. She was assisted by Mr D. Dunlop, who was headmaster of the Paeroa District High School from 1812-1916 [1912-1916 - E], afterwards becoming an Inspector and then for many years Secretary of the Auckland Education Board. The school residence was built in 1892.⁵⁰⁷

Observer, Volume XI, Issue 691, 26 March 1892, Page 13

⁵⁰³ <https://paperspast.natlib.govt.nz/newspapers/OG18920402.2.7>

Ohinemuri Gazette, Volume I, Issue 16, 2 April 1892, Page 3

⁵⁰⁴ <https://paperspast.natlib.govt.nz/newspapers/THS18920423.2.23>

Thames Star, Volume XXIII, Issue 7166, 23 April 1892, Page 4

⁵⁰⁵ <https://www.ohinemuri.org.nz/journals/journal-44-september-2000/karangahake-roads-and-bridges>

Karangahake Roads and Bridges. Ohinemuri Regional History Journal 44, September 2000

⁵⁰⁶ <https://paperspast.natlib.govt.nz/newspapers/OG18920430.2.18>

Ohinemuri Gazette, Volume I, Issue 20, 30 April 1892, Page 6

⁵⁰⁷ <https://www.ohinemuri.org.nz/historic-texts/karangahake-school-70th-jubilee/school-history>

4 May

Thames Star:-

At Karangahake excavations for the Crown Co.'s battery are almost completed. A manager's house has been erected. The new tramway from the mine to the intended new battery, and the water race to carry water to drive the stampers are also in course of construction. It is expected that about £10,000 will be spent in and about the works in erecting the battery, etc. The ore coming to hand continues to be the richest found in the Peninsula for many years. I am informed that the last clean up was a most extraordinary rich one. [remember, this is still at the old Railey's site]

Mr McConnell is general manager, Mr McGruer mine manager, and Mr Moore accountant.⁵⁰⁸

New Zealand Herald:-

THE CROWN COMPANY'S MINE AND PLANT. Access to this mine does not now present the difficulties which we experienced during our previous visit, for a tramway road has been cut out of the face of the gorge cliff—a precipice of about 1000 feet vertical height—in order to give communication with the new plant, which is in course of erection on a fine site below Shepherd's Tramway Hotel. But, as we shall have to refer presently to the tramway, water-race, and plant, more on the subject need not be alluded to now.

The Crown Company was the first to introduce the Cassel process of gold-saving to New Zealand, but until recently the company had only the use of the plant under certain specified terms, the principal one of which was that the company delivered the ground ore to the Cassel company's plant, for treatment, and the latter had no control over the mining operations. The little plant, erected in an almost unapproachable position, proved a thorough success, but the small crushing plant, and the heavy expenses incurred in transit proved hitherto a great drawback to the progress of the company. Now, however, that the Crown has acquired the right to the Cassel process, there is no longer a divided management, and the result is projected works for a huge development of operations. Mr. John McConnell, formerly manager for the Cassel Company only, is now general manager for the Crown Company's mine and plant, Mr. McGruer retaining his position, however, as manager of the mining operations.

On reaching the mine, Mr. McGruer courteously placed himself at our disposal. Of course, what chiefly interested us was the developments at the deep levels, and they certainly created surprise from their extent. On the south side of the river Waitawheta, where operations have hitherto been chiefly carried on, a new main level has been opened from the face of the cliff at the level of the new tramway. The reef was opened from the face where it was exposed, and it is now opened at this section for a length of 80 feet. It is a strong lode, averaging 12 feet in width, and lying at an angle of about 45 degrees, and that it carries rich ore was proved to us by ocular demonstration,

School History. Karangahake School and District 70th Jubilee 1889-1959

⁵⁰⁸ <https://paperspast.natlib.govt.nz/newspapers/THS18920504.2.15>

Thames Star, Volume XXIII, Issue 7175, 4 May 1892, Page 2

for fine specimens had just been obtained as we arrived at the face of the stope on which operations are in progress. We may add that stoping is being carried on at this level; also from one 35 feet higher, and from what is known as No. 4 level, which until recently has been the main level of the mine, and in which the reef has been driven on for a length of 300 feet, giving, Mr. McGruer informed us, good payable, and sometimes very rich ore, for the entire distance. The richest specimens in the reef at this side of the river are contained in ore of a dark colour, but on the north side of the river, where the lode has been driven on for a distance of about 100 feet, the reef equally strong, is of a white formation, and the specimens are very showy, but no richer in quality than the dark ones on the opposite side. A new face was just being opened at the creek level, beneath the tramway, at the time of our visit, and gold was at once in sight; in fact, a very nice dish of specimens was brought up from it at the time. This, we may add, is only about 18 feet below the main level.

Are these the three adits we see in the MM White photo?

If the No. 4 level, “until recently has been the main level of the mine”, was worked, and ore taken from, then there possibly was a cable to bring it across to the Monastery (tramway) side. See 1890 reports, and AJHR 1893

The peculiarity of the Crown reef from first to last is that, it increases not only in strength and size as it is followed downwards, but that it also increases in richness, for the very best ores are being taken from the deeper level, while the upper ones were comparatively poor.

The mine at present employs twenty four men under Mr. McGruer, but some idea may be formed of the extent to which the working staff may be increase when the time arrives for treating the ores on a large scale, from the fact that, making allowance for the flatness of the reef, the tramway level gives 1100 feet of backs on which to operate. It is needless to say that there will be no drainage plant for many years to come. We may just add in passing that the company's mine covers an area of 110 acres. There are other reefs in it, one of which has given good results, but all work is now confined to the main reef, and will be so for some time.

The little plant is still going, and although I was not informed of the exact value of the ores treated the results are very good, and the returns are highly satisfactory and more than encouraging.

As already stated the construction of the new tramway has been a huge undertaking, the cutting cut of the face of the precipice being a most trying one. The contract for this section was let to Mr. O'Brien, formerly of the firm of Larkins and O'Brien, railway contractors. The cutting has been very heavy, and in many places the overhanging cliff forms a roof over the line. The greater portion of the line on this section is laid, but there still remains a bridge to build across the river [place where new suspension bridge has just gone in 05.2021], as the lower section is taken along the south side of the gorge and the other on the north. The total length of the tramway to connect with the new works will be 80 chains [1609 m], but the longest portion is in open country, and the cuttings and formations are all complete, and ready for sleepers and rails. The old Woodstock tramway is utilized as far as it extends.

The water-race contract was let to Mr. McCormick. This is taken from the Ohinemuri River, and its entire length is 83 chains [1670 m]. It is almost

completed, the floor structure being laid for the greater part of the distance from the Waitawheta to the headwater where the dam is to be constructed, being nearly finished. The race is four feet wide, and is to be three feet high, the frames providing for that height, but for the present the top planks will be omitted, leaving the race two feet high, quite sufficient to carry water power for the plant in course of erection. The frames are placed three feet six inches apart, the floor planking being 16in by 1¼ and the sides 12in by 1¼in. It will take 180,000 feet of timber, the whole of which is hand-sawn in the Waitekauri Forest. The bridge across the Waitawheta is not yet commenced, further than the work of blasting the foundations for the supports. It will be a double structure, the upper portion to carry the water-race, and the lower, which will not be finished at present, is intended to bring ore from the Ohinemuri section of the district into the tramway level at the junction of the two rivers should it—as it probably will—be required. Mr. McCormick's contract for the race and bridge is £1704.

The excavations for the plant site was a separate contract, and it has been considerably delayed owing to the immense masses of large boulders which were unexpectedly met with. These foundations are now well advanced. A brief description of the plant proposed to be erected, and which we may add is all ready, will no doubt be of interest. The crushing plant will consist of 20 9cwt stampers, provision being made in the foundations and buildings for adding another 20 head when required, as the company intend to crush for the public. The dry crushing process is to be the only one used, but the ore will not be roasted in kilns as at the Waihi, although a patent furnace will be used for drying it.

The tramway is at such an elevation that the ore is delivered into the stone-breaker direct [however, this requires the ore to be dragged up a sloping tramway from Battery Flat, presumably by horse. More on this later], and after treatment there it will pass into a hopper, from which it is received into the drying furnace. From thence it runs into a hopper above the stampers which supplies the self-acting feeders to the stamper-boxes. There is a hopper below the stamper-boxes to catch the pulverised ore, which is then conveyed by revolving tubes to the Cassel plant, to be treated either by the agitation or percolation process, as may be found most suitable. The whole of the operations are on the gravitation and automatic principle, so that there will be no second handling of the ore from the time it is delivered from the trucks, and every labour saving appliance seems to have been studied out and adopted. Mr. McConnell expects to have the plant in operation by October, but it may be a month later, owing to the delays which have occurred in the excavations.

The manager's residence, a comfortable six roomed verandah cottage [not sure this is Crown House. It was built 1898, or 1900?], is erected on a fine site facing the river, a short distance from the works, and opposite where a country road is now in course of formation, and where it is intended to erect a traffic bridge [across the Ohinemuri near the new battery; never happened at this time? Only the Crown workers' bridge gets built?]. This will be of great advantage to the owners of other mines in getting their ore to the battery.

We were thoroughly pleased with the magnificent prospects before the Crown Company, and could not but admire the pluck and enterprise of those Glasgow gentlemen who are the principal shareholders and directors of the company.

THE WOODSTOCK COMPANY'S MINE. Another mine in the Karangahake district which for some time past has held a high place in public estimation is the Woodstock, but operations in it, although prospects and results have been rich, have been greatly retarded for want of suitable means to treat the ores. It is now being mined by six men under the management of Mr. J. McCombie, whose experience in the district dates back to almost its opening. Operations at present are confined to what is known as the No. 3 lode at the low level, this being about 400 feet above the Crown tramway level, so that there is ample room for future backs. The low level drive is extended 52 feet, and stoping is progressing, the lode varying in size from six inches to two feet, consisting of refractory and free milling ore, these two parts being divided by a narrow clay seam running through the lode, and forming one of the most peculiar geological features of the district. Mr. McCombie informed us that the free milling ore is worth £15 a ton, and the refractory ore from £40 to £50 a ton. About 60 per cent of the bullion in the free milling ore can be saved by pan amalgamation, and about 37 per cent. of the bullion of the refractory ores. From the present level there have been a number of crushings at the small and compact battery on the flat; and from a perusal of Mr. McCombie's battery-books we ascertained that the following gratifying results have been obtained:—Ten tons for 350z melted gold value 50s per ounce, 21 tons for 100oz, 20 tons for 51oz, and 18 tons for 71oz. He has now on hand six tons of No. 1 ore worth £-15 per ton, four tons of No. 2 ore worth £20 per ton, and ten tons of No. 3 ore worth 15 per ton. The present level gives 120 feet of backs below what is known as the tributers' level, and it has been stoped out to a height of 50 feet, leaving about 70 feet still intact. It is intended to start crushing again about the end of this month.

We may add that only the free milling ore has been crushed, the refractory ore being stored away for treatment by the Cassel process.

The tributers working above this level broke out 200 tons of ore, the assay value of which was £12,000, and for which they received £6000 so that it will be seen that when suitable appliances are available this company has every prospect of a good future. But in addition to the lode now being worked, there is another valuable reef known as the Maria reef opened in the mine. It has been driven on for a length of 100 feet, and 50 feet of it has been blocked out; 120 tons from this lode were crushed at the Waiorongomai Battery, and it gave an assay value of £12 per ton, although the actual return was much smaller, but it is intended to open it up no further, so as to have plenty of stuff ready for the Cassel process when the Crown mill starts, and, as the reef averages four feet thick, a plentiful supply can be obtained.

MISCELLANEOUS. In addition to the mines already referred to, there are many valuable properties in the district, the resources of which have been fairly tested, and reefs opened to a considerable extent. Of these, one of the most promising perhaps at present is the Talisman, an area of 87 acres, on the Crown line of reef, in which a lode has been driven on for nearly 200 feet, with payable assay results the whole way. The Bonanza is also a promising property, and we were informed that negotiations are in progress to form a syndicate to work the properties conjointly, on a scheme by which all subscribed money is to be devoted to the development of the mine.

On the whole, we may say in conclusion that we were greatly impressed with the mineral resources of the Upper Thames district. The mines must be operated by strong companies with large capital, and all the best appliances at their disposal, but with these the facts have already proved beyond doubt that there is immense wealth in the magnificent reefing areas of Karangahake, Waitekauri, and Waihi.⁵⁰⁹

14 May

THE NEW ZEALAND CROWN MINES CO. (Limited). TENDERS.

TENDERS for Lifting and Re-laying and thoroughly Repairing the Tramroad known as the "Woodstock Tramway" will be received at the office of the Company not later than 4 p.m. on WEDNESDAY, the 18th inst. Plans and specifications maybe seen at the Company's office. The lowest or any tender not necessarily accepted. For the New Zealand Crown Mines Co., Limited. JOHN McCONNELL.⁵¹⁰

The old Woodstock section of tramway needs to be upgraded.

The bridge crossing the Waitawheta for the tramway has yet to be built, as is the much bigger bridge for the water race near the confluence with the Ohinemuri. It will be a double decker, with tramway beneath the water race. This can be seen in photographs. The dam will be upstream of the Woodstock dam, and must surely compromise it.

⁵⁰⁹ <https://paperspast.natlib.govt.nz/newspapers/NZH18920504.2.47>

New Zealand Herald, Volume XXIX, Issue 8869, 4 May 1892, Page 6

⁵¹⁰ <https://paperspast.natlib.govt.nz/newspapers/OG18920514.2.8.3>

Ohinemuri Gazette, Volume I, Issue 22, 14 May 1892, Page 4

Waitawheta Road tramway complete except bridge

New main level opened at tramway level (No.6 Level)



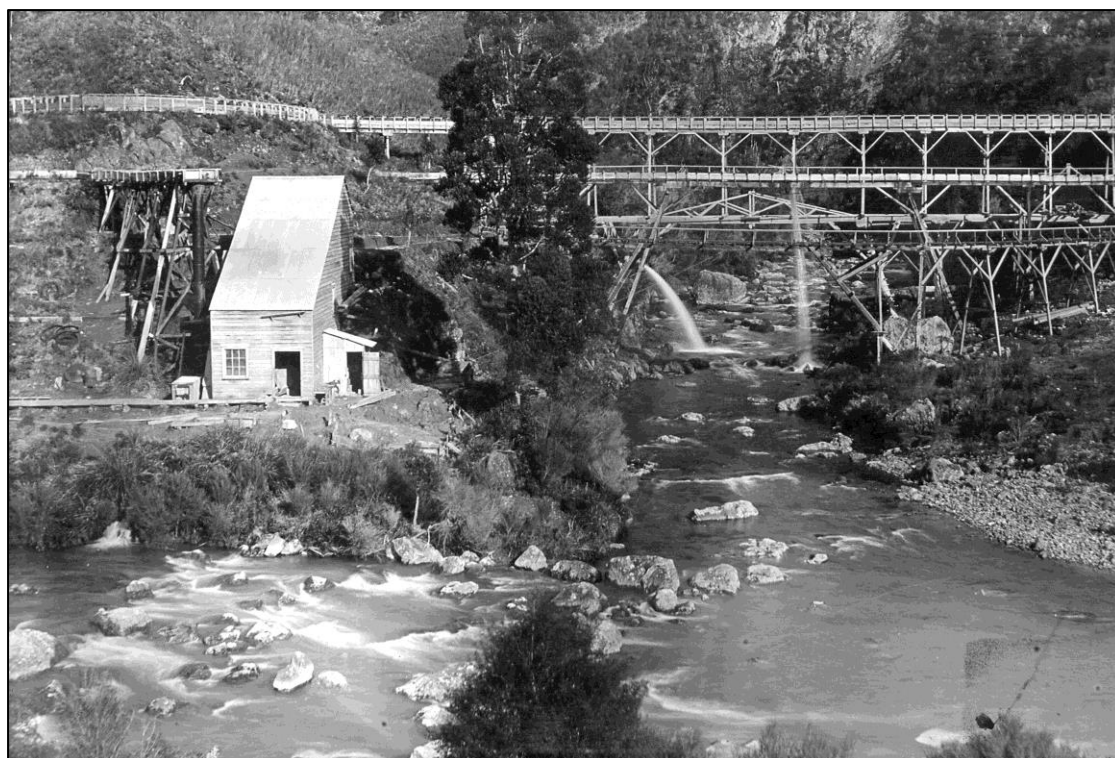
This photograph appears to be the earliest we have of the Crown River Level. The photographer is Margaret Matilda White, and was probably taken after access was provided by the Waitawheta Road (tramway) up the Waitawheta completed in mid 1892. Access before this time was difficult. It appears that a pipe enters the mine at handrail height on the bridge. This could be compressed air from the compressor building which replaced the Crown battery (early 1894), or maybe even from the battery during its operation. Compressed air was required to run the rock drills. If after 1897-8, a conspicuous compressed air pipe would be present top left of image.

The windlass device at centre appears to haul a bucket up the steep wooden rails from the low level (allowing ore to be then tipped into an ore truck?). (See entry for 2 August 1897; the windlass is replaced by compressed air winches) It is not seen complete in subsequent photographs. There appear to be three entrances here; No. 5, No. 6, and the level 18ft below?

We can stand where Margaret stood.

Crown water race flume constructed

Any photographs showing the water race must be after this date; and most of them do.



This appears to be the earliest image of the flumes crossing the Waitawheta at the confluence. M.M. White photograph B3575. 1892-4.

The lowest bridge (dark) is the ore tramway for the Ivanhoe. The top flume is the Crown water race (1892). Below this is the flume bringing water from the Ohinemuri to the furnace house. Below this again we see a bridge structure incorporating an A frame; this is the lower section of the Crown flume bridge (a double decker, as mentioned above). It is intended to provide tramway connection across the river.

This is also the earliest photograph of this battery, Cox's 4 stamp battery and pan plant. It was erected end 1888, early 1889. And was started on or before 13 February. This image is probably showing the battery under the ownership of the Woodstock Company, who took it over in 1893; a new 10 stamp battery was added August 1894.

The photographer stood on the side of the new gorge road (completed 1890).

21 May

By arrangement with Government Mr G. Fitzgerald inspected the sight [site] of the Karangahake bridge, and reports that, as concerns the site, none better could be obtained. He also agrees with Mr Littlejohn, County Engineer, that a concrete bed would be ample foundation, as the boulders are quite immovable. However, the sting of his report lies in the tail, as he believes that owing to the to the timber which comes down in flood-time concrete pillars should be used instead of ordinary piles. This may keep the erection of the bridge back, owing to the extra expense incurred.⁵¹¹

⁵¹¹ <https://paperspast.natlib.govt.nz/newspapers/OG18920521.2.16>

Ohinemuri Gazette, Volume I, Issue 23, 21 May 1892, Page 7

28 May

The lowest tender for the work of renovating the horse grade section of the Woodstock tramline, was £29 10s, and this has been accepted by Mr. J. McConnell, general manager, Crown mines.⁵¹²

4 June

The work on the Crown Tramway has not been resumed by the contractor, Mr McCormick, but we understand that satisfactory arrangements have been completed, and a staff of men from Auckland will recommence work next week.⁵¹³

Argy bargy, see entry 7 February 1893.

6 June

New Zealand Herald:-

Crown- (Karangahake). The prospects in the mine still continue of a most excellent character, and there is no doubt that the company has a very bright future before it. The returns for the last three months have given a value of £4300 on the actual quantity of bullion banked, for which only 300 tons of ore have been treated. The battery site is now completed, and Messrs. Price Bros., who have the contract for erecting the machinery, have commenced to put down concrete foundations, and the timber for the buildings is now being delivered on the site. A little difficulty has occurred with the contractors for the water-race and tramway, they having failed to pay their wages men, who in their turn have "struck," but no delay will be incurred in consequence, as I understand the company will take over the contracts and proceed with them at once at the contractors' expense, it being anticipated there is sufficient money in hand to guarantee their completion.⁵¹⁴

Bay of Plenty Times:-

The Government will probably give £1 for £1 for the Karangahake Bridge (Ohinemuri), which will cost about £1,100.⁵¹⁵

Still not clear where this bridge is. A traffic bridge for the Crown battery? It never gets built?

13 July

A VISIT TO THE UP-COUNTRY MINES. FROM OUR OWN CORRESPONDENT.

THE CROWN MINE. The lowest point at which operations are in progress is situated just a few feet above the level of the Waitawhetu river, where it passes through a narrow gorge. At this level two drives are in progress upon what is known as the Welcome reef, one being on one side of the river, and the

⁵¹² <https://paperspast.natlib.govt.nz/newspapers/NZH18920528.2.34>

New Zealand Herald, Volume XXIX, Issue 8890, 28 May 1892, Page 5

⁵¹³ <https://paperspast.natlib.govt.nz/newspapers/OG18920604.2.9>

Ohinemuri Gazette, Volume I, Issue 25, 4 June 1892, Page 4

⁵¹⁴ <https://paperspast.natlib.govt.nz/newspapers/NZH18920606.2.7>

New Zealand Herald, Volume XXIX, Issue 8897, 6 June 1892, Page 3

⁵¹⁵ <https://paperspast.natlib.govt.nz/newspapers/BOPT18920606.2.5>

Bay of Plenty Times, Issue XX, 6 June 1892, Page 2

other on the opposite side. The drive on the south side is in a distance of about 120 feet, and the reef averages at present about six feet in thickness, whilst the drive on the opposite or north side is in a distance of over 130 feet, with the reef about four feet in thickness. About 30 feet above the first-mentioned drive (on the north side) is No. 5 level, and above that again is No. 4 level, which is several hundred feet beneath the next level above. Stopping operations are in progress at each of the levels mentioned with the exception of the drive on the north side of the river, and the reef throughout varies from 4 to 10 feet in thickness. It is a strong, compact body of quartz, which requires a good deal of force to break it out, and that it is of good quality is proved by the fact that it not only shows gold freely, and is interlaced with veins of sulphide, but that 300 tons of the quartz treated by the Cassel process during the three months preceding June yielded bullion to the value of £4300. The course of the reef is nearly due north and south, with a strong westerly dip of about 45 degrees.

The length available upon its course is considerably over 2000 feet, whilst the backs obtainable from the river level only are about 1100 feet on its underlie, so that it will be seen that many years' work are before the company before it will be necessary to go in for sinking for deeper levels. It should be stated, however, that so far as the works have progressed, the richest quartz obtained has come from the lowest levels opened up, which in itself appears to point conclusively to the fact that better quartz will be obtained at still lower depths than has ever yet been found. Satisfactory progress is being made with the construction of the new water race, and also with the new tramway which is to connect the mine with the new Cassel's plant that is to be erected on the south side of the river, a little distance below the township. The site for the latter is now ready, and tenders for the construction of the necessary buildings are being invited. Messrs. Price Bros., of the Thames, have the contract for erecting the machinery. I understand that after the end of the present month the treatment of the company's quartz at the old plant will be suspended, as it is intended to take the plant to pieces, with the view of utilising the whole of the material in connection with the new plant. The time that will be taken in erecting the new plant will probably run into the new year.

THE WOODSTOCK. The manager of this mine, Mr. John McCombie, very courteously conducted me through this company's workings, and pointed out the points of interest. Operations at the present time, however, are confined to what is termed the low level, but which in reality is several hundred feet up the face of the southern cliff of the Waitawheta River. The first body of quartz intersected at this level is the Maria or No. 2 lode, upon which the work done up to date has been accomplished by tributers, who were fairly successful. This reef averages about four feet in thickness, and is comprised of a rather refractory character of ore, but Mr. McCombie is satisfied that it can be remuneratively dealt with by the Cassel process, which will be available when the Crown Company's new plant is completed....

Nothing is at present being done in the upper parts of the mine, but the company's future operations will no doubt tend to the development of a still deeper level upon the reefs that have yielded so remuneratively in the past in the upper workings, and this will be easily accomplished by commencing the same from the Crown Company's new tramway, which runs along the Woodstock boundary on the south bank of the Waitawheta river, and from

which point backs of several hundred feet in height will be available. From this point an extent of country would be opened up that would provide for future operations for many years to come, and that, too, at a comparatively small outlay of capital.

This suggestion will come into being as the Woodstock No.5 Level, at the underground pumphouse area, in the future (1895/96).

TALISMAN.

This claim is located south of and next to the Woodstock, and is on the same line of reef country. At present it is owned by a small party of men who have kept it going for several years, during which a lot of prospecting as well as permanent work has been carried out. Several reefs have been opened up in the ground, and the principal one intersected is considered to be the southern continuation of the lode known as the Maria, in the Woodstock mine. Driving southward is now in progress on this lode, which varies from two to six feet in thickness, and quartz showing gold pretty freely is being grassed daily. The quartz in this lode is also very rich in silver, which occurs as a sulphide, and is very easily discerned by the innumerable dark ribbon-like streaks that traverse the quartz in every direction. Here, as in most of the other claims in this district, the lode appears to be improving downwards, because the quartz underfoot is evidently better than that in any other part of the workings.

BONANZA. South of and next to the Talisman is the location of this claim, which contains an area of about 30 acres. So far work upon it has been confined to surface prospecting with the view to testing some of the lodes now being worked in the adjoining properties. Several lodes have already been disclosed, and these are now being systematically prospected by Mr. P. Hayes, who is a very old hand at this game.

GOLDEN TREASURE. This claim is situated south of all the other mines referred to, and is on the same belt of reef country. Active prospecting operations are now in progress upon it, and some very good quartz is coming to hand.

ADELAIDE. In this well-known mine there is at present only one party of tributers at work, but so far their exertions have not been attended with very satisfactory results.

IVANHOE AND TRURO. These two mines are held by a Christchurch syndicate, and are bounded southward by the Woodstock and Crown mines, and they embrace the lodes upon which operations are being conducted in the last mentioned properties. The hill upon which they are located stands up to a height of 750 feet above the water level, and the lowest workings are only 200 feet beneath the crown of the same. Altogether about £18,000 worth of bullion has been taken out of the surface workings, which are pretty well exhausted, and capital is now wanted to open up new lower levels. Recognising this fact, the owners are now negotiating with a syndicate of London capitalists for the requisite funds to thoroughly develop the whole concern, and it is expected their efforts in that direction will be crowned with success. In the meantime the surface workings are in the hands of tributers, who have about 20 tons of quartz to grass, from which they expect a payable return. This stuff will be treated in a small battery and pan plant which the owners of these properties erected about three years ago at a cost of over £1000, and which is equal to the treatment of about 30 ton per week.

CROWN PRINCE. This mine is situated north of and next to the Crown and Ivanhoe, and is on the same strike of auriferous country. Just now a tunnel is being put in by the shareholders to cut a reef which they have discovered on the surface, and from which very good prospects of gold are obtainable.⁵¹⁶

The Crown battery at the old Railey's site is still in operation, generating cash flow for the company as they spend up large. The Ivanhoe and Truro mines are putting ore through their little 4 stamp battery (the Percy Cox, or Christchurch syndicate), as is the Woodstock mine. It seems that the Woodstock also use their own battery (old furnace house), which has had one or more pans added to it. John McCombie manages both concerns. It is not yet clear when the furnace house is removed.

15 July

At Karangahake, the Crown Company are still producing rich ore from the Welcome reef at the low levels, and the quantity is sufficient to keep the old reduction plant fully employed, it is stated that last month's return is the best the company has yet obtained, but the value has not been made public. After the end of this month, however, it is intended to stop operations at the plant, and to pull it to pieces, in order to utilise the material and machinery in connection with the new plant to be erected lower down the river. The site for this plant is now excavated, and tenders for the erection of the buildings are invited, so that the work will soon be in hand. The construction of the new tramway and water races is proceeding satisfactorily, but it is thought that the new plant will not be ready for the treatment of ore before the beginning of the new year.⁵¹⁷

20 July

THE NEW ZEALAND CROWN MINES COMPANY (LIMITED),
KARANGAHAKE.

TENDERS. Tenders are invited by the New Zealand Crown Mines Company (Limited) for the ERECTION OF NEW WORKS AT KARANGAHAKE.

Plans, specifications, and full particulars can be had from the Company at Karangahake, between MONDAY, 11th, and FRIDAY, 29th instant; or at the office of Mr. R. F. Adams, Surveyor, Thames, on and after FRIDAY, 15th July, 1892.

Tenders will be received up till noon of SATURDAY, 30th July, 1892. The lowest or any tender not necessarily accepted. For the New Zealand Crown Mines Company Limited, JOHN McCONNELL, Manager.⁵¹⁸

12 August

At Karangahake, the Woodstock and Crown mines are still turning out quartz of a very remunerative grade, and the prospects in both mines are of an excellent character. The latter company have just received the following

⁵¹⁶ <https://paperspast.natlib.govt.nz/newspapers/NZH18920713.2.51>

New Zealand Herald, Volume XXIX, Issue 8929, 13 July 1892, Page 6

⁵¹⁷ <https://paperspast.natlib.govt.nz/newspapers/NZH18920715.2.8>

New Zealand Herald, Volume XXIX, Issue 8931, 15 July 1892, Page 3

⁵¹⁸ <https://paperspast.natlib.govt.nz/newspapers/NZH18920720.2.5.4>

New Zealand Herald, Volume XXIX, Issue 8935, 20 July 1892, Page 1

tenders for the erection of their new reduction works :Kelly and O'Brien, £3650; Moore, £3600; Brown, £3280; Moody and Co., £2975. The tramway leading from the mine to the new mill site is completed, and the contractor for the water race is making good headway with the erection of the fluming and the bridge across the Waitawheta River, and a start has also been made to lay down the concrete foundations for the new machinery.⁵¹⁹

Crown battery at Railey's site stops

The tramway leading from the mine to the new Crown mill site is completed

20 August

KARANGAHAKE MINING. Karangahake, Thursday.

Crown.—Three shifts of hands are now employed in extending the low or No. 6 level, in this mine, southwards along the course of the lode, which maintains its average size, and rich bullion results are obtainable from any point of it. Now that ore reduction at the old plant has been finally suspended preparatory to the machinery and fixings belonging thereto being removed to the new site, no expense will be spared, or efforts wanting on the part of the manager to thoroughly open up the mine, and have large blocks of ore available for stoping by the time the new plant is ready for its treatment. Messrs. Brown Brothers are the successful tenderers for the removal of this company's old plant to the new mill site, as well as for the erection of the extensive buildings required to house the new machinery, and they intend starting work immediately.

The site selected for this plant is the most suitable one in the whole district. It is on the slope of a steep spur, which has been utilised to grade the whole concern in such a way that the ore can be sent from the hoppers at the head of the works right down through the kilns, stampers, sampling floors, bins, and percolating vats, by gravitation. Heed has been taken to provide an area sufficiently extensive to admit of the plant being increased to six times its proposed present capacity, and the water available for motive power is quite equal, even in the driest season of the year, to do all the requirements.

Ivanhoe. —Liddell and party, tributers in this mine, are now treating a parcel of ore amounting to 29 tons at the mill, where it is shaping for a return of about 1oz per ton, which will pay them handsomely. This stuff is the surface debris from a rich lode which the tributers expect to locate very shortly.

Woodstock. —Work in this mine is still being continued in the stopes on the No. 3 lode, from which there is now in the paddock about 20 tons of free milling ore, worth from £15 to £20 per ton. Crushing operations will be started on this stuff early next week, when it is expected about 70 per cent, on the assay value will be redeemed by battery and pan amalgamation. The refractory ore, which occurs in a portion of the lode, is being reserved either for treatment by Cassel's process or for shipment to some of the foreign ore markets, as it cannot be dealt with satisfactorily by amalgamation. As

⁵¹⁹ <https://paperspast.natlib.govt.nz/newspapers/NZH18920812.2.7>

New Zealand Herald, Volume XXIX, Issue 8955, 12 August 1892, Page 3

opportunity offers the low level is being extended southwards, on the Maria reef which, in the present face is fully four feet in thickness, and the ore contains a very high percentage of gold and silver, the latter preponderating.⁵²⁰

19 October

Woodstock United (Karangahake). —

....Stored in the paddock at the mine there are now about 15 tons of free milling ore, which I intend having conveyed to the mill before the end of the ensuing week, and after completing its treatment a start will be made to deal with the tailings that accumulated from previous crushings. When the hoppers are clear of the milling ore the refractory ore can be sent down to the furnace house, where advantage may be taken of the first spell of fine weather for drying purposes, preparatory to crushing and sampling for shipment.⁵²¹

It seems the Woodstock are using the Cox mill? The furnace house still exists. When was it removed?

22 October

The gale of Wednesday and Thursday did a good deal of damage. Messrs Brown, of Karangahake, were the greatest sufferers, — the framework of the Crown G.M. Co.'s battery, for which they are the contractors, being blown down and their footbridge swept away. Damage £200.⁵²²

The workers have (well, had) a foot bridge across the Ohinemuri to the new battery site. But how did the heavy materials get there? By horse and cart over the Mackaytown ford, then County Road, then down the hill again (our modern Crown Hill Road)? A ford across the Ohinemuri River? No mention of a cableway. Is this what the new traffic bridge was to be for?

17 December

MINING NEWS.

The s.s. Ohinemuri, on Tuesday, brought up from Price Bros., Thames, 38 tons machinery, stamper boxes, &c, for the Crown G.M.Co.'s new works at Karangahake. The plant should be completed within three months when crushing will at once commence. The capacious paddock is now being well stocked with grand ore, and by February there should be from 600 to 800 tons to grass, the lowest value of which should be £10 per ton [where is this “paddock”? there is no room at the river level adit. A map shows a quartz paddock to the west of, ie up hill behind, the battery⁵²³]. A large amount of dead work is being done by Manager McGruer as well as the winning of ore. The Messrs Brown Bros, are making grand progress with the work of erection, than whom there are no better men for this class of work.

⁵²⁰ <https://paperspast.natlib.govt.nz/newspapers/NZH18920820.2.8>

New Zealand Herald, Volume XXIX, Issue 8962, 20 August 1892, Page 3

⁵²¹ <https://paperspast.natlib.govt.nz/newspapers/NZH18921019.2.5>

New Zealand Herald, Volume XXIX, Issue 9013, 19 October 1892, Page 3

⁵²² <https://paperspast.natlib.govt.nz/newspapers/OG18921022.2.12>

Ohinemuri Gazette, Volume I, Issue 45, 22 October 1892, Page 6

⁵²³ Plan of Karangahake Mining Township 1893-98

A small parcel of ore from the Earl of Glasgow has been sent to the Thames for treatment, and the usual crushings have been proceeding in the Ivanhoe battery for the Southern syndicate.⁵²⁴

30 December

The Crown Company have had a pretty successful year, for 614 tons of ore broken out from the mine and treated by the Cassel process, has yielded bullion to the value of £8270, which is an average of £13 9s 4d for each ton of ore treated, and a saving of 91 per cent. of the assay value, whilst the cost of treatment did not exceed 14s per ton. At the present time a large staff of miners are at work developing the mine, and getting everything in readiness for the output of a large tonnage of ore by the time the new plant is ready for operation.

In the Woodstock mine the operations of the year have been chiefly confined to stoping the No 3 lode, from which 100 tons of ore have been treated by the ordinary battery process and pan amalgamations for the return of 565ozs of bullion, of a total value of £1,397, which is equal to about £13 10s per ton of ore treated. In addition to this, however, 40 tons of ore of a very refractory character, of an average assay value of £40 per ton, have also been obtained, and as there is no suitable process available for its treatment locally, the company is about to ship it to Freiberg. Driving has also lately been commenced on a large body of quartz known as the Maria reef, the prospects obtainable from which promise well for the future.

Several other mines in the same district have shown great improvement during the year, notably the Talisman, Ivanhoe, Bonanza, Adeline, Imperial, Crown Prince, and Earl of Glasgow. In the former, about 12 tons of rich refractory ore have recently been secured, of an assay value of £60 per ton, which will shortly be shipped to Freiberg; and about 60 tons of ore valued at £13 per ton has also been secured, which will probably be treated at the Crown Company's new plant when it commences operations.⁵²⁵

AJHR 1893

Published 1893, but largely reporting on 1892.

THE GOLDFIELDS OF NEW ZEALAND: REPORT ON ROADS, WATER-RACES, MINING MACHINERY, AND OTHER WORKS IN CONNECTION WITH MINING.

APPENDIX TO THE JOURNALS OF THE HOUSE OF REPRESENTATIVES, 1893 SESSION I, C-03⁵²⁶

⁵²⁴ <https://paperspast.natlib.govt.nz/newspapers/OG18921217.2.17>

Ohinemuri Gazette, Volume II, Issue 53, 17 December 1892, Page 7

⁵²⁵ <https://paperspast.natlib.govt.nz/newspapers/NZH18921230.2.65>

New Zealand Herald, Volume XXIX, Issue 9075, 30 December 1892, Page 6

⁵²⁶ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1893-I.2.1.4.5>

THE GOLDFIELDS OF NEW ZEALAND: REPORT ON ROADS, WATER-RACES, MINING MACHINERY, AND OTHER WORKS IN CONNECTION WITH MINING., Appendix to the Journals of the House of Representatives, 1893 Session I, C-03

Mr. H. A. Gordon, F.G.S., Inspecting Engineer,

to the Hon. R. J. Seddon, Minister of Mines. Sir, — Mines Department, Wellington, 8th June, 1893.

Page 2

Bridge over Ohinemuri River at Karangahake. —This is a bridge across the Ohinemuri River to give further facilities to get quartz taken to the crushing-plant which has recently been erected by the Crown Company, and it will give access to the mines, which are all on the opposite side of the river from the present road. Designs for the bridge were prepared by the Public Works Department, and the County Chairman now wishes it to be constructed under one of the Government engineers. It was originally estimated to cost £1,100, and a subsidy of £550 was authorised; but it is now estimated to cost £1,280.

This bridge is intended to give access to the new Crown battery. Is intended to be where the road/rail bridge was installed 1904? It appears it was never built? A footbridge for the contractors was swept away October 1892.⁵²⁷ Presumably this is a different bridge.

OHINEMURI DISTRICT page 62

Karangahake.

This was the first place where gold was discovered in the Ohinemuri District. A rush took place about eighteen years ago, and the field was proclaimed in March, 1875, when arrangements were made with the Natives to throw open the land for mining; but the returns from the field were so small that very soon the most of the miners left Karangahake to seek their fortunes elsewhere. Indeed it may be said the field was almost deserted for some years, until a revival in mining took place in 1882, about the same time as the Te Aroha field was opened, and a number of claims and licensed holdings were taken up, some of which were partially prospected, and some of the ground was held as a mere speculation in the hope that someone with capital would come along and purchase the holders interests. The gold in the lodes at Karangahake is in a very finely-divided state and always in combination with silver, so that only a very small percentage of the precious metals can be recovered by the ordinary crushing-battery treatment. At the time the second rush took place there was one crushing-battery erected at the junction of the Ohinemuri River and the Waitawheta Creek; but this crushing plant was of very little use except for ore containing free gold, and at that time the absence of any roads or tracks made it a difficult undertaking to get any ore taken to the battery for treatment.

On the construction of a track around the base of the Karangahake Hill it gave facilities to prospect the ground, and several lodes were found on the surface which were considered to be payable for working. One of these was discovered in the Adeline Company's ground, which was worked for some time and gave very good returns. Several companies spent considerable sums in prospecting, and numbers of lodes were discovered containing gold and silver, and apparently the surface indications showed that large quantities of ore could be obtained if a suitable plant was erected for treating it. At length a gentleman, Mr. Railey, appeared on the field, who arranged a to erect a plant

⁵²⁷ <https://paperspast.natlib.govt.nz/newspapers/OG18921022.2.12>

Ohinemuri Gazette, Volume I, Issue 45, 22 October 1892, Page 6

on the side of the Waitawheta Creek, which, he stated, would save both the gold and silver in the ore, and that he had been working the same description of a plant in Mexico, and saved a very large percentage of these metals. This gave a large impetus to mining on the field, and steps were taken, simultaneously with the erection of the plant, to get a tramway constructed from the track along the base of the mountain to connect with Mr. Railey's battery. Shares in the different mining companies on the field rose in value, and everyone thought that a new era had dawned which promised to bring prosperity and enable the different lodes to be worked with profit. The principle upon which Mr. Railey proposed to treat the ore was by first crushing it by stamps, and allowing the pulverised material to flow into a series of tailings-pits, about twelve in number, so as to settle all the sediment from the water before allowing it to run to waste; and the tailings and slimes from these pits were treated in charges in pans with a little salt and sulphate of copper, the temperature of the water used in the pans being raised to from 120° to 180° Fahr. It was found, however, that this mode of treatment was not suitable for the class of ore found on this field, only a small percentage of it being recovered by this process, the gold being in the ore in a very finely-divided state, resembling the finest flour. Even with all the settling-pits a large proportion of it was carried away with the muddy water, after passing through the different pits. The plant having proved a failure, it necessarily had the effect of prospecting operations in the different mines being discontinued.

About the same time that Railey's plant stopped crushing, an English company or syndicate purchased the Crown Mine, and they arranged with the McArthur-Forest Company—who were perfecting plants to extract both gold and silver from the ore by a solution of cyanide of potassium—to erect one of them at Karangahake. This arrangement being made, the new Crown Company erected two Lamberton mills, which were considered by the English company as the best class of dry-pulverising machinery; and the accounts that came from England as to the capacity of these mills were so encouraging that many thought a new era was going to be opened up and that these mills would soon supersede the stamps, and their erection was watched with a deal of interest. As the ore had to be dried previous to being pulverised by these mills, kilns were constructed, and a cyanogen plant erected, and the ore pulverised so that it would, pass through a 40-mesh grating. But it was found that the capacity of the mills was only about two tons of ore per day for each mill, the ore on the surface levels not being of high grade. The manager of the company discarded the dry crushing and used them for wet crushing; but this proved an utter failure, as it increased the wear and tear on the mills, and the pulverised wet pulp could not be leached with the cyanide solution, as the wet slimes prevented the solution from filtering. Another plant, having agitators and screw presses, was erected by the Cassel Company to treat the wet pulp, but in the meantime the mills were kept going, and the ordinary tables used to collect the gold. The percentage saved, however, was so small that wet crushing had to be discontinued. Having all these drawbacks to contend with, and the surface ore of low grade, the company came almost to a stand-still; the manager was either recalled, or resigned, and a local man put in charge of the works. After prospecting for some time he found a lode of good ore outside the company's ground, at the bottom of the Waitawheta Gorge, and the mill was kept going on ore from this lode up to August last, when the Lamberton

mills got worn out beyond repair, and, as the company were erecting a larger plant by this time, crushing operations were suspended until the new plant is completed.

This company has done a considerable quantity of work in opening out their mine. Although the crushing operations have been suspended, they have been employing a considerable number of men in the mine opening out the levels. The expenditure on the mine averaged, up to the time of my visit, about £450 per month. In Mr. McConnell's (the manager of the Crown Company) report to the directors of the company in November last, he states that crushing with the old plant commenced towards the end of July, 1891, and was carried on successfully until August of the same year, when, during a heavy fresh in the river, part of the dam was carried away, and caused operations to be suspended with this plant for some months. After repairing the dam they resumed crushing, and, with the exception of a few break-downs owing to the dilapidated condition of the plant, they had a continuous run for six months up to August, 1892, when the machinery broke down beyond repair. Every effort was made to crush as much ore as possible with the old mill, but the quantity treated never exceeded 100 tons per month. The total amount of ore crushed and treated from the lode in the Waitawheta Gorge was 614 tons, which yielded bullion to the value of £8,270, being an average value of £13 9s 4d. per ton, and about 94 per cent. of the assay-value was saved.

The bottom level in the Waitawheta Gorge is in for a distance of 400ft. on the south side of the creek, and 132ft. on the north side, and the level above this is in for a distance of 137ft. on the north side with 50ft. between the levels, and 500ft. on the south side with 100ft. between the levels. The lode is 8ft. wide in places, but in one place it is only about 3ft. in width, but this is only for a short distance. The whole of the ore in the lode is said to be payable for working, but only about 4ft. on the hanging-walls side has been broken out, as there is not room to stack the quartz in this gorge outside the levels.

At the end of the present levels on the south side of the creek there is an extremely rich band of stone on the hanging-wall side of the lode, about 12in. in width, which assays at a rate of from £337 to £487 per ton; but taking the assay-value of the general ore stuff it goes from £11 7s. to £14 10s. per ton. The rich band referred to does not extend far back in the level, but in general the stone assays better close to the hanging-wall than in other portions of the lode. Any one visiting this mine cannot fail to be impressed with its value. The quantity of ore that is now in sight will give the shareholders handsome returns for working. The shot of gold in this mine has been proved to have a length of 700 ft., and it is still continuing on the south end, but on the upper level they have come to a cross course, which may have the effect of cutting out the gold, although there is no appearance of this taking place yet. It may be said this is the longest shot of gold that has been proved to run continuous in any lode in New Zealand, and the lode is richer in the bottom level than it is on the upper one, which holds out a great hope that the gold will continue to go down to a considerable depth. The bottom level is at least 600 ft. below the surface, and shows rich ore under-foot, and the lode getting wider. On the upper levels some very hard bands of rock were gone through; but on the lower levels, strange to say, the hard rock cuts out, and a soft tufaceous sandstone takes its place, having small leaders and veins of quartz here and

there through it. The lode is also better defined on the lower levels, and the quartz more compact. There is none of the loose rubbly stone found in the lode that was in the upper levels. The present appearance of the lode shows that it is likely to go down carrying gold to a considerable depth.

Taking the manager's report to the directors of the 22nd November last, he states that No. 4 adit is 124 ft. above the creek level, and had at that time been driven on the reef 314 ft. After the first 80ft. the lode pinched very small for 60ft., but made again, and has continued intact up to the present time, averaging 3ft. in thickness, with an approximate value of from £5 to £7 per ton. He gives the assay-value of samples taken from the lode at the end of this level on the date of his report as follows: From foot-wall—Gold, loz. 11dwt; silver, loz. 7dwt. 18gr.: value, £6 7s. per ton; from across the face of the lode—Gold, loz. 4dwt. 12gr.; silver, 2oz. 16dwt. 4gr.: value, £5 2s. per ton. The No. 5 adit is 72ft. below No. 4, and the thickness of the lode in this level averages about 6ft.; and the assay-value of the ore broken out ranged from £8 to £12 per ton.

The No. 6 adit level, on the south side of the creek, is on a level with the gorge tramway, and therefore will be used as the main adit to work the stopes above this level. The lode in this level averages from 7ft. to 8ft. in thickness, and the assay-value of the ore broken out is given at from £15 to £20. The manager gave the directors the result of the assay samples taken from the face of the adit on the date of his report, as follows: From centre of lode—Gold, 3oz. 6dwt. 23gr.; silver, loz. 19dwt. 4gr.: value, £13 7s. per ton. Hanging-wall—Gold, 3oz. 16dwt. 18gr.; silver, 2oz. 10dwt. 15gr.: value, £15 10s. per ton. Foot-wall No. 1—Gold, 2oz. 15dwt. 22gr.; silver, loz. 15dwt. 22gr.: value, £10 15s. per ton. Foot-wall No. 2—Gold, 13oz. 19dwt. 7gr.; silver, 10oz. 2dwt. 12gr.: value, £57 6s. per ton.

The No. 6 adit, on the north side of the creek, has been driven on for 115 ft. For the first 70ft. the lode averaged 7ft. in thickness, and the assay-value of the ore varied from £4 to £30 per ton. For the remaining distance driven the thickness of the lode varied from 2ft. to 5ft., and towards the end of this adit the lode broke into several branches.

In reference to the assay-value of the ore, Mr. McConnell takes promiscuous samples at short intervals from the different faces, and crushes up each sample before making any halving or quartering for assay, and he states that by taking samples in this manner during the time that the stone was being crushed at the old mill he got, in treating 614 tons, 94 per cent. of the assay-value; which shows that average samples of the ore must have been taken, and also that by careful assaying the value of a lode is accurately ascertained. It is gratifying to learn that other companies are now beginning to see the value of having their ore carefully assayed, and, although the result shows that they are losing a large percentage of gold and silver, it will eventually have the effect of their adopting a different method of treatment. This is specially referred to in my remarks on the Thames field. The balance-sheet of the Crown Company for the year ending the 31st May, 1892, shows the capital of the company to be £65,000, in shares of £1 each, of which 47,673 shares have been issued, with 18s. per share called up, and 200 shares fully paid up; making the total number of shares issued 45,873, and the amount due for patent-rights acquired from the Cassel Gold Extracting Company, payable in fully paid-up shares,

£11,468, and to sundry creditors £712 19s. 9d. Their assets are set down as follows : — £ s. d.

Purchase of property from the old company	35,000	0	0
Patent rights acquired from Cassel's Company	11,468	0	0
Value of plant, &c, acquired from old company	666	16	0
Expended to the 31st May on new operations, and re-erection of plant, &c...	3,650	15	4
Stock of materials on hand	194	18	11
Funds in bank	1,762	14	4
Sundry debtors	81	5	0
Reconstruction expenses	227	10	8
Making a total of	£53,052	0	3

It is gratifying to find that in the case of this company, unlike many of the English companies, there does not appear to have been a large proportion of the capital absorbed in promoters' shares, and that the cost of management in the Glasgow office is small in comparison to some of the London offices, as, for instance, the Blue Spur, and Round Hill Company, in Otago. The receipts and expenditure for the year ending the 31st March, 1892, were as follows : —

£ s. d. Bullion extracted from 383 tons 16cwt. of ore: Gold, 1,1260z. 16dwt. 15gr.; silver, 1,1710z. 10dwt. sgr.: value	4,720	7	8
Expenditure — Mining, crushing, and ore treatment	3,928	15	1
Transport charges, freight, insurance, rent, and taxes	162	8	7
Management, travelling expenses, and employes' passage-money to colony	750	3	11
Expenses of Glasgow office	231	6	7
Total	£5,072	14	2

This shows a loss on the working for the year of £352 6s. 6d., a loss which is entirely due to extra expense incurred in working with a defective plant, and in sending men out from Europe to work the cyanide plant. According to this balance-sheet the cost of crushing 384 tons of ore by the Lamberton mills was £484 2s. 11d., which is equal to £1 5s. 3d. per ton, and the cost of treatment of the pulverised ore was £1,253 13s. 1d., being equal to £3 5s. 3d. per ton; while the cost of mining, including surface labour and stores, is set down at £2,190 19s. 1d, which is equal to £5 14s. 1d. per ton. This would make the total cost of mining, pulverising, and treatment equal to £10 4s. 7d. per ton, which would clearly show that unless very rich ore was obtained it would be impossible to carry on operations. The manager, however, informed me that the statement is very misleading, inasmuch that during the year a large quantity of cyanide was purchased, which is at the present time in stock. On my calling Mr. McConnell's attention to the statement in the balance-sheet and the heavy cost of working a cyanide plant, he wrote me as follows: "The statement you refer to in the balance-sheet is extremely misleading. There is no doubt the cost at the old site was excessive, but that was certainly not the fault of the process, but owing rather to the unhandy way our plant was constructed, and also to the fact that though our output never exceeded 30 tons per week a full staff had to be employed. Then, again, immediately before the date of the statement referred to a quantity of cyanide was bought from the Cassel Company, and has evidently been charged by the head office, Glasgow,

under the heading 'Treatment of Ores,' whereas this cyanide was actually used in the treatment of ore after the 31st May." He further states that "the actual average consumption of cyanide amounted to 0.2 per cent., equal to 9s. per ton, reckoning 70 per cent. cyanide, as supplied by the Cassel Company, at 1s. 5d. per pound. The labour in a well-constructed plant would not amount to more than 2s. or 2s. 6d. per ton at the most. He estimates that with the new plant the whole expense of drying, pulverising, and treatment will be not more than 20s. per ton."

Unless an explanation of the balance-sheet were given it would show that the use of the cyanide process was prohibitive, except the ore was extremely rich. No company would think of going to the expense of erecting a plant and paying royalty if the actual expense in treating the pulverised ore was £3 5s. 3d. per ton. This company deserves every encouragement. They have expended about £15,000 in plant and machinery; and from the appearance of their mine, the quantity of ore in sight ought to recoup all their expenditure within the next twelve months. During the year ending the 31st March last they crushed 349 tons of stone, which yielded 45oz. gold and 3,266oz. bullion, worth £2 per oz. The average number of men employed by this company last year at their mine, and in connection with the construction and erection of their works, was 112.

Plant. —Included under the head of plant may be classed a water-race and tramway. The water-race is taken from the Ohinemuri River in the Karangahake Gorge, about one mile above the battery-site. The water is taken from the river by means of a short tunnel through a rocky point. The bottom of the tunnel being a little below the bed of the river there is no need for any dam or weir to turn the water into the race [tunnel still exists]. From the end of this tunnel the water is conveyed in a wooden flume 4ft. wide and 2ft. deep, having a carrying capacity of twenty-four sluice-heads of water. At the upper end of the flume it is covered over on the top, and is secured to the rock, so that in time of freshes or floods in the river the water flows over the top of the fluming. This top covering is carried down to such a distance as to admit of the flume being a sufficient height above flood-level before the boxing is left open on top. The boxing is laid along the face of the hill for the whole of the distance, on stringers laid on the ground, with the exception of trestle-work where the flume crosses the Waitawheta Creek. The actual head of water at the battery-site on the jets of the Pelton wheels is 69ft.



The Crown Company dam.

Part of a stereo pair, Staples Collection. C. 1902.

The spoil on the right is from the railway tunnel excavation (eastern portal). The river will take this away and distribute it along the stream bed further downstream.

The Crown dam is the break of flow in the river in the foreground. It was only a low dam; the bed log and some planking remain to this day. At the extreme left of the dam a short tunnel takes the water, delivering it to a wooden flume which sat on a bench cut into the river bed. The entrance to the tunnel was protected by railway irons. These, and the cut bench, remain today. The flume is just visible on the left of the river in the distance.

Tramway. —A narrow-gauge tramway was constructed by the Woodstock Company some years ago up the gorge of the Waitawheta Creek, from the Ivanhoe Battery, for some distance. The Crown Mines Company arranged with the Woodstock Company for the use of this tramway, and extended it up the Waitawheta Gorge for a distance of 30 chains—namely, 13 chains on the south side of the creek, thence by a bridge across the creek, and 17 chains of tramway on the north side to their mine; again on the lower end of the

Woodstock tramway they extended it for 30 chains, to the site where their crushing-plant is erected. This tramway, for a portion of the distance up the Waitawheta Gorge, is cut out of a perpendicular rocky cliff, having the rock overhanging the tramway, but at a sufficient height above the line to admit of a horse being used, if necessary, to haul the trucks from the mine to the battery. The expenditure on this tramway is said to be about £1,300.

Battery Site. —The battery-site is situated on the side of the terrace on the south side of the Ohinemuri River, about 30 chains below the junction of the Waitawheta Creek. The foundations are cut out on the slope of the side of the hill, so that all the material is passed down stage after stage by gravitation as it is dealt with.

Crushing-battery. —The crushing-battery consists of a Lamberton rock-breaker, and twenty heads of stamps of the American pattern, 900lb. each stamp. The building where the rock-breaker is placed is on trestle-work 45ft. in height, strongly braced together. The ore as it is brought into the building is first dumped on to a grizzly, and what will not go through the bars of the grizzly runs down to the rock-breaker, and is broken up to a maximum size of 2in. in diameter, and then falls into the same hopper where the fine material goes that passes through the bars of the grizzly. It then passes from this hopper into the drying-kilns, which are built of brick, the hot air being confined in a long flue, having a series of steps to prevent the ore from travelling down too fast before it gets thoroughly dried. There is a cast-iron plate at the bottom of this flue which can be turned, to allow of the dried ore to pass down into a large hopper, made of steel plates 5/16in thick, from which the Challenge ore-feeders are fed. These kilns are only for drying the ore, and not in any way to calcine it. There are two of these kilns built on a stone foundation, and placed about 6ft. apart; the foundation going all the way across. The kilns themselves stand about 30ft. in height, the step-flue being at an angle of about from 30° to 40° from the vertical. There is a furnace at the bottom, where either coal or firewood can be used to dry the ore.

Stamp-mortars. —There is first a concrete foundation put in for the stamps, and on the top of the concrete the stamp-mortars are each placed on the end of a log of kauri, each 18ft. in length, 4ft. 8in. one way, and 2ft. 2in. the other. These are firmly embedded in the concrete, and all bolted together so as to form a solid block of timber standing on end, having a length of 18ft. 8 in. by a width of 2ft. 2in., and on this the four mortars are placed. They are fitted with screens, having the top standing outwards at a slight angle, and held to the face of the mortars by means of a long wedge, the gratings being 30-mesh, equal to 900 holes to the square inch.

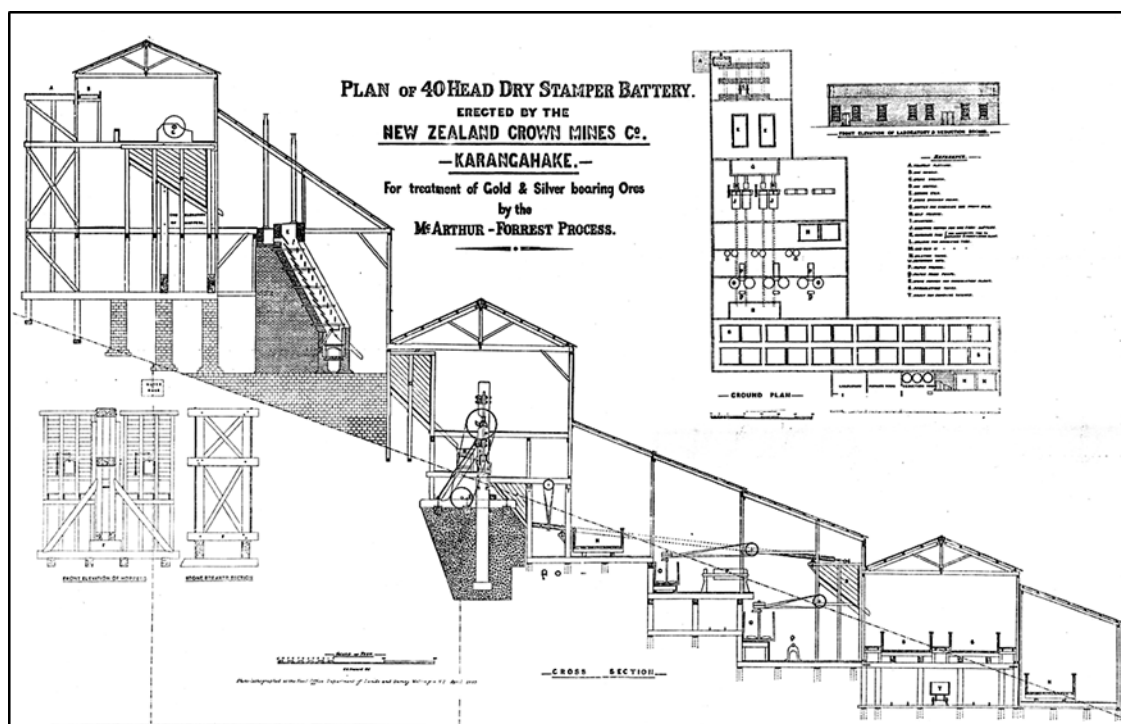
Stamps. —The stamps are similar to those used by the Waihi Company, and are fitted with the latest appliances for raising and holding them up, the cams and tappets being all constructed on the American type by Price Brothers, of the Thames. They are intended to make about ninety-two blows per minute, having a drop of 6in. The guides and framing are made of wood, and the framing and erection reflects credit on the contractor. Each ten-head battery is driven by a separate belt, and there is further provision made so that twenty additional stamps can be erected should they at any time be required. The pulverised material from the stamps falls into a chute and is conveyed into

another set of hoppers at a lower level than the stamp-mortars, and from these hoppers the pulverised dust is taken to the leaching-vats.

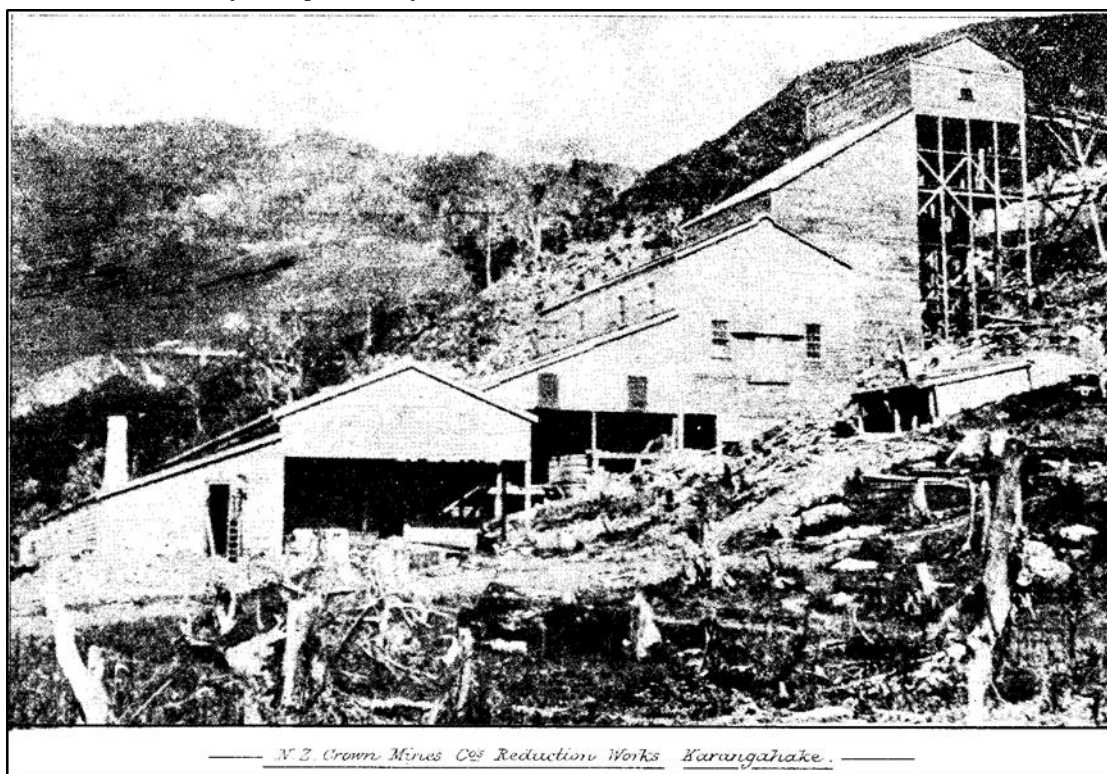
Cyanide Plant. — This consists of twenty-four wooden vats, each 11ft. long by 9ft. wide and 3ft. 9in. deep. In the bottom of these vats there is a false bottom, or grating, placed about 3in. above the ordinary bottom, and on this false bottom a filter-bed is placed, about 4in. in thickness, the bottom layer being of coarse quartz-gravel, and gradually getting finer up to the top, the last coating being fine sand, having a coarse cloth placed over the top of the filter-bed to prevent the sand from being disturbed as the vats get cleaned out after every charge of pulverised ore. There are also fourteen agitators, eight of which are 5ft. deep by 4ft. 9in. in diameter, and six of them 6ft. deep, and 5ft. 6in. in diameter. The agitators and vats are all made of kauri timber, the staves of the agitators being 3in. in thickness, and the vats being made of partly 3in. and partly 4in. timber, and all bolted together. Into each of these vats are placed three pipes, under the false bottom, so that the first, second, and third solutions can be drawn off into separate channels. On one side of each vat there is a door, which can be opened to admit of the material being sluiced out after the whole of the cyanide solution is completely washed out of the ore, the solution passing through a long series of boxes filled with zinc-shavings, which precipitates both the gold and silver in the form of a blackish powder. There are also three concrete sumps, each 15ft. by 12ft. and 6ft. deep, capable of holding about thirty tons of the cyanide solution; this is pumped up to the vats on the floor above as required. It is in these concrete sumps where the solution is always made up to the proper strength before being used.

It is also-proposed to use a vacuum pump to assist the filtration of the solution through the pulverised material in the vats, and by this means Mr. McConnell hopes to be able to leach the ore in about half the time he was able to do so at the old plant. However, this has yet to be tried. Where there are a great deal of slimes in the ore, it is very difficult to filter even with a vacuum pump. This proved to be the case at the Sylvia Company's plant at Tararu Creek, where Dr. Scheidel adopted this method to assist the leaching.

Annexed are plans of the company's plant, to which the following description or reference applies. The explanation of the plans was handed me by Mr. McConnell, the manager : —



Plan of 40 Head Dry Stamper Battery. ERECTED BY THE NEW ZEALAND CROWN MINES CO.



N.Z. Crown Mines Works Karangahake.

"At point A the ore is delivered at the battery, and tipped on to grizzly, B; the fines pass through and are conveyed to hopper, D; the roughs pass over the grizzly on to the stone-breaker floor, and are passed through stone-breaker, C, and fall into hopper underneath, marked D; the drying-kiln E is charged from this hopper. The ore, after passing through the kiln, being perfectly dry, is run into an iron hopper G, from where it is automatically fed into stampers I, by self-feeders, H; the ore, after passing through the stampers, is received in

hoppers J, and then conveyed by means of revolving tube X, either into truck for conveying ore to agitation-cylinders for treatment, or, if the ore can be better treated by percolation, to store-hopper, R, in connection with percolation plant, from where it is trucked along the top of and tipped into percolation tanks, S, for treatment.

"The plant is so arranged that the ore, after it is delivered above the stone-breaker, falls from the stage by gravitation, requiring the least possible handling, and thereby reducing the cost of labour to a minimum.

"Water-power: By means of a 4in. by 2in.[ft] fluming the water is taken from a point in the Ohinemuri River above Karangahake, and conveyed to the battery a distance of 85 chains, giving a fall there of 70ft., which, with three Pelton wheels, 140-horse power can be obtained. The diameter of the water column is 44in.

"Crushing Machinery: One Lamberton stone-breaker, capable of reducing 70 tons of ore per day fine enough to feed into stamps; and twenty heads of 9cwt. dry stamps, erected by A. and G. Price, which are guaranteed to crush 30 tons of ore per day sufficiently fine to pass through a 30-mesh screen.

"Percolation Plant: This plant consists of twenty-four tanks, capable of holding each a charge of 7 tons of finely-pulverised ore. The bottom of each tank is covered with a sand-and-gravel filter. The finely-pulverised ore is trucked from the store-hoppers and tipped into the tanks. A dilute solution of cyanide is then run on to the top, and allowed or assisted to percolate through the body of the ore. As the solution percolates it is carried away from underneath the filters by means of iron pipes, and allowed to run through a series of boxes filled with zinc-turnings. The cyanide in the solution having a much stronger affinity for gold and silver than the baser metals, dissolves these precious metals in its course through the ore, and again deposits them in the form of a black slime on the zinc-turnings. This black slime is collected and melted down into bars direct.

"Agitation Plant: This plant consists of sixteen wooden tubs fitted with revolving paddles, in which the ore and cyanide solution are agitated together until the gold and silver is dissolved. The solution is then filtered, and the bullion deposited on the zinc-turnings, as already described."

Woodstock Company. —There does not appear to be much energy displayed by this company in carrying on extensive operations. There is some very rich ore in their ground which cannot be treated by the ordinary battery process; and it is questionable if the Cassel process will give a large percentage of the bullion. It is said that the company propose to send a large parcel to Freiberg, Saxony, for treatment. In some portions of the lode the gold is in a tolerably fine state, although alloyed with silver. Taking the returns for the year ending the 31st December last, 100 tons of ore were said to be treated by battery and pan-amalgamation, and gave 565oz. bullion, representing a value of £1,397, which is equal to £2 9s. 5d. per ounce. If the quantity of stone treated be correct, then the average value of the ore is £13 19s. 5d. per ton. This represents about 70 per cent. of the assay-value of the ore. The manager, Mr. McCombie, carefully assays the ore in the lode as it is broken out, and thereby knows its exact value. He was one of the first men in this district who was alive to the necessity of those who were interested in mining being fully

acquainted with the character of the different compounds in ores, and ascertaining their correct value. During the year ending the 31st March last, this company sold 51 tons of ore at £40 per ton, and crushed 110 tons of quartz, which yielded 467oz. of gold. They had an average of ten men employed during the year.

Ivanhoe and Truro Company. —There were two wages-men and four tributers employed by this company last year, but the operations have not been carried on with much success. They crushed 220 tons for themselves, which yielded 138oz. of gold; and 115 tons for the tributers, which yielded 109oz. of gold.

Appendix 1

No. 2. Mr. Warden Northcroft

to the Under-Secretary of Mines, Wellington. Sir,— Warden's Office, Thames, 19th May, 1893. I have the honor to forward herewith statistical returns for the Hauraki Mining District for the year ended 31st March last.

Page. iv

Karangahake.

This part of the district is fast coming to the front, and if the large plant now being erected, and almost completed, is the success it promises to be, the increase of gold for next year should be very considerable. There was a number of mines with valuable reefs known to exist in them, and their development has been retarded by the want of a process by which the refractory and complex ores could be profitably treated, owing to their containing silver and it is said gold in chemical combinations. The loss is too great to treat them by the ordinary process. Several attempts have been made; but in all cases, though the ore was very rich, the methods proved to be too expensive. The MacArthur-Forrest (better known as the Cassell) process seems likely to supply the want so long felt—a method at once efficient and sufficiently cheap. The Crown Mines Company, who have had ample opportunity of testing it, appear to be satisfied with its efficiency in erecting at great cost their reduction works, which have been constructed on the most improved principles at present known. It consists of one stone-breaker, two drying kilns on the American pattern, twenty head of 9cwt. dry stamps, and a complete plant for the treatment of ore by the MacArthur-Forrest process, and is supposed to be capable of treating from twenty to thirty tons of ore per day. The buildings have been erected on the slope of the hill below their tramway, thus allowing them to take every advantage of the nature of the ground. The ore being delivered at the top of the plant, passes through the stone breaker, and then falls from stage to stage by gravitation, requiring the least possible handling until it is ultimately delivered at the bottom, in a fine pulverised state, for the treatment of the before mentioned process. As, however, the Manager, Mr. John McConnell to whom I am indebted for the foregoing particulars, informs me he has provided Mr. H. A. Gordon, Inspecting Engineer, with a plan, full particulars of machinery, and method of treatment, for his report to the Hon. Minister of Mines, it will be unnecessary for me to go more fully into this matter.

The Waitawheta River has made a natural cross-cut for the Crown Mine, which the Company have taken full advantage of by running their tramway up

the side of the gorge, though at great expense; but by adopting this course they have several hundred feet of backs on each side of the river. The reef crosses the river at right angles, and is a strong body of quartz, which has so far increased in thickness and value as it went down, and so far as the reefs have been driven on the results have been most encouraging.

No. 3 Mr G. Wilson, Inspector of Mines

to the Under-Secretary of Mines, Wellington. Sir, — Inspector of Mines Office, Thames, 5th May, 1893. I have the honor to forward the following report on mines in the Hauraki District for the year ended 31st March, 1893:
KAKANGAHAKE DISTRICT

Page. xiv

Ivanhoe and Truro Mine, 42 acres (John McCombie, mine-manager).—The workings in this mine have been chiefly on the surface and in levels near the top of the Taukane Hill. The owner crushed 220 tons of quartz for 138oz., and the tributers 115 tons or 109oz. of gold. Two wages-men and four tributers were employed.

Woodstock Mine, 30 acres (John McCombie, mine-manager).—A considerable amount of work has been done during the year on the No. 3 reef, which averages about 12in. in thickness; 90ft. of driving was done, and 136 fathoms of reef stoped out. Several parcels amounting to 110 tons of ore were crushed at the Ivanhoe battery [Cox battery?] for a yield of 467oz. of gold, and a parcel of 51 tons of ore was shipped to Freiberg, the assay-value of which was £40 per ton. Ten wages-men were employed.

Crown Mine, 116 acres (John McConnell, general manager, and G. N. McGruer, mine manager).— One hundred and twelve men have been employed by the company, about one-half in the mine and the other half in surface-work. The work in the mine in the early part of the year consisted in driving on three levels on the south side and the levels on the north side of the Waitawheta Stream, and in stoping the reef from the south low level upwards. 394 tons of quartz were treated at the company's mill by the Cassel process, and 45oz. of gold and 3,266oz. of bullion extracted. Crushing was then stopped, and the tramway completed from the mine to the new battery-site. The erection of the 20-stamp mill with all latest improvements in labour-saving machinery and plant for the cyanide extraction process is almost finished.

The water-race—about one mile in length—from the Ohinemuri River to the new battery-site has also been constructed.

Upwards of 1,000 tons of quartz are stacked near the battery, and the whole of the passes in the mine are filled with quartz ready for transport to the mill. The chief work in the mine lately has been in advancing the levels and opening blocks of the reef for stoping. 103 fathoms of reef were stoped, and 1,500ft. of driving done on the reef, which is from 4ft. to 6ft. in thickness.

Talisman Mine, 30 acres.—This mine is situated higher up the hill than the Woodstock, the reef worked on being probably a continuation of one of the reefs worked in that mine. The reef has been driven on for about 100ft., and some stoping done. About 100 tons of quartz are in the paddock and 5½tons were shipped to Freiberg, the assay-value of which was £33 per ton.

Earl of Glasgow Mine, 26 acres 3 roods.—This mine is part of the old Adeline Amalgamated ground, and was taken up in October last. A crushing of 5 tons of quartz yielded 28oz. of gold.

The Diamond Mine, also a portion of the Adeline Amalgamated ground (Tresize and party, two men), crushed 4 tons of quartz for 27oz. of gold.

The Imperial Mine was worked by the owner, R. Clements, who crushed 3 tons of quartz for 15oz. of gold.

Sundry other small crushings from this district yielded 26oz. 4dwt. of gold.

A considerable amount of prospecting has been done in the Crown Prince, Taukane, Shaughraun, Bonanza, Golden Treasure and Mint licensed holdings, but no quartz has been crushed from them.

MINES STATEMENT. BY THE HON. R.J. SEDDON, MINISTER OF MINES.

APPENDIX TO THE JOURNALS OF THE HOUSE OF REPRESENTATIVES, 1893 SESSION I, C-02⁵²⁸

Page 6

There are numerous auriferous and argentiferous lodes at Karangahake, some of which have given good returns in gold, but generally there is a large percentage of silver in the ore, and in some of the lodes there are other minerals which make the ore refractory to treat; and although the ore according to assay contains a fair percentage of bullion, when it comes to be treated in the ordinary manner a very small percentage of it is saved. The New Zealand Crown Company, consisting principally of shareholders residing in Great Britain, purchased a mine on this field some three or four years ago, and arranged with the Cassel Company to erect one of their cyanide plants in conjunction with their mine, and, since they have commenced operations, the company have proved that some of the lodes are very rich, having an assay-value of from £8 to £15 per ton. Recently this company has erected a new reduction plant, and intend to purchase ore from other mining companies according to its assay value, which will induce individual miners to take up and prospect some of the lodes, as no outlay will be required for a plant. They will thus be able to sell their ore for its full value, after deducting expenses of treatment. Wherever there are refractory ores to deal with, the mines cannot be made as profitable ventures as they should be until central custom-plants are established, at which the ore can be disposed of according to its assay-value. The Crown Company has therefore taken a step in the right direction, as it will not only tend to develop the mining industry in this particular locality, but will no doubt prove such a source of revenue to themselves as will induce others to follow their example.

We will see how this turns out.

⁵²⁸ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1893-I.2.1.4.4>

MINES STATEMENT. BY THE HON. R.J. SEDDON, MINISTER OF MINES., Appendix to the Journals of the House of Representatives, 1893 Session I, C-02

1893**3 January**

THE GOLDFIELDS. (from our own correspondent.)

Karangahake, Saturday. - Notwithstanding the many vicissitudes through which this place has passed during a period of nearly 18 years, it now has every prospect of a bright future, and the incoming year should see it take a prominent position in the rank of bullion producers. Here during the past six months there has been a steady growth of population, and that the people are settling permanently is evidenced by the numerous comfortable cottages that are now studded all over the Terrace, fronting the main line of traffic, while the while the demand for building sites is still unsatisfied.

Crown.— Operations in this mine during the past year have been confined to the main reef, which, when taken right through the workings, is about six feet wide, and the rich ore averages about four feet in thickness. So far as explorations have gone in the lowest obtainable level, the rich ore has been opened up for a length of about 300 feet south of the Waitewheta River, and to a height of 160 feet above the same-starting point. North of the Waitewheta River the same shoot of rich ore has been driven upon for a distance of 100 feet, and it has also been proved to extend upwards, to a height of about 130 feet. The total distance driven on this shoot of ore in six different levels, at stated intervals apart, is about 1000 feet, and connections are now being effected between the various workings, so that there will be some extensive blocks of ore available for breaking out by the time the new works are ready for its treatment. The total amount of ore broken out from this mine and treated by Cassel's process during the year was 614 tons, and the bullion extracted therefrom represents £8270, being an average of £13 9s 4d per ton, showing that 94 per cent, of the assay value of the ore was recovered, at a cost not exceeding 14s per ton for treatment. The new plant now in course of erection for this company is worthy of a brief description, inasmuch as it will be the best of its kind in the southern hemisphere, and it should be the direct means of giving gold mining in this region a better start than it ever had before.

The new works will consist of one Lamberton stone-breaker, capable of breaking down 70 tons of ore per diem, and next in order come the "kilns," which are to be utilised for drying purposes. After the ore is dry enough and fine enough for dry stamping, it will be passed through automatic feeders into the battery, which will comprise four mortar boxes, each one being furnished with five head of 9cwt stampers, and being equal to the reduction of 30 tons of ore per day, fine enough to pass through a 60 mesh screen, having 3600 holes to the square inch. As the crushed ore passes through the battery screens it will be conveyed by means of a revolving tube and deposited in hoppers situated above the percolation and agitation plants respectively. To begin with, the percolation portion of the chemical plant will contain 30 vats, each one capable of holding a charge according to its capacity varying from six to 20 tons of finely pulverised ore. The bottoms of these tanks or vats will be covered with a sand and gravel filter, and the general method of treatment will be as follows: —A dilute cyanide solution is poured in on the top, whence it

percolates through the body of the ore, finding its way down to the bottom of the filter, carrying the gold and silver in solution with it. Thereafter the solution is tapped and conveyed in iron pipes to a series of wood boxes, filled with zinc shavings, upon which the precious metals are precipitated in the form of a black slime, which is subsequently freed of its impurities and melted into bars of bullion ready for the market. Treatment by percolation requires no motive power, and very little labour or attention, the whole concern being worked automatically from start to finish, especially if the ore subjected thereto is "crystalline" and free of slimes. The Agitation plant will consist of 16 wood barrels, fitted with revolving paddles, and capable of holding about 3 tons of ore in each charge. This system of treatment is only brought to bear on ore that is so heavily charged with slimes as to prohibit percolation; and after the gold and silver is dissolved the solution is filtered, and the bullion deposited on zinc shavings in the way already described.

Woodstock.—During the year about 100 tons of ore broken out from the No. 3 lode in this mine have been treated by battery and pan amalgamation for a return of 565oz melted bullion, value, £1397. The average return is about £13 10s per ton, representing about 70 per cent, on the assay value of the ore, which was comparatively free milling. From the same lode about forty tons of refractory ore have also been grassed, and its average value is £40 per ton or thereabouts. As there are no means of treating this stuff locally at present, the owners have decided upon sending it to Freiberg, Saxony, for which place it will shortly be shipped. Stoping is still being continued on the No. 3 lode, which varies from six inches to 2 feet in thickness, and some of the ore now coming to hand is very rich in the precious metals. Driving is also in progress on the Maria reef, which varies from three feet to eight feet in thickness, and fair prospects of gold are obtainable from any part of it. As yet some distance remains to be driven before this level—which affords 300 feet of backs on the reef—reaches under the rich shoot of ore disclosed to view in the upper workings, and then it is expected that a heavy deposit of the precious metal will be encountered.

Ivanhoe.—This mine has been worked during the year just past chiefly by tributers, who have done fairly well out of their venture, and are likely to continue operations after the holidays. At present this property is under offer to a syndicate of London capitalists, who are expected to find money for its development very shortly, and, if so, there is every prospect of their efforts being crowned with success.

Talisman.—This claim is owned by a party of private individuals, who have worked it steadily for the past three years, and now there is every probability of their being richly rewarded for their faith and perseverance. The low level has been extended for a distance of 300 feet along the course of the No. 1 reef, which varies from one foot to four feet in thickness, and carries very good prospects wherever it has been broken down. During the extension of this level a very rich shoot of ore, 40 feet in length, was discovered, and about 80 tons of ore have already been broken out therefrom. This stuff has been roughly sorted and divided into two classes. No. 1 lot, amounting to 12 tons, is worth about £60 per ton, assay value, and it will very soon be shipped to Freiberg for treatment. No. 2 lot, containing about 68 tons, has been proved by

assay to be worth about £13 per ton, and it is being reserved for treatment at the Crown plant, as soon as the latter is available for such purpose.

Bonanza.—Active prospecting operations are now in progress on this claim, where a reef six feet wide has already been found carrying very good prospects of the precious metals.

Adeline. —Some time since this mine was forfeited for non working, and subsequently taken up by three different parties of miners, who are now giving the ground a thorough prospecting, with highly satisfactory results, inasmuch as two of them have just had remunerative crushing.

Imperial. —This claim is about being floated into a company with sufficient capital to give the concern a fair start, and it should very soon attract some attention, because the prospects are most promising.

Crown Prince.— A large amount of prospecting, consisting of trenching and tunnelling, has been done on this mine during the past six months, and the owners have met with very encouraging results.⁵²⁹

6 February

About 100 tons of ore have accumulated from the Talisman, and a road is now almost completed to the mouth of the low level tunnel. When this is finished, a shipment of about 10 tons of first-class ore will be forwarded to Frieberg for treatment. The low level gives backs of 150 feet for stopes on the lode, and a commencement has been made with sinking a winze below this level. Here the reef is three feet wide, and shows nice gold.⁵³⁰

7 February

McCORMICK V. NEW ZEALAND CROWN MINES COMPANY.
ALLEGED BREACH OF CONTRACT. ACTION FOR DAMAGES.

At the civil sittings of the Supreme Court, which opened yesterday before His Honor Mr. Justice Conolly and a common jury of twelve, a case of considerable importance, principally on account of the magnitude of the sum claimed, came on for hearing. This was an action brought by Wm. John McCormick, contractor, against the New Zealand Crown Mines Company (Limited), carrying on operations at Karangahake, Ohinemuri, to recover a sum of £764 6s 6d for work done, and for £1000 damages....⁵³¹

9 February

In the case of W. J. McCormick v. the New Zealand Crown Mines Company, a claim for £1764, a verdict was given in the Auckland Supreme Court for the plaintiff for £530 with costs on the highest scale. An application was made for a new trial and judgment was stayed till next banco day.⁵³²

⁵²⁹ <https://paperspast.natlib.govt.nz/newspapers/NZH18930102.2.60>

New Zealand Herald, Volume XXX, Issue 9077, 2 January 1893, Page 6

⁵³⁰ <https://paperspast.natlib.govt.nz/newspapers/NZH18930206.2.76>

New Zealand Herald, Volume XXX, Issue 9116, 6 February 1893, Page 6

⁵³¹ <https://paperspast.natlib.govt.nz/newspapers/NZH18930207.2.67>

New Zealand Herald, Volume XXX, Issue 9117, 7 February 1893, Page 6

⁵³² <https://paperspast.natlib.govt.nz/newspapers/THS18930209.2.4>

22 February

A meeting of miners at Karangahake was held on Saturday last with a view of having some arrangement for making the services of Dr. Wright available for Karangahake. The meeting came to no agreement, as the terms stated, 6d a week per man, and a payment of £4 a visit, in case of the doctor being called in, were deemed too high.

The pay-sheet of the Crown Mines Co. Karangahake, shows about 100 hands. The works at the mine are in full swing, and the show is, if anything, better than it has ever been. The tramway is certainly a vast improvement on the old style of going up to Mount Dubbo and then falling down into the creek; but one cannot but regret that where there is so much science and so much water power, the old and expensive form of traction by horse-power has still to be used.⁵³³

9 March

KARANGAHAKE.

For some days past Mr Charles Rhodes, of the Bank of New Zealand, has been testing some 50 tons of ore from the Woodstock mine here, which has been purchased by the Bank for transmission to Freiberg for treatment. The ore is highly mineralised, and would not be suitable for treatment by cyanide, even had the Cassel Syndicate been willing to purchase—which they were not, as they have now some m 3000 or 4000 tons of their own ore on hand waiting for the completion of their battery.

The Talisman also sends 10 tons, valued here by Mr Alf. Shepherd at £100 per ton.

The contractors for the Crown battery are making rapid progress with the second storey of the building damaged by the late gale.—Hauriki Tribune.⁵³⁴

11 March

The contractors for the erection of the Crown Company's plant seem an unfortunate lot, as a large portion of the building was again blown down during the late gale at Karangahake. Nothing daunted, they intend finishing at an early date. The new water race they predicted would be washed away has stood the floods all right. Mine owners are now anxiously awaiting the completion of the plant to give the district a boom and a lot of bullion — and the Glasgow stockholders some dividends.⁵³⁵

30 May

Paeroa, Monday. CROWN (Karangahake).— The whole system of the Crown Company's reduction plant at Karangahake, is working in a highly satisfactory

Thames Star, Volume XXIV, Issue 7418, 9 February 1893, Page 2

⁵³³ <https://paperspast.natlib.govt.nz/newspapers/THS18930222.2.4>

Thames Star, Volume XXIV, Issue 7429, 22 February 1893, Page 2

⁵³⁴ <https://paperspast.natlib.govt.nz/newspapers/THS18930309.2.19>

Thames Star, Volume XXIV, Issue 7442, 9 March 1893, Page 4

⁵³⁵ <https://paperspast.natlib.govt.nz/newspapers/TO18930311.2.3>

Observer, Volume XI, Issue 741, 11 March 1893, Page 2

manner, and without the slightest hitch. The plant commences this week permanently.⁵³⁶

New Crown battery starts 29⁵³⁷ May 1893

31 May

Crown (Karangahake).— This company's new reduction plant was started yesterday (Monday) morning, and has been running full time ever since. There was no ceremonial, but Mrs. McConnell, wife of the general manager, started the machinery to work. The only other persons present were the company's employees. All the machinery, from the stonebreaker downwards, has since worked most admirably.⁵³⁸

1 June

The long talked of and long expected start of the Crown Mines battery at Karangahake took place on Saturday. With that modesty which has always distinguished our Glasgow friends, and that care of their pockets which always distinguishes their country, there was neither sound of trump nor drum; no champagne, not even a 'Glasca' Magistrate⁵³⁹ was present upon the occasion. No cake and no cards was the word.—Hauraki Tribune.⁵⁴⁰

24 June

Woodstock Mine (Karangahake).— This company's little mill is running full time at present upon ore broken from what is known as the Maria reef, and it is shaping for a payable return.

Calliope.—Fair progress is being made with the winze; but the country is somewhat tight, although of a favourable description for gold. The reef averages about nine inches in thickness still, and continues to show colours of gold freely.

Crown Mine (Karangahake).— company's new reduction plant is working splendidly, and all the machinery is giving great satisfaction. The plant is working full time in the treatment of ore won from the mine, and about 25 tons per diem are being dealt with. The percolation plant is also in full work, and it is stated that the tailings going to waste from the same show an extraction of 96 per cent. on the assay value of the ore treated by the cyanide process.⁵⁴¹

⁵³⁶ <https://paperspast.natlib.govt.nz/newspapers/NZH18930530.2.64>

New Zealand Herald, Volume XXX, Issue 9213, 30 May 1893, Page 6

⁵³⁷ <https://paperspast.natlib.govt.nz/newspapers/THA18931113.2.19>

Thames Advertiser, Volume XXVI, Issue 7682, 13 November 1893, Page 3

⁵³⁸ <https://paperspast.natlib.govt.nz/newspapers/NZH18930531.2.60>

New Zealand Herald, Volume XXX, Issue 9214, 31 May 1893, Page 6

⁵³⁹ Possibly “a salt herring of fine quality”

<https://www.dsl.ac.uk/results/%22Glasgow%20Magistrate%22>

⁵⁴⁰ <https://paperspast.natlib.govt.nz/newspapers/THS18930601.2.7>

Thames Star, Volume XXIV, Issue 7484, 1 June 1893, Page 2

⁵⁴¹ <https://paperspast.natlib.govt.nz/newspapers/NZH18930624.2.50>

New Zealand Herald, Volume XXX, Issue 9235, 24 June 1893, Page 6

1 July**WOODSTOCK G. M. CO. ANNUAL MEETING.**

The annual meeting of shareholders of the Woodstock Gold Mining Company was held yesterday, at Mr. D. G. MacDonnell's office, Insurance Buildings. There was a good attendance, and Mr. W. Gorrie, chairman of directors, presided. The advertisement convening the meeting, and the minutes of last general meeting were read, and the latter confirmed.

DIRECTORS' REPORT. The directors' annual report was read as follows:—
Third Annual Report and Balance-sheet for the Year ending June, 1893.

To the Shareholders, We have much pleasure in presenting you with our report and balance-sheet for the past year. As regards the operations in the mine, which we are pleased to say have been very successful, the mine manager in his report herewith submitted deals so fully with the subject, we have not thought it necessary to supplement same further than by remarking that the recent purchase made by us of the Ivanhoe and Truro mines and plant is a most valuable addition to the company's property, as will be seen from the plan, which shows that, in addition to the many known reefs which run through the ground, that the Crown Company's reef, which has been worked on with great success, runs right through the centre of the Ivanhoe ground, and strikes on the boundary of the Truro, the underlie of the reef being into the Truro. The battery and pans [the 4 stamper], which are included in the purchase referred to, enable us to treat the free-milling ore, from which is obtained about 70 per cent, of the assay value. We shipped to Freiberg, through the Bank of New Zealand, on the 4th April last, 50 tons 10cwt of what is termed refractory ore, the average assay value of which is £40 per ton, equal to £2020, and from which we fully expect to obtain a net receipt of £1600...

MINE MANAGERS' REPORT. The report of the Mine Manager, which was taken as read, was as follows : — Gentlemen, — Operations in your mine during the past year have been confined to a limited number of hands, who have been partly engaged in opening up new ground, and re-timbering old levels, and partly engaged in the work of breaking out from the No. 3 lode a lot of very rich ore, which has been dealt with for highly satisfactory results. The money value of the ore and bullion realized upon, was £2,795; being the result of handling 117 tons of ore broken out from the Nos. 2 and 3 lodes respectively, and the following is a summary of the work done throughout the mine during the period named: —

To begin with samples of all the ore broken out from the different lodes, from time to time, have been taken regularly for assay purposes, and a record kept of the bullion results. These samples were taken promiscuously from every truck as the ore was being run out of the mine, and as showing how near one can get to the intrinsic value of ore, even by this method of sampling, I was able to state the actual value of all the ore sent to Freiberg fully one month before the final sampling and assaying of the bulk lot were completed by Mr. Rhodes.

No. 1 Lode....

No. 2 Lode.—...

No. 3 Lode. —...

Ivanhoe and Truro Mines.—The above mines, of which you completed the purchase recently, are situated north of and next to the Woodstock and Crown mines, and, of course, they are on the same line of auriferous country. Combined they embrace an area of 42 acres, affording a stretch of about half-a-mile along the reefs which are known to exist within their boundaries. The Woodstock reefs, known as No. 1, 2, 3, and 4, must traverse the entire length of these mines, but only one, known as the No. 2 lode, has been worked upon up to the present. From this lode ore yielding over £18,000 worth of bullion has been treated by the most primitive battery appliances, which did not redeem more than 40 per cent. of its assay value. This lode has been worked upon to a depth of about 200 feet below the surface, and its average thickness is a little over three feet. Last month Sheehan and party, tributers, banked 31oz melted bullion, which gave them £87, as the result of treating 16 tons of ore at the mill belonging to the mines in question, and which has now passed into your hands. Between the present lowest workings and the water level there is a space of over 500 feet, admirably adapted for tunnelling purposes; while the various reefs are plainly visible, outcropping here and there down the slopes of the conical hill upon which the mines are located.

West of and running almost parallel with the No. 2 lode is a lode varying from 8 to 20 feet in thickness, but as yet no permanent work has been done upon it. This unquestionably is the northern continuation of and identical with the Woodstock No. 1 lode, because it can very easily be traced right through both of those mineral areas. Eastward of, and again running parallel with the No. 2 lode, are quite a series of reefs, upon which little or nothing has ever been done, and in this direction the now famous "Crown " lode has its course right through the centre of the Ivanhoe section. According to Mr. Adams' plan the present face of the Crown Company's low-level, going north of the Waitawheta River, is now within 290 foot of the Truro boundary, and the underlie of that company's lode is striking in the direction of your ground at an angle of about one in one.

In conclusion I have no hesitation in stating that you now hold a proved auriferous area, whose outlook is second to no other on the Northern Goldfields, and the only thing required to make it take a front place in the list of bullion producers, is capital judiciously expended in its development.— I am, etc., Jno. McCombie, Mine Manager.

The Chairman, in moving the adoption of the report and balance-sheet, said it was hardly necessary that he should add anything to what was contained in the reports themselves. They had carried on operations without calls, and although they had an overdraft of £1200, this was more than met by the profit which they anticipated from the ore sent to Freiberg. Of course, as they were aware from the manager's report they were not able to deal with the ore fully, but it was hoped that this year they would be able to treat with the Crown Gold Mining Company for the treatment of their ores, and they would then be able to judge more correctly in regard to their returns. They had every reason to expect profitable results. They had purchased the Ivanhoe and Truro mines with the battery of the former for £500. The battery had been kept in full work on ore fitted for treatment by that process. He moved the adoption of the report and balance-sheet.

Mr. J. A. Pond, in seconding the motion, said he wished to supplement the chairman's remarks, by stating that they had paid for the new mines and battery, not out of calls, but out of cash profits from the mine, so that the return was a fairly good one. They had splendid prospects, and they had all facilities for putting up a plant of their own, when they had ascertained what was the cheapest and most efficient method of treating their ores.⁵⁴²

Ivanhoe and Truro mines and plant is purchased by Woodstock G.M. Co.

11 July

The Crown Co.'s mine at Karangahake was first formed in September, 1888, and reconstructed in May, 1891, when the Cassell Company at Karangahake merged into it. There are 64,341 shares of £1 fully paid. Mr T. A. Craig, Glasgow, is secretary. Fully paid-up shares amounting to £11,468 were handed to the Cassell Company for the patent rights.⁵⁴³

The above writer must mean the purchase by the Glasgow purchasers (Cassell Company) in August 1888, and the purchase of the old Railey's battery.

17 July

MINING NEWS.

The Crown G.M. Co.'s mine and battery at Karangahake are keeping along the even tenor of their way. The plant is working splendidly, and putting through about 25 tons of ore per diem. The first monthly retorting and melting lately finished has been speculated upon very much by local mining men, and it is deemed unaccountable why the result of the month's work should be kept such a dread dark secret among a chosen coterie. There is always suspicion in secrecy, and I cannot for the life of me see why this return, so long looked forward to, should be kept back. I have heard a number of people say that the first question they will ask any intending candidates for the House is whether they will be in favor of an amendment to the Mining Act compelling battery owners to make the returns public.

Complaint is made also that while it has always been supposed that there were 10 head of stampers available for the general public at the new works when those with ore desire to arrange with the Company they can get no satisfaction whatever. This is not as it should be, and the spirit of the conditions on which the water monopoly was granted to the Crown Company is certainly broken if the terms of the Crown Company are such that they compel people to send their ore to an inferior Thames battery for treatment instead of having it treated by the more modern and efficient Cassels process. The whole thing savors of monopoly.

The Crown mine itself is being well opened up under the efficient management of Mr McGruer. The ventilation is excellent, and the system of working is unsurpassed. I understand that a shaft is likely to be sunk shortly near the river, where the best gold has yet been obtained. There is a lot of

⁵⁴² <https://paperspast.natlib.govt.nz/newspapers/NZH18930701.2.10>

New Zealand Herald, Volume XXX, Issue 9241, 1 July 1893, Page 3

⁵⁴³ <https://paperspast.natlib.govt.nz/newspapers/THS18930711.2.6>

Thames Star, Volume XXIV, Issue 7468, 11 July 1893, Page 2

dynamite used which, of course, means slow work, but with the present system of opening up the mine I should think there will be no difficulty in keeping the battery going.

In the Talisman Messrs Shepherd and party have just let a contract for 100 ft driving to H. Tresize at 17s per foot, and have also done about 53ft on wages in the same crosscut. It is expected that the lode will be cut 237 ft in, and good results are expected. There are from 80 to 100 tons of good ore lying ready for shipment to Frieburg or elsewhere. It certainly seems a pity—not to put too fine a point on it—that this class of ore has to be shipped away when such a *fin de siècle*⁵⁴⁴ plant is almost at the very mouth of the drive. Surely there is a screw loose here.

The Earl of Glasgow party (Fleming and Co.) have about six tons of rich ore awaiting shipment. This also goes out of this district.

In the Imperial Mr Clements is pegging away solus and is making arrangements for a new level. This is an excellent piece of ground, and right on the County tramway, which is in need of repair, and which connects with the Crown Co.'s tramway. This claim will yet prove a Bonanza, and I trust that Mr Clements will reap the reward he so richly deserves.

That sterling property, the Woodstock, is going on much as usual, there being nothing very new to report.—Ohinemuri Gazette.⁵⁴⁵

The Imperial claim is to the south east of the Crown claim⁵⁴⁶, and includes the top of the incline. It is “right on the County tramway, and which connects with the Crown Co.'s tramway”. So down the incline to the old Crown battery site, across the river and downstream on the old Monastery line, to the Crown River Level and tramway?

11 August

At Karangahake the Crown G. M. Co.'s new reduction plant has been in full operation during the month in the treatment of ore from the company's mine, which, it is understood, has and is still shaping remuneratively, but the utmost secrecy is being observed regarding the actual returns obtained. This fact is causing great discontent amongst colonial shareholders in the mine, who consider that they have its much right to know the results of the works carried on as the English shareholders have. This fact, apparently, has caused a considerable decrease in the value of shares, for whereas they stood at 30s about a month ago, buyers are now only quoted at 20s.

The Woodstock Company in the same district are breaking out an excellent class of ore from their No. 2 lode, and as a result they are keeping their small crushing constantly employed.

Another claim in the same vicinity that may possibly be heard more of shortly is the Earl of Glasgow, owned by a private syndicate. This claim includes the continuation of the Crown G.M. Company's line of reef, and three loads of

⁵⁴⁴ Fin de siècle is used to describe something that is thought to be typical of the end of the nineteenth century, especially when it is considered stylish or exaggerated.

⁵⁴⁵ <https://www.collinsdictionary.com/dictionary/english/fin-de-siecle>
⁵⁴⁶ <https://paperspast.natlib.govt.nz/newspapers/THS18930717.2.33>

Thames Star, Volume XXIV, Issue 7473, 17 July 1893, Page 4

⁵⁴⁶ Karangahake claim map Jan 1895

quartz were brought down to the Thames a week or two ago, and treated for a return of 12oz of gold.⁵⁴⁷

2 September

Karangahake. — Crown, Woodstock and several other mines are all producing fair amount of pay rock containing a large percentage of bullion. Woodstock still keep their 2-'possum power plant extracting the precious metal. Crown company produces its several thousands per month, the knowledge of which they religiously keep for the benefit of the Glasgow bodies. But so long as they produce bullion in bulk it don't matter a dump whether we know anything about it or not. It will all come out in the melting — except what goes up the lum [chimney].⁵⁴⁸

The 2 possum battery must be the Cox 4 stamper. Woodstock are using this battery.

Woodstock United (Karangahake).—Manager's report. A start was made this morning to carry out the various preliminaries necessary to the extension of the new low level on the No. 2, or Maria lode. Here I expect to break out payable ore from the very outset, and as the conformation of the country adjacent thereto is not suitable for making storage paddocks, it will be necessary to complete all the hoppers and tramway connections in the first instance. Having that object in view, and taking the present spell of fine weather into consideration, I have stopped work in the mine, and all hands are now engaged as above stated... when I also put in the level pegs for the ground tramway, which connects the low level with the aerial line, and which will be about 200 feet [61m] in length.⁵⁴⁹

This is the No. 3 level tramway shown on maps (and GIS).

It will span the Waitawheta River from the eastern side of the Blow, terminating at the Crown tramway beside the river. Hoppers and a tramway siding will be constructed here.

I am reminded here to note that the lode numbers are not the same as the level numbers!

11 September

PAEROA.—This day. The Karangahake Bridge.

The Karangahake bridge contract is a £1000 job, more or less, and not £100 as appears in my wire. The Government gives £550, the Crown G.M. Co. £300, and the County the balance and supervision. Tenders will be called for this week.⁵⁵⁰

This bridge is still not built.

⁵⁴⁷ <https://paperspast.natlib.govt.nz/newspapers/NZH18930811.2.60.12>

New Zealand Herald, Volume XXX, Issue 9276, 11 August 1893, Page 2 (Supplement)

⁵⁴⁸ <https://paperspast.natlib.govt.nz/newspapers/TO18930902.2.20>

Observer, Volume XI, Issue 765, 2 September 1893, Page 7

⁵⁴⁹ <https://paperspast.natlib.govt.nz/newspapers/NZH18930902.2.8>

New Zealand Herald, Volume XXX, Issue 9295, 2 September 1893, Page 3

⁵⁵⁰ <https://paperspast.natlib.govt.nz/newspapers/THS18930911.2.6>

Thames Star, Volume XXIV, Issue 4530, 11 September 1893, Page 2

12 September

CROWN MINES MONTHLY RETURN. (by telegraph.—own correspondents.) Karangahake, Monday. Mr. J. McConnell, general manager of the Crown Mines Company, Karangahake, has given me the following for publication : —"During the month just passed 525 tons of ore were treated in the company's plant, for a return of bullion which realised £2600 sterling."⁵⁵¹

Woodstock United (Karangahake).—Good headway is being made with the excavations for the hopper and "siding" on the horse grade section of tramway, and a start has been made to prepare the anchorage for the aerial line. The ground tramway commencing at the head of the aerial section is now ready for the sleepers and rails right to the outcrop of the No. 2 lode, upon which an open cutting will be continued until we save enough solid country overhead for tunnelling purposes...

We are still running the little mill full time, and the ore under treatment is shaping for an average return.⁵⁵²

The tramway and cableway are underway before the adit has been started. The horse grade tramway is beside the river, part of the Crown tramway.

18 September

Woodstock United (Karangahake)— anchorage, at the head of the proposed aerial tram line, has been all cut out of the solid rock, and it will be ready for the ropes tomorrow night. The open cutting, being a continuation of the low level tramline, has now been extended for a distance of 12 feet along the footwall side of the No. 2 lode, where it outcrops, and there still is another five feet to go southwards, before we shall have enough ground overhead to start driving. This work should be completed early next week, when there will be about 17 feet of the lode stripped ready for breaking down, and then I expect to grass some good ore. We are now cutting out of the solid rock, near the starting point of the low level, a place 20 by 20 and 10 feet high, for a smithy, and this will be ready for the roof about Saturday next. The excavations for the siding and large hopper, at the horse grade tramline, will be sufficiently advanced to admit of a start being made with the timber work in a few days' time.⁵⁵³

The "siding and hopper at the horse grade tramline" are beside the Crown tramway, a little upstream from the crown tramway bridge across the Waitawheta (the recently renewed modern suspension bridge).

9 October

Woodstock United (Karangahake).— Manager's report... and there are now to grass about 27 tons of ore. The large hopper at the horse grade section of the tramway will be finished on Saturday next, and then a start will be made to strain the aerial line and secure the lower anchorage. The trucks required for

⁵⁵¹ <https://paperspast.natlib.govt.nz/newspapers/NZH18930912.2.75>

New Zealand Herald, Volume XXX, Issue 9303, 12 September 1893, Page 6

⁵⁵² <https://paperspast.natlib.govt.nz/newspapers/NZH18930912.2.75>

New Zealand Herald, Volume XXX, Issue 9303, 12 September 1893, Page 6

⁵⁵³ <https://paperspast.natlib.govt.nz/newspapers/NZH18930918.2.70>

New Zealand Herald, Volume XXX, Issue 9308, 18 September 1893, Page 6

the different sections of the tramway are now in course of construction, and I expect to have everything in complete working order in about ten days' time.⁵⁵⁴

17 October

Woodstock United (Karangahake).— Manager's report... The aerial line of tramway is now in position, and a start has been made with the erection of the break [brake] frame. The tramway siding is also under way, and by the end of next week we should be ready to forward ore to the mill for treatment.⁵⁵⁵

Woodstock No. 3 level tramway and cable near completion

30 October

SALE OF KARANGAHAKE MINES. The following additional particulars of the above sale are given by the Ohinemuri Gazette:—"We learn with intense satisfaction that the Talisman mine at Karangahake has at last been successfully placed upon the Glasgow market with nominal capital of £100,000. A sum of not less than £25,000 in cash is to be set apart for the working of the mine, and the Home syndicate pay absolutely all expenses in regard to floatage, etc. The local owners receive no cash, but 40,000 fully paid-up shares. Of course the good reports sent Home from the Waihi and Crown mines, more especially the latter, which is next door to the Talisman, have been a factor to the success of the scheme. We believe, indeed, that the syndicate who floated the mine are closely identified with the Crown Co.'s syndicate or directorate, and we heartily wish them the same success with the one as the other."⁵⁵⁶

Talisman mine has been successfully placed upon the Glasgow market

However, it appears that this arrangement fails, as in November 1894 a decision is made to form a limited liability company locally.^{557 558}

31 October

OHINEMURI. FROM OUR OWN CORRESPONDENT. Karangahake, Monday.

There is a steady growth of population here, and judging by the comfortable cottages that are now thickly studded over the foot hills, adjacent to the main Thames-Tauranga road, the people have come to stay. That we are keeping pace with the times is evidenced by the fact that the electric light is now being used in the Crown Company's ore reduction works, which, I may add, are

⁵⁵⁴ <https://paperspast.natlib.govt.nz/newspapers/NZH18931009.2.56>

New Zealand Herald, Volume XXX, Issue 9326, 9 October 1893, Page 6

⁵⁵⁵ <https://paperspast.natlib.govt.nz/newspapers/NZH18931017.2.62>

New Zealand Herald, Volume XXX, Issue 9333, 17 October 1893, Page 6

⁵⁵⁶ <https://paperspast.natlib.govt.nz/newspapers/THS18931030.2.20>

Thames Star, Volume XXIV, Issue 4571, 30 October 1893, Page 2

⁵⁵⁷ <https://paperspast.natlib.govt.nz/newspapers/NZH18941115.2.43>

New Zealand Herald, Volume XXXI, Issue 9669, 15 November 1894, Page 5

⁵⁵⁸ <https://paperspast.natlib.govt.nz/newspapers/NZH18941116.2.34>

New Zealand Herald, Volume XXXI, Issue 9670, 16 November 1894, Page 5

unequalled in the Southern Hemisphere from a bullion-saving point of view, and it is to be hoped the owners will shortly see their way clear to increasing the size of their plant, so as to meet the wants of outsiders.

Amongst other improvements is a public hall now in course of erection, and which it is expected will be ready for an opening entertainment in a few weeks' time. This structure is to be 55 feet long by 26 feet wide, with 12 feet studs; and the money requisite to pay for it has already been contributed voluntarily—partly by the residents, and partly by Thames, Paeroa, and Auckland business-men, who are interested in the progress of the place. When once this hall is an accomplished fact, an effort will be made to obtain an occasional visit from Mr. Park, director Thames School of Mines, so as to get the benefit of that gentleman's instruction as a lecturer on geology and kindred subjects.⁵⁵⁹

Electric light is now being used in the Crown Company's ore reduction works

3 November

The Woodstock Company is at present confining its operations to the opening up of a new low level on the No. 2 reef. A distance of nearly 100 feet has been already driven on the course of this reef, and so far the ore obtained has been of good grade. In fact the prospects are improving every foot that is driven, and there appears to be every likelihood of a very rich run of ore being met with shortly. A tramway has been erected for connecting this level with the battery, and on the 23rd ult. [October] permanent crushing operations were commenced upon the ore that is coming to hand, which is shaping for a good return.⁵⁶⁰

9 November

Tenders are invited by the New Zealand Crown Mines Company (Limited), for the undermentioned works

REPAIRS TO DAM.

CONSTRUCTION OF WATER-RACE.

EXCAVATION OF SITE.

ERECTION OF BUILDINGS AND OTHER MINOR WORKS....⁵⁶¹

This is for the compressor building on their old battery site (ex Railey's). See next entry.

13 November

NEW ZEALAND CROWN MINES. A SATISFACTORY REPORT.

⁵⁵⁹ <https://paperspast.natlib.govt.nz/newspapers/NZH18931031.2.5>

New Zealand Herald, Volume XXX, Issue 9345, 31 October 1893, Page 3

⁵⁶⁰ <https://paperspast.natlib.govt.nz/newspapers/NZH18931103.2.66.22>

New Zealand Herald, Volume XXX, Issue 9348, 3 November 1893, Page 4 (Supplement)

⁵⁶¹ <https://paperspast.natlib.govt.nz/newspapers/NZH18931109.2.3.4>

New Zealand Herald, Volume XXX, Issue 9353, 9 November 1893, Page 1

We have received a copy of the report of the directors of the New Zealand Crown Mines Co. submitted at a meeting of the Company at Glasgow on the 11th ult. The directors in the course of the report state:

The directors have pleasure in reporting that regular crushing operations were commenced at the new Reduction Works on 29th May last, and have been since continued without interruption. As the shareholders are aware, the various works which it was proposed to execute in connection with the new battery were of considerable magnitude, including as they did the cutting and laying of a tramway through the gorge from the mines to the new site, a distance of about a mile, the formation of a water race also about a mile in length, and the erection of a new mill containing 20 heads of stampers, together with the buildings and plant necessary for the treatment of the ore by the Cassell process. Owing to the damage done by storms and from other causes these works were not completed so early as was at one time anticipated. Ultimately, however, the difficulties were overcome, and the new works completed in a manner which reflects credit on the manager and other officials at the mines. The amount of ore treated, as shown in Mr McConnell's report, from 39th [29th] May last, when crushing was commenced, down to the end of July, was 980 tons, from which bullion was recovered to the value of £5878...

With a view to expedite the opening up of the mines, and increase the supply of ore, the directors have ordered a complete rock-boring plant, including five rock drills. The plant, which has been made in England, is now completed, and arrangements have been made for its shipment to the mines in the beginning of next month. The power for driving the drills by compressed air is to be obtained by utilizing the old water-race on the Waitawheta River...⁵⁶²

They intend to use the water power from their old plant (previously Railey's). A great idea. Most of the photographs we have of this site show the buildings associated with this compressor.

Woodstock United (Karangahake).— Manager's report... A start has been made to excavate a tram-line from the No. 3 level paddock to a point on the eastern slope of the spur, where I purpose commencing a tunnel, which will have to be driven about 50 feet in order to reach the No. 3, or tramway lode. This lode, you will remember, was cut on the No. 2 level tramline, where it carried a high percentage of the precious metal, and where the best of the ore was left under foot. To connect with the paddock at the head of the aerial line, about 100 feet of tramway will be required, and as the country here is favourable for driving, it should not take very long to push the level on to the lode, upon which it will afford about 180 feet of backs. The mill is still running full time...⁵⁶³

There appears to be no photographic evidence of this extension to the tramway.

1 December

The value of the bullion won from the Crown Company's mine at Karangahake during the month of October, was £1750, for which return 525

⁵⁶² <https://paperspast.natlib.govt.nz/newspapers/THA18931113.2.19>

Thames Advertiser, Volume XXVI, Issue 7682, 13 November 1893, Page 3

⁵⁶³ <https://paperspast.natlib.govt.nz/newspapers/NZH18931113.2.30>

New Zealand Herald, Volume XXX, Issue 9356, 13 November 1893, Page 5

tons of ore were treated. This company has decided to go in for more vigorous operations in its mine in the matter of extending the main levels, and with this purpose in view preparations are now being made for repairing the water race and dam at the site of the old mill, with the object of providing sufficient water to work a 40 horse-power air compressor, to drive four rock drills for pushing the levels ahead with greater speed than is possible by manual labour.⁵⁶⁴

20 December

At a meeting of the Ohinemuri School Committee a vote of thanks was accorded to Miss Jessie Paterson for her untiring assiduity in the management of the Karangahake School while under her control. Mr A. Oldham, of Waitekauri, has been appointed head master of the Karangahake School.⁵⁶⁵

AJHR 1894

Published 1894, but largely reporting on 1893.

THE GOLDFIELDS OF NEW ZEALAND: REPORT ON ROADS, WATER-RACES, MINING MACHINERY, AND OTHER WORKS IN CONNECTION WITH MINING.

APPENDIX TO THE JOURNALS OF THE HOUSE OF REPRESENTATIVES, 1894 SESSION I, C-03⁵⁶⁶

Mr. H. A. Gordon. F.G.S., Inspecting Engineer,

to the Hon. A. J. Cadman, Minister of Mines. Sir, — Mines Department, Wellington, 21th July, 1894. I have the honour to submit my annual report, for the year ending 31st March last, on the different works undertaken and constructed either by the Mines Department or by subsidies paid to local bodies; also, on Schools of Mines, water-races controlled by the department, and generally on the development of the mining industry throughout the colony.

Page 29

The large increase in the yield of gold last year in the Ohinemuri County is due to the more extensive workings of the Waihi Gold- and Silver-mining Company, also the produce from the Crown Company's mine at Karangahake, and Mr. [T.H.] Russell's mine at Waitekauri.

Although there is a considerable percentage of silver in the bullion from the mines in the North Island goldfields, there is no one working silver-ore by itself. The silver is extracted from the bullion by the banks, and it is only from this source that silver has been obtained. At Karangahake, Waihi, Waitekauri, and Waiorongomai there is a larger percentage of silver in the ore than that found at the Thames and Coromandel; but even at the last-mentioned places

⁵⁶⁴ <https://paperspast.natlib.govt.nz/newspapers/NZH18931201.2.56.14>

New Zealand Herald, Volume XXX, Issue 9372, 1 December 1893, Page 2 (Supplement)

⁵⁶⁵ <https://paperspast.natlib.govt.nz/newspapers/THS18931220.2.6>

Thames Star, Volume XXIV, Issue 4615, 20 December 1893, Page 2

⁵⁶⁶ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1894-I.2.1.4.3>

THE GOLDFIELDS OF NEW ZEALAND: REPORT ON ROADS, WATER-RACES, MINING MACHINERY, AND OTHER WORKS IN CONNECTION WITH MINING., Appendix to the Journals of the House of Representatives, 1894 Session I, C-03

the gold obtained is alloyed with silver, which reduces the price of the gold considerably below what is obtained in the Middle Island. Some of the gold obtained at Coromandel is worth about £3 per ounce, and this is considered a high price, whereas at the Thames the average value of the gold does not exceed £2 14s. per ounce.

During last year 63,076oz. of silver was extracted, representing a value of £9,743, as against 22,053oz., valued at £3,996, for the previous year, which shows an increase in the quantity exported last year of 41,023oz., representing £5,747.

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Karangahake.

There are only two mines on this field where mining operations have been actively carried on during the past year—namely, the Crown and the Woodstock. There are two other claims—the Earl of Glasgow and Diamond—in which prospecting operations are being carried on, besides ten sundry parties who are working on the field. The total quantity of ore treated last year was 5,200 tons, which yielded 12,791oz. bullion.

Crown Company. —This company have now their plant at full work; and the ore, although not so rich as was at first anticipated, is of a highly payable character. The mine, which is situate in the gorge of the Waitawhita Creek, is well opened out, and shows that there is a large quantity of payable ore. The lode the company is working is what is known as the Welcome Reef, which has an average thickness of about 5ft. About 2,000 ft. of levels have been constructed. Two cross-courses were met with in driving the levels, the first one being 460 ft. in from the mouth of the adit and the next one at 530 ft. These shifted the lode a little, but did not affect it in either thickness or value. The heave of the lode in the cross-courses is rather more at the upper level than what it is at the lower one, and the country at the lower level appears to be more of a settled nature than overhead.

Gold appears in the outcrop of the reef, which can be traced for 100 ft. over No. 3 level. The lode on the level, as it gets into the hill, is somewhat broken and disturbed; but at 400 ft. in from the mouth of the No. 4 level an uprise has been put up for 60ft., showing very good stone. This shows that the broken and disturbed country will not go very far down. On the north side of the creek the outcrop of the reef continues to a much greater height than on the south side, and has been prospected at several levels with very satisfactory results, the character of the ore in the lode being somewhat similar from top to bottom. The country rock is of a hard and compact nature, which makes the construction of levels and uprisings a slow undertaking when done by hand-drilling. The company are erecting a complete plant of rock-boring machinery, in order to carry on operations more expeditiously. This plant consists of a 40-horse power air-compressor and four rock-drills. The compressor is to be driven by a water-motor, and the water-supply used for working the old plant in the Waitawheta Gorge will be utilised for this machinery. According to the company's balance-sheet of the 31st May, 1893, the capital of the company has been increased from £65,000 to £100,000 in 100,000 shares of £1 each, of which 75,770 shares are fully paid up, with the exception of £70 10s. arrears of calls.

Expenditure— £ s. d.

The purchase of the property cost	35,000	0	0
Value of paid-up shares given to the Cassel Company for patent rights in connection with cyanide process	15,154	0	0
Reconstruction expenses	227	10	8
Value of plant acquired from old company	666	16	0
Removal and re-erection of plant, water-races, &c.	18,321	15	1
Value of stores on hand	549	3	7
Cash in bank	5,288	6	11
£75,207	12	3	

The results of working the mine for the year ending 31st May, 1893, were as follows : There was 226 tons of ore treated, which gave bullion to the value of £3,612 8s. 8d.; and the expenditure at the mine during the same period was £6,768 17s., and at the Home office £584 17s. 6d., making the total expenditure £7,353 14s. 6d.: thus showing a loss on the year's transactions of £3,741 ss. 10d.; but against this, 1,143 tons of ore had been got from the mine and stacked at the mouth of the adits, which would show that this ore was debited with a cost of about £3 5s. 5d. per ton.

The total quantity of ore treated at the old mill was 614 tons, which yielded bullion to the value of £8,270. The total quantity of ore treated up to the 13th March last was 4,674 tons, yielding bullion to the value of £27,318; deducting the quantity of stone crushed previously, and the value of the bullion, it would show that 4,060 tons has been crushed, and treated by the new plant, which yielded bullion, to the value of £19,048, which would give the average value of the ore to be about £4 14s. 3d. per ton. Taking the whole of the ore extracted from the mine, it gives an average value of about £5 16s. 11d. per ton. Taking the quantity of gold in the ore, which, according to assay, was 7,010oz., the quantity extracted was 6,603oz. or 94 per cent. The quantity of silver according to assay was 8,588oz., and the quantity extracted was 7,169oz., being 83.4 per cent.; by taking the assay value of the whole of the bullion, which was £29,007, and the value of that extracted, namely £27,318, it shows that a saving of 94 per cent. of the assay value has been obtained. The percentage of cyanide used for treatment was 0.12. Taking the year ending the 31st March last, there was 4,544 tons of ore crushed, and treated by the cyanide process, which yielded 11,130oz. 15dwt. of bullion; while the average number of men employed throughout the year was 112.

Woodstock Company. —There is some very good ore in this company's claim, but it has not yet been opened up on anything like a large scale. During the past year there has been sixteen wages men and two tributers employed. The company have been carrying on the operations on their own behalf on No. 2 lode, which averages about 4ft. in thickness. This lode has been opened out at the No. 3 level, which is 150 ft. below the ore above it, and about 250 ft. above the bed of the Waitawheta Creek. The lode has been driven on for a distance of 150 ft., carrying good ore for the whole of the way. A winze was sunk on this lode from the No. 2 level to a depth of 70ft., and it varied in thickness from 3ft. to 5ft., giving an average assay value of £6 per ton. There were 568 tons of ore treated for the company last year, which yielded 1,517oz. bullion; and 51 tons by tributers, which produced 71oz. bullion.

There were sixteen men employed in the other claims, principally carrying on prospecting operations. They had 29 tons of ore crushed, which gave a yield of 73oz. bullion. There is a number of auriferous and argentiferous lodes in the locality, and some very rich ore has been got from time to time. Some years ago, some of the ore from the Adeline Mine, which was forwarded to the Thames for treatment, yielded 10oz. of gold to the ton. The field only requires to be systematically prospected to open it up. The whole of the range between this and Waiorongomai is full of auriferous and argentiferous leaders and lodes, which will yet be found to give fair returns for working.

REPORT ON GOLDFIELDS: WARDENS' REPORTS.

APPENDIX TO THE JOURNALS OF THE HOUSE OF REPRESENTATIVES, 1894 SESSION I, C-03A⁵⁶⁷

No. 2. Mr. Warden Kenny

to the Under-Secretary of Mines, Wellington. Warden's Office, Thames, 4th May, 1894. I have the honour to forward herewith statistical returns for the Hauraki Mining District for the year ended 31st March last; and also the following report on the mining industry for the same period:—

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Karangahake. The Crown Mines Company's mine and the Woodstock United are the chief mines worked in this district, and the yields are very satisfactory. The cyanide process is used by the Crown Mines Company, and their well-equipped battery of twenty stamps, with cyanide plant, is carefully erected, and works admirably. £3,886 9s. has been paid in dividends. The Woodstock Company still use the amalgamation process, but are about to introduce a cyanide plant into their battery. The Earl of Glasgow Mine is being worked by Fleming and party, who are erecting a small battery of five stamps on the Adeline Creek. The Talisman Mine has been steadily prospected, and rich returns are looked forward to in the near future. It is reported that this mine has been acquired by an English syndicate.

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No 3. Mr. G. Wilson, Inspector of Mines

to the Under-Secretary of Mines. Inspector of Mines' Office, Thames, 7th May, 1894. I have the honour to forward the following report on mines and yield of gold and bullion in the Hauraki District for the year ending 31st March, 1894

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Karangahake district

Woodstock United Mine, (Woodstock Gold-mining Company, owners).—This mine, which now includes the Ivanhoe and Truro, has been steadily worked during the year. Mr John McCombie, the manager, gives the following account of what has been done: "Operations on the company's account have

⁵⁶⁷ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1894-I.2.1.4.4>

REPORT ON GOLDFIELDS: WARDENS' REPORTS., Appendix to the Journals of the House of Representatives, 1894 Session I, C-03a

been confined during the past year to the No. 2 lode, which averages 4ft. in thickness wherever work has been carried out upon it. Since last annual report this lode has been opened out at the No. 3 level, which is located about 150ft. below the No. 2 level, and about 250ft. above the bed of the Waitawheta River, vertical measurement. The necessary connections between this level and the horse section of tram-line have also been effected by the construction of a complete system of hoppers and an aerial tramway. [This is the No. 3 Level tramway and cableway. The ground tramway is on the eastern side of the Woodstock Blow, the cable-top hopper is on the flank above the Waitawheta, the terminus is on the Crown tramway beside the true right bank of the Waitawheta.] Here the No. 2 lode has already been driven upon for 150ft., and it has carried a high percentage of the precious metals throughout for the whole of the distance. A winze has also been sunk upon it to a depth of 70ft. below the No. 2 level, and there the lode, varying from 3ft. to 5ft. in width, gives an average assay value of £6 per ton. Above the No. 2 level about 15 fathoms of stoping has been done, and about 5 fathoms of stoping has been done above the No. 3 level. At the last-mentioned level a cross-cut has been driven for a distance of 123ft., and the whole of the workings have been secured with heart of kauri timber. For the year ending 31st of March, 1894, the quantity of ore dealt with on the company's account was 568 tons for a return of 1,517oz. melted bullion, value £1,729. During the same period the ore treated for tributers amounted to 59 tons, yielding 71oz. melted bullion, value £173. About 60 per cent. on the assay value was recovered by battery and pan-amalgamation from both lots of ore. The average number of men employed was, sixteen wages-men and two tributers.

Crown Mine (Crown Mines Gold-mining Company, Limited, owners).—The work done in this mine during the year has been confined to opening up levels on the main reef on both sides of the Waitawheta Stream; 800ft. of driving has been done, and 790 fathoms of reef stoped out. The reef averages 5ft. in thickness. 4,544 tons were crushed, yielding bullion containing 4,873oz. of gold and 5,454oz. of silver. 112 men were employed in the mine and battery. Mr. John McConnell, the general manager of the company, says: "The nature of work done in the Crown Mine during the year has been driving, stoping, and general mining work. Above the mine, Riley's dam has been repaired, and the water-race to the old battery site thoroughly renovated for the purpose of supplying power for driving a complete rock-drilling plant, which is being erected where the battery stood. This plant comprises one forty-horse-power air-compressor and four Hornaut [Hirnant] drills. The compressed air for driving the drills will be conveyed to the mines, a distance of about 16 chains, by means of 4in. pipes, and carried from the main pipe into the drives by pipes of 2½in. in diameter. During the year the machinery in connection with our new works has gone very smoothly, and the treatment of the ore has been all that could be desired, the bullion recovered showing an extraction of 94 per cent. of the average value of the ore, and the percentage of cyanide of potassium used being 12 [0.12] per cent."

Earl of Glasgow Mine (Malcolm, Fleming, and party, owners).—This mine is at a high elevation, being situated to the south-eastward of the Karangahake trig. station. A considerable amount of work was done in opening up old drives and driving on leaders; 20 tons of quartz were crushed at Owharoa for a return of 35oz. of gold. Three men were employed. The party has been

prospecting the ground a great deal on the surface, and has decided to erect a small battery, consisting of five heads of stamps and pans. The past month they have been engaged in the preliminary work of battery-site, water-race, and tramways, &c., from the mine to the mill.

Diamond Mine. (Tresize and Sheehan owners).—A parcel of 9 tons of quartz yielded 38oz. of gold. Two men were employed.

Talisman (A. Shepherd and others, owners).—A considerable amount of work has been done in opening up the reef, which is from 3ft. to 5ft. in thickness; 523ft. of driving has been done. Four men were employed. The prospects obtained from the quartz are very promising, and the owners are in treaty with an English syndicate for the purchase of the mine. If the purchase of the mine is completed, a crushing-plant is to be erected near the junction of the Waitawheta and Ohinemuri Rivers. Without expenditure of capital, mines in this district cannot be developed.

The Golden Treasure, Imperial, and City of Perth Licensed Holdings have been prospected off and on during the year.

Hirnant compressor. The scrap metal collection at the Victoria Battery sports a Hirnant No.1. The New No. 1 shaft on Union Hill, Waihi, had a Hirnant compressor.

1894**Verandah added to Tramway Hotel****5 February****KARANGAHAKE DISTRICT.**

There have unquestionably been great and rapid strides made in the Karangahake district during the two years that elapsed since I last visited Ohinemuri. The population has largely increased, and a number of new houses have been erected in the settlement, which has now quite a populous and lively air. Amongst other improvements are a handsome residence for the teacher, erected just behind the public school, on a nice elevation overlooking the Ohinemuri River, also a commodious public hall, and the Tramway Hotel, always a commodious house, has been further improved by the erection of a handsome verandah along the river frontage, and another over the front of the building. The Crown Company's reduction works, the foundations of which were in course of excavation two years ago, have been completed, and form a conspicuous feature as one enters the township, while the manager's residence and the offices and stores of the company form almost a settlement in themselves in proximity to the mill...

It is, of course, as a mining district that Karangahake claims attention, and its rich and permanent reefs have brought its claims strongly before the public. In natural advantages as a mining centre I know of no place in the world which possesses so many as Karangahake. It has for motive power for machinery two splendid rivers, the Ohinemuri and the Waitawheta, the supply of water being never-failing, and in the great Waitewheta Gorge nature has done for the district a stupendous piece of engineering work, for it is a huge crosscut intersecting the whole reef system, and affording levels of more than 1000 feet in depth on each side of the river, the banks, if I may so designate those great precipices rising almost, and in some cases quite, perpendicularly, from the river bed. The result is that the reefs can be worked on end from each side of the river, while the great depths afforded give promise of profitable employment and wealth available for an incalculable number of years, and it is not remarkable that these natural advantages have been utilised to the greatest extent.

THE CROWN MINES COMPANY'S MINE AND PLANT.

On arriving at the mine, I was courteously received by Mr. George McGruer, the mine manager, who took me through the main workings. The chief operations are now conducted from the tramway level, about 20 feet above the creek, and in this the reef has been driven on a distance of from 700 to 800 feet. This level, I may state, is 670 feet below the county road, and above that again the range rises to a great height, so that the present workings, making allowance for the underlie of the reef, afford backs for stoping to a height of 1100 feet. The reef itself is about 8 feet thick on an average, and it has throughout the entire length been highly auriferous, but of a hard character; but just a day or two before my visit a most favourable change had taken place in the reef itself and the surrounding country, and on no previous occasion was there such an excellent show of rich gold. Not only in the quartz in the trucks then on the way to the battery was gold visible in almost every piece one might pick up, but in the face itself the show was a brilliant one, reminding me

strongly of some of the richer mines at the Thames in the earlier days, because for the full width of the reef, and here it is more than eight feet in width, the stone is richly studded with shotty gold well and evenly distributed, and it is not surprising, therefore, that Mr. McGruer was in jubilant spirits over the rich prospects in view...

A rock-drilling plant is now in course of erection, and the plant is all on the ground, including pipes, etc. It comprises a 40-horse power air compressor, and four rock drills, the motive power being supplied by water brought in at a height of 28 feet...

December was a short month, on account of the holidays, and there was also a slip on the tramway on the 20th, which delayed operations. This stoppage was taken advantage of to overhaul the machinery, but the value of the bullion recovered during the month was £1250.

Since the above was written the company has paid its first dividend of 1s per share on the capital stock of 80,000 shares, and New Zealand shareholders have already been paid the dividends accruing to them.

The Crown Mines' plant, although not the largest, is about the most effective and economical in the colony, for the greatest advantage has been taken of the site, and from the time the ore is delivered from the tramway to the stone breaker at the top floor there is no further handling up to the time the solution is received into the zinc towers and the bullion extracted. Mr. John McConnell, the company's general manager, and Mr. Hutchison, the engineer, kindly showed me through the works, explaining the various processes as we went.

The stonebreaker being the first process to which the quartz is subjected on arrival from the mine, it will be best to follow the course the quartz takes in its descent. This is a very powerful one, by Lamberton of Coatbridge, Glasgow, and is one of the type known as the "Hungry Scotchman," from its great voracity. It has 16-inch jaws, with 9-inch openings, these jaws being of chilled steel, and it is capable of breaking 70 to 80 tons of ore per day into pieces much smaller than two-inch road metal, but as the mill only treats 20 tons, the machine, the heaviest portion of which weighs three and a-half tons, is only worked at intervals.

From this floor the ore falls into two hoppers, which have openings on the kiln floor, and each is capable of holding 15 tons. It then passes into the automatic kiln, a large structure of the most ingenious description, so constructed that the heat reverberates all round the ore, and when drawn off it passes into a large iron hopper, from which it is fed by automatic feeders into the battery. The ore, I may add, is not roasted as at the Waihi kilns, but it is thoroughly dried, and this, Mr. McConnell assures me, is effectual for dry crushing as if it were roasted, while it is far less expensive. The battery itself is 20 head of stampers, which fall each at the rate of from 90 to 95 strokes per minute, and here the dried ore is pulverized to extreme fineness, and conveyed by automatic conveyers through horizontal boxes by means of an endless belt to the hoppers from which the tanks are charged. Each conveyer carries the crushed ore from five head of stampers, the method being an invention of Mr. McConnell's, which is found to act admirably.

On the battery floor is an ingenious contrivance, by which, by means of a lever, the water can be turned instantly on or off the Pelton wheel, so that in

the event of a stamper head dropping off or any accident occurring the whole mill can be instantaneously stopped without having to run down to the wheel-pit to turn off the water, the connection of the lever acting directly on the deflector. The motive power is water, working on a pair of seven-feet Pelton wheels, the water being conveyed through a 42-inch iron column, and provision has been made for two extra wheels being added when, as is intended, the battery is increased to 40 head of stampers, the bed-log and building for the additional 20 head being all in readiness.

The cyanide process adopted is the percolation process, the vats being square, and the labour of employing them is saved by an appliance by which they can be flushed out when the solution is all extracted from the charges. There is also an agitation plant erected, the 20 circular vats are all in position ready for use when required, but at present this system is not used; the percolation process, which is the cheapest, being found excellently adapted for the treatment of the Crown ores. The solution when drawn off is conveyed by pipes to the zinc boxes, beneath which are three tanks capable of containing 30 tons of solution.

The assay plant is a very complete one, and the furnace for melting the bullion is also very perfect. In fact, the whole of the appliances are of the most perfect description, and creditable alike to Mr. McConnell, and all connected with him. I may add that Mr. McConnell informed me that the strength of the cyanide used in the extraction is .13, out of which .07 was saved, so that the actual consumption was only .06.

There is a continuous dynamo in connection with the plant, by which not only is the battery lighted by electricity, but all the offices and stores, as well as the residence of Mr. McConnell, the general manager, and Mr. Hutchinson, the company's engineer.

Altogether, I may conclude this notice appropriately by stating that with a splendid plant, and with the brilliant prospects of the mine, the shareholders may, now that the great first cost incidental to such a huge undertaking is over, look forward to a continuation of regular dividends, which will have the effect of further assisting the district by inducing capitalists to undertake the development on a similar scale of other valuable mining properties in the Karangahake ranges and gorges. To these properties I shall take occasion to refer in future articles.⁵⁶⁸

12 February

KARANGAHAKE— (Continued)

THE WOODSTOCK. This mine, and the small crushing plant attached is, like the Crown, situated on the Waitawheta River, and operations have been in progress for some years, but owing to the want of a suitable plant for treatment of the ores, a great portion of which is refractory, and not amenable to ordinary mechanical treatment, the operations have been on a limited scale. Enough has, however, been done, and sufficient bullion has been obtained, to prove beyond doubt that the three reefs opened and worked are rich enough to warrant the necessary expenditure for a suitable plant, which would make it a

⁵⁶⁸ <https://paperspast.natlib.govt.nz/newspapers/NZH18940205.2.68>

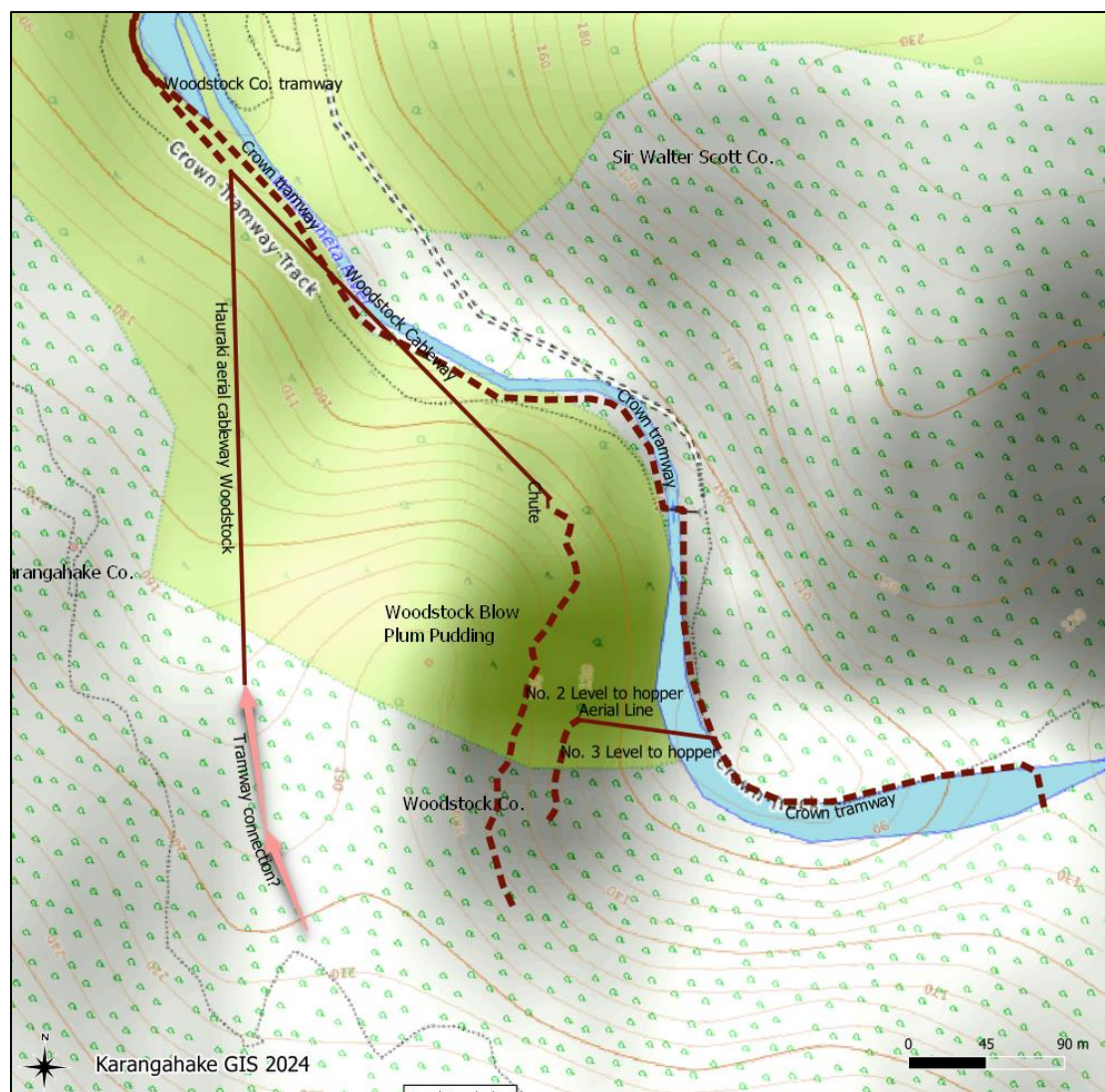
New Zealand Herald, Volume XXXI, Issue 9426, 5 February 1894, Page 6

large and important factor in the total gold produce of this promising district. Mr. John McCombie, who has been manager of the mine and the small crushing plant of four stampers for several years, courteously showed me through the workings and afforded me a good deal of valuable information in regard to the reefs...

It will thus be seen that the company has not only excellent prospects on four good reefs, with extraordinary facilities for working inexpensively, but the small four head battery and pans is not only totally inadequate to treat any reasonable output of ore, but it only saves about 57 per cent, of the bullion two-thirds of this quantity being saved by the pans. Mr. McCombie informed me that the company is now collecting data as to the cost of a suitable plant for the cyanide process of treatment, and the sooner this is erected, the sooner will the mine commence to give returns, which cannot fail to prove satisfactory to the company, and justify any expenditure they may incur in the erection of a suitable and powerful plant.

I may say that both levels are connected with the present battery, one by means of a wire tramway connecting with an iron tramway running from No. 2 level, the other by a wire tramway stretching from a hopper close to the mouth of the No. 3 level and extending across the Waitawheta River to a hopper, from which it is loaded into trucks and conveyed along the Crown Company's tramway, the Woodstock Company having secured the right of conveying their quartz along this line of rails.

These two levels are both on the east of the Woodstock Blow. The tramways and cables can be seen in some photographs, and are mapped in the GIS. Is the old Hauraki cable no longer used?



Woodstock No. 3 level tramway and aerial cableway to the Crown Co. tramway.

THE TALISMAN AND BONANZA. These are two adjacent holdings of 30 acres each, which have been amalgamated, and the property has recently been brought prominently before the public by the fact that negotiations for its sale have been opened with a London syndicate, who are sending out an engineer to report on it...⁵⁶⁹

This amalgamation may not in fact have occurred at this time. A November report has the Bonanza people deciding to form a company.⁵⁷⁰

26 February

The necessary arrangements are being made for the erection of a five stamp battery in connection with the Earl of Glasgow (late Adeline) mine at Karangahake. The claim has on former occasions proved itself a most valuable property, and being now in good hands will be pretty sure to give a first class

⁵⁶⁹ <https://paperspast.natlib.govt.nz/newspapers/NZH18940212.2.61>

New Zealand Herald, Volume XXXI, Issue 9432, 12 February 1894, Page 6

⁵⁷⁰ <https://paperspast.natlib.govt.nz/newspapers/THA18941128.2.9>

Thames Advertiser, Volume XXVI, Issue 7984, 28 November 1894, Page 2

account of itself. In all probability the plant will be erected by Messrs Judd, of the Thames and operations will be commenced in a week or so.

In the Woodstock Mr McCombie has finished the connection of the tram with the mill, which will effect a saving of 2s 6d per ton in transit.⁵⁷¹

12 March

Earl of Glasgow Claim. Karangahake. —Messrs. Fleming and Riddell, owners of this claim, have just completed the purchase of a five stamper battery and two berdans from Messrs. Price Brothers, which they intend to erect at once to deal with their output of ore. This claim is situated on the southern boundary of the Crown Company's mine, and north of the Bonanza and Talisman holdings, and it contains several good gold-bearing reefs, which yielded large returns during the early part of the Ohinemuri goldfield, so that the prospects are of an exceedingly encouraging character.⁵⁷²

23 March

The Crown Mines. The rock-boring plant is now in full operation in the mine, and is said to be giving every satisfaction.⁵⁷³

Compressor at old Crown battery site working

This is the 40 horse power compressor at the old Crown battery site, and the four drills.

This appears to be a very early adoption of air drills in the Hauraki area. Not introduced at Waihi until 1898/99 according to McAra.⁵⁷⁴ Before this compressed air was available, drilling in the mine would have been by hand, a slow and laborious process. This applied to all the other mines as well, until they put in plant to produce their own compressed air.

13 June

MINE MANAGERS' REPORTS.

Woodstock United Mine (Karangahake, June 9).—When breaking down the No. 2 lode at the No. 3 level today we secured about 5cwt of rich ore, which contains a high percentage of gold, and is thickly impregnated with chlorides as well as sulphides of silver. Judging by results obtained from a number of assays already made the average value of this ore will not be under £30 per ton, and we are certain to get a large quantity of it when stoping operations are in full swing. There is a good show in the face and back of the level, and I expect another big haul of rich ore when we break down again about Tuesday next. As the bullion in this ore is locked up in a variety of forms, and would

⁵⁷¹ <https://paperspast.natlib.govt.nz/newspapers/THS18940226.2.24>

Thames Star, Volume XXV, Issue 4670, 26 February 1894, Page 2

⁵⁷² <https://paperspast.natlib.govt.nz/newspapers/NZH18940312.2.74>

New Zealand Herald, Volume XXXI, Issue 9456, 12 March 1894, Page 6

⁵⁷³ <https://paperspast.natlib.govt.nz/newspapers/NZH18940323.2.70.13>

New Zealand Herald, Volume XXXI, Issue 9466, 23 March 1894, Page 2 (Supplement)

⁵⁷⁴ Gold Mining at Waihi, 1878-1952, JB McAra

not yield ten per cent. of its value if dealt with by battery and pan amalgamation we are storing it for special treatment.⁵⁷⁵

22 June

ACCIDENT AT KARANGAHAKE.(By Telegraph.—Own Correspondent.)

Paeroa, This day. A young man named Samuel Dickey, while trucking quartz for the Crown mine, at Karangahake, met with a serious accident yesterday. The horse and three trucks overturned into the river, Dickey having to jump to save himself. He escaped miraculously, but the horse was killed and the trucks smashed.⁵⁷⁶

25 June

It is reported at Waihi that Mr Napier is about to take charge of the Crown Goldmining Company's property at Karangahake, vice Mr McConnell resigned.⁵⁷⁷

30 June

At the annual meeting of the Woodstock G.M. Co.:— Director's Report.

...the mine is now so fully developed, and the prospects so encouraging, that we think the time has come for action to be taken in respect of the erection of a plant capable of efficiently treating the ore. The present method of treating the ore is by no means satisfactory, in so far that not more than 40 per cent, of the bullion is recovered; whereas, by erecting a plant such as we contemplate will, we have reason to believe, extract 85 per cent. Such an increase in bullion extracted, apart from being able to treat the ore in much larger quantities than in the past, would soon place the company in a flourishing financial position, which would, in due course, enable the payment of dividends...

The mine manager's report was as follows :— Karangahake, June 22, 1894— During the year just past in your mine attention has been devoted chiefly to opening up the No. 3 level, on the No. 2 lode, at a depth of 145 feet beneath the No. 2 level, as well as effecting the necessary connections with the main line of tramway. These connections consist of a ground tram-line, about two chains in length, leading away from the entrance to the No. 3 level and terminating at the paddock, which is capable of holding about 70 tons of ore. Starting from this paddock there is a double aerial line of tramway, which spans the Waitawheta river, in order to reach a large hopper located near the horsegrade section of tram-line, and 250 feet below the point of present operations. This hopper will accommodate about 100 tons of ore, and it is made easy of access by means of a "siding," where the trucks can be filled without interfering with ordinary traffic. A saving of 2s 6d per ton on the cost of transit on ore has been arrived at by adding to and improving the old Hauraki bridge, over which ore intended for treatment at the mill is now

⁵⁷⁵ <https://paperspast.natlib.govt.nz/newspapers/NZH18940613.2.34>

New Zealand Herald, Volume XXXI, Issue 9536, 13 June 1894, Page 5

⁵⁷⁶ <https://paperspast.natlib.govt.nz/newspapers/THS18940622.2.12>

Thames Star, Volume XXV, Issue 4768, 22 June 1894, Page 2

⁵⁷⁷ <https://paperspast.natlib.govt.nz/newspapers/THA18940625.2.4>

Thames Advertiser, Volume XXVI, Issue 7851, 25 June 1894, Page 2

conveyed instead of being hoisted up to and across the water-race bridge, as heretofore. Dating from the month of October last year, when work at the No. 3 level was first commenced, a new smithy and magazine have been erected...

This "connection" shows well on the map:

40_32_19_Woodstock_Levels_Old_300ppi, and on the GIS. It goes from the eastern side of the Woodstock Blow across to the Crown tramway upstream from the bridge across the Waitawheta. It is a little further downstream than the much later (1912) cableway that comes from the Crown No. 7 Level. **It was established October last year (1893).**

The fact that the water race bridge was used for ore transport is not apparent in photographs. Was it the bottom level of the Crown water race bridge?

Then we met the "Woodstock rich ore shoot," which proved to be about 25 feet in length, and some of the ore broken out therefrom assayed as high as £140 per ton, while the general stuff on the average is also of good quality...

The second-class ore is all being sent to the mill, where it is shaping for a fair return, which, however, will not exceed 45 per cent of the assay value, but we are "pitting" the tailings for subsequent treatment by the cyanide process or otherwise...

During the same period we reduced for tributers, working in the Ivanhoe section, 35 tons of ore, which yielded 33oz melted bullion, value £71 18s, and of this the company received for crushing and percentage £23 8s 6d...

There is no change to note at the mill, where the second-class ore is shaping for a fair return. Here the new tailing pit is now complete in every particular, and the whole of the tailings resulting from the mill treatment can now be saved, and dealt with as circumstances may dictate afterwards.⁵⁷⁸

27 July

KARANGAHAKE NOTES.(From Our Own Correspondent.)

Karangahake, July 24. To testify their esteem for their late manager, Mr J. McConnell, the employees of the Crown Mines Company determined that they would bestow upon him some suitable memento before he left the district. Accordingly a very pleasing incident transpired at the Crown Mines on Saturday last, when Mr McConnell, in the presence of the miners, was presented by them with a very beautiful and valuable piece of silver plate. Mr A. McLoghry, one of the foremen, in a neat and appropriate speech, expressed the good feelings of the miners towards Mr McConnell, and wished him and his good lady a safe and happy trip to the Old Country. Mr McConnell replied in happy and suitable terms, after which the "peat reek" was passed round, and the health and prosperity of the parting couple heartily honoured. The people of Karangahake generally unite with the employees of the Crown Company in wishing Mr and Mrs McConnell a pleasant voyage and a happy holiday.

Mr Napier, who now takes charge of the Crown mines, has arrived with his family and taken his abode with us. Mr Napier is so widely and so favour-known that it is needless to say he is heartily welcomed here.

⁵⁷⁸ <https://paperspast.natlib.govt.nz/newspapers/NZH18940630.2.5>

New Zealand Herald, Volume XXXI, Issue 9551, 30 June 1894, Page 3

Mining is progressing very favourably in this place. Woodstock people have lately been getting excellent ore in their mine, and have happily resolved to proceed immediately with the enlargement of their battery and to adopt the cyanide process. Mr John McCombie, the genial local manager, lately purchased for his company a reduction plant in the Waiorongomai district [“This plant was purchased by Mr. H. Adams at Waiorongomai, being portion of the large battery erected by the Te Aroha Gold and Silver Company”⁵⁷⁹], and when this is added to the battery now here, the Woodstock property should take its place among the best gold-producing works in Ohinemuri.

Very satisfactory progress in being made with the City of Glasgow [Earl of Glasgow?] works. The reduction plant is nearly complete, and all things necessary for a start at crushing are being pushed forward as quickly as circumstances will permit.

Tuesday's storm and rain did some little damage in this place. A portion of the Crown Company's water race not far from the battery was wrecked, which, of course, brought the battery to a standstill for a time.⁵⁸⁰

28 July

THE RECENT STORM. DAMAGE AT PAEROA.

During the whole day on Tuesday last we had both wind and rain from the east; as night approached the wind increased, until during night the worst storm we have ever had here came on. The thunder and lightning were almost continuous, the wind howled, and the rain descended in floods, with occasional breaks of heavy hail...

During the night a portion of the CROWN WATER RACE broke away, near where the County contractors had been quarrying metal. Of course this will stop the battery for a time.⁵⁸¹

Already quarrying the columnar stone cliff?

Flood and slip destroy Crown water race

4 August

WOODSTOCK UNITED G.M. CO. An agreement has been made by the directors of the above company with Mr. McConnell (representing the New Zealand Crown Mines Company) for the use of the McArthur - Forrest cyanide process, the rights of which are the exclusive property of the shareholders of the Crown Company within a radius of three miles of their mine, a concession granted to them by the Cassel Company some years since. Arrangements have also been made with Mr. H. Adams for the erection of a 10-stamp mill and a complete cyanide plant, on a suitable site on the Woodstock property, at Karangahake, which are to be completed in four

⁵⁷⁹ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1889-I.2.1.4.3>

THE MINING INDUSTRY., Appendix to the Journals of the House of Representatives, 1889 Session I, C-02

⁵⁸⁰ <https://paperspast.natlib.govt.nz/newspapers/THA18940727.2.29>

Thames Advertiser, Volume XXVI, Issue 7878, 27 July 1894, Page 3

⁵⁸¹ <https://paperspast.natlib.govt.nz/newspapers/THS18940728.2.4>

Thames Star, Volume XXV, Issue 4799, 28 July 1894, Page 1

months. It is satisfactory to know that active steps are now being taken to develop this valuable mine. The directors yesterday made a call of 3d per share, payable on the 22nd instant.⁵⁸²

Woodstock to erect 10 stamp mill

10 August

KARANGAHAKE DISTRICT.

In consequence of a very heavy flood experienced in this district during the night of the 24th ultimo, a rather serious slip occurred on the side of the hill not far from the New Zealand Crown Mines Company's reduction works, with the result that a length of about three chains of the company's water-race was carried away, and the tramway also blocked for a considerable length. This had the effect of causing a complete stoppage at the battery for a period of eight days in order to carry out the necessary repairs. The battery, however, resumed the treatment of ore on the 2nd inst., and is now in full swing again. During the stoppage all work was suspended in the mine, with the exception of continuing the extension of the No. 6 level southward. At this point a break was recently met with which had the effect of cutting off the reef, but from appearances the continuation of the reef will soon be to hand again. A splendid class of sandstone country, interlaced with black mineral veins, is being penetrated, and the manager is confident of meeting with a good run of gold as soon as the reef is to hand.

There is another landslip in mid 1901 in what might be the same place.

The Woodstock Gold Mining Company's prospects are of a very good character indeed. The development of the No. 2 lode at No. 3 level has resulted in the discovery of a very remunerative run of ore, but as it is of a somewhat refractory character, the ordinary battery process is not adapted for its successful treatment. In consequence of this the directors held a meeting on the 3rd instant to consider what was best to be done in the matter, and as a result of their deliberations they entered into an agreement with Mr. McConnell (representing the New Zealand Crown Mines Company) for the use of the Mc-Arthur-Forrest cyanide process, the rights of which are the exclusive property of the shareholders of the within a radius of three miles of their mine, a concession granted to them by the Cassel Company some years since. Arrangements have also been made with Mr. H. Adams for the erection of a ten-stamp mill and a complete cyanide plant, on a suitable site on the Woodstock property at Karangahake, which are to be completed in four months. It is satisfactory to know that active steps are now being taken to develop this valuable mine.⁵⁸³

13 August

MINE MANAGERS' REPORTS. Woodstock United (Karangahake, 9th August).

⁵⁸² <https://paperspast.natlib.govt.nz/newspapers/NZH18940804.2.60>

New Zealand Herald, Volume XXXI, Issue 9581, 4 August 1894, Page 6

⁵⁸³ <https://paperspast.natlib.govt.nz/newspapers/NZH18940810.2.32.8>

New Zealand Herald, Volume XXXI, Issue 9586, 10 August 1894, Page 2 (Supplement)

...As it will be necessary to remove a portion of the water race before starting excavations for the new plant, I will stop the mill on the 11th instant, when a general cleaning up will take place.⁵⁸⁴

The water race flume trestle and pipe of the small battery are in the way of the new building. The pelton wheel pit has to be moved upstream as well.

28 August

UPPER THAMES MINING.(from our own correspondent.)

Waitekauri, August 21.

In Karangahake the Crown Mines Company suffered a rather severe loss in their last month's operations through heavy floods breaking away a portion of the water-race and causing the battery to stop for eight days. But apart from the Crown Company's works there is considerable activity in this centre lately. The erection of a new plant to treat the Woodstock ore by cyanide process is now well in hand, and will give employment to a number of carpenters for the next few months. The Earl of Glasgow battery is now in complete working order and there is also talk of a Home syndicate erecting a plant to treat ore from the Talisman and Bonanza properties, so that it is quite likely that the near future will see a very much improved state of in this locality.⁵⁸⁵

1 September

MINE MANAGERS' REPORTS. Woodstock United (Karangahake, 30th Aug.)— Four men are now employed in driving the water-race tunnel, which is in 20 feet at the north end, and 33 feet at the south end, and the distance remaining to be done is 47 feet or thereabouts. Mr. Adams, contractor for the erection of the new mill, has got a considerable quantity of his building material on the site, and yesterday a start was made to put in the blocks, preparatory to laying down the ground plates of the building intended to cover the percolation plant.⁵⁸⁶

Some of the “blocks” for the ground plates are still in the river bank.

How is all this material brought to the site? Much could come over the pedestrian bridge over the Ohinemuri, and then the Hauraki bridge over the Waitawheta. But surely not the heavy mortar boxes etc? By wire tramway over the river! (see February 1895)

5 September

Thames, Tuesday. Woodstock United Mine (Karangahake).

Mr. Adams, contractor for the erection of this company's new mill and cyanide plant, is making good headway with the preliminary arrangements. The whole of the material required for building purposes is now on the site, and the machinery which has been landed at Paeroa is being carted out to its

⁵⁸⁴ <https://paperspast.natlib.govt.nz/newspapers/NZH18940813.2.5>

New Zealand Herald, Volume XXXI, Issue 9588, 13 August 1894, Page 3

⁵⁸⁵ <https://paperspast.natlib.govt.nz/newspapers/AS18940828.2.17>

Auckland Star, Volume XXV, Issue 205, 28 August 1894, Page 3

⁵⁸⁶ <https://paperspast.natlib.govt.nz/newspapers/NZH18940901.2.43>

New Zealand Herald, Volume XXXI, Issue 9605, 1 September 1894, Page 5

destination. The necessary excavations are fairly underweigh, and the blocks and ground plates for the percolating portion of the plant are all in their place. The position selected for the new plant is admirably adapted for the purpose, inasmuch as the ore intended for treatment will pass almost automatically from the kilns to the grissly through the stone breaker, then to the ore feeders, thence to the stamper boxes, from which it will gravitate to the percolating vats. The dissolving and stock solution vats will be located above the percolating vats, and after the solution will have done its work it will be drawn off by the vacuum boiler, passed through the zinc boxes into the sumps, which will be located under the lowest floor of the building, from whence it will be pumped up again to the percolating vats when required. Attached to the building it is arranged to have three distinct apartments for the oxidising and melting furnaces, assay and muffle furnaces, and assay balance. The machinery will comprise one stone-breaker, two challenge ore feeders, two. five-head batteries of 8cwt dry-crushing American stampers, driven by two six-feet Pelton wheels, governed by a deflector for starting and stopping the machinery instantaneously.⁵⁸⁷

6 September

At Karangahake the Woodstock Company are erecting ten head of stampers from the Waiorongomai plant, and the cyanide process is to be adopted for the treatment of the ore from the Company's mine.⁵⁸⁸

7 September

The proprietors of the Earl of Glasgow claim have erected a five-stamper battery, and are at present connecting the same with the mine by means of a tramway. They hope soon to commence treating the ore available in their property.⁵⁸⁹

This tramway includes an incline, with wooden rails; a photograph exists. See GIS

Earl of Glasgow claim have erected a five-stamper battery

10 September

MINE MANAGERS' REPORTS. Woodstock United (Karangahake, September 6, 1894.)—

...At the water-race tunnel 75 feet of the work has been finished, and 32 feet remains to be done. The country at the south end is somewhat hard, but six men are now employed on the job, which should be complete in every particular on about the 15th instant. Mr. H. H. Adams, the contractor for the erection of the new mill, has a strong staff of men employed on the excavations, as well as preparing material for the building, and, although the

⁵⁸⁷ <https://paperspast.natlib.govt.nz/newspapers/NZH18940905.2.57>

New Zealand Herald, Volume XXXI, Issue 9608, 5 September 1894, Page 6

⁵⁸⁸ <https://paperspast.natlib.govt.nz/newspapers/AS18940906.2.28>

Auckland Star, Volume XXV, Issue 213, 6 September 1894, Page 5

⁵⁸⁹ <https://paperspast.natlib.govt.nz/newspapers/NZH18940907.2.60.14>

New Zealand Herald, Volume XXXI, Issue 9610, 7 September 1894, Page 3 (Supplement)

weather is not propitious, good headway is being made with the work throughout.⁵⁹⁰

18 September

WOODSTOCK UNITED

The manager (Mr J. McCombie) reports :—

...At the water-race level, 94 feet of the work has been done, and the remainder, amounting to 12 feet, should be finished on or about Saturday next. Owing to the almost continuous rainfall experienced here of late, outdoor work of every description has been considerably retarded, and as a consequence very little headway has been made with the excavations for the new mill site. But next week should see this complete, and as the framework for the building to cover the percolation part of the plant is all cut out, it will not take a long time to put it into shape.⁵⁹¹

24 September

It is stated that arrangements are being made by which, the Crown G.M. Co., at Karangahake, will purchase ore on the customary mill system. It is quite likely that the owners of the Talisman mine, who have a large tonnage of valuable ore to grass, will treat with the company for the purchase of their ore on a mutually advantageous basis.⁵⁹²

MANAGERS' REPORTS. Woodstock United (Karangahake).—

...The water-race tunnel is complete in every respect, and all necessary preparations are now being made, with a view to carrying the fluming through, on the 23rd instant. The foundations of the battery are now being excavated, and the tail-race leading up the point selected for the wheel pit is advancing as quickly as possible. The framework of the building to cover the cyanide plant is all in position, and a start has been made with the roofing and weather-boarding.⁵⁹³

What/where is the water-race tunnel? 106ft long [32 m] It was being cut in at both ends at once, north and south. An interpretation of the above “The water-race tunnel is complete in every respect, and all necessary preparations are now being made, with a view to carrying the fluming through” is that the fluming goes through the tunnel.

The Woodstock water race and dam are the existing Woodstock Furnace, and then the Cox/Woodstock 4 stamper, water race and dam, are they not? So where was a tunnel suddenly required?

Photographs appear to clarify this. The new Woodstock battery interferes with the Crown Company's water race flume, so they are obliged to put it through a tunnel through the ridge. This also allows for the water balance to be installed clear of the

⁵⁹⁰ <https://paperspast.natlib.govt.nz/newspapers/NZH18940910.2.8>

New Zealand Herald, Volume XXXI, Issue 9612, 10 September 1894, Page 3

⁵⁹¹ <https://paperspast.natlib.govt.nz/newspapers/THS18940918.2.15>

Thames Star, Volume XXV, Issue 4845, 18 September 1894, Page 2

⁵⁹² <https://paperspast.natlib.govt.nz/newspapers/THS18940924.2.8>

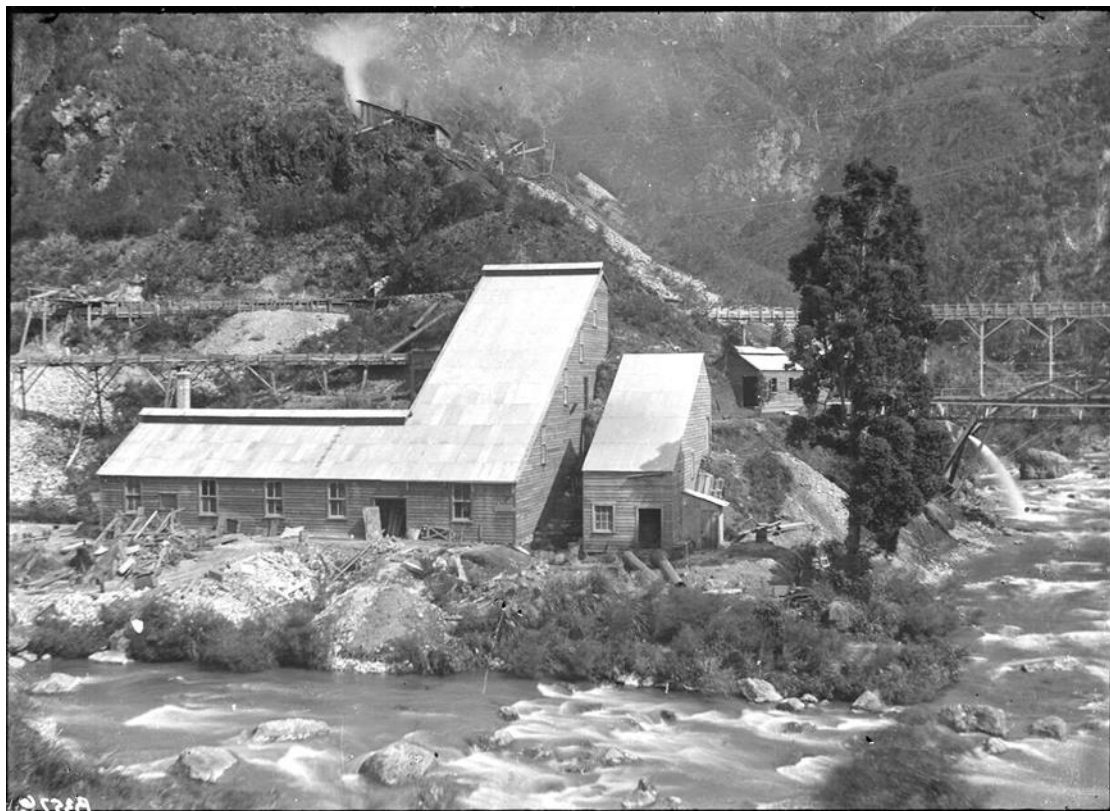
Thames Star, Volume XXV, Issue 4850, 24 September 1894, Page 2

⁵⁹³ <https://paperspast.natlib.govt.nz/newspapers/NZH18940924.2.48>

New Zealand Herald, Volume XXXI, Issue 9624, 24 September 1894, Page 6

water race flume. The MM White image of the new 10 stamp battery shows this tunnel, with the water race flume apparently entering it. The tunnel from the base of the kiln is to the left of this image, and it appears that the tramway from it crosses the top of the Crown water race flume.

This tunnel would lie north east to south west. It may still be there.



MM White photograph, No B3576.

This photograph was taken from a very similar position to the first, from the road edge.

At the end of 1894 the Woodstock Company start to erect a 10 stamp mill beside the old 4 stamp battery. It starts to operate 11 February 1895. It is a percolation cyaniding plant. A firewood wire tram is installed, and an ore roasting kiln constructed in the hillside above the battery.

The old water race is reused, after an upgrading. Notice that this race no longer continues past the battery and across the Waitawheta. It went to the Woodstock Furnace house, which no longer requires it, or is gone.

The new building extends further up the hillside, and meets the tramway and tunnel from the bottom of the kiln. The kiln has a roof, and the smoke indicates that it is operating. Firewood is delivered to the kiln via aerial cableway from probably the County Road high above Battery Flat. Two sets of cables can be seen in the image, the upper most for the Woodstock kiln., the other for Talisman?

The tunnel servicing the bottom of the kiln is at the level of the top of the Crown water race flume and must cross it. The spoil from the tunnel has been trucked over the flume, and dumped on the hillside.

The Crown water race flume no longer arcs around the spur, but is tunnelled through it.

A small building has been added, behind the kauri tree. Likely the smithy.

The new bridge to the water balance should exist, though it can't be made out in this image. The bridge in the foreground appears to be the old Hauraki bridge. The water balance lifts the ore carts to the level of the kiln.

This battery operates for only a year before being replaced by a forty stamp battery on the same site. Hence this image could be considered to date at 1895.

8 October

MINE MANAGERS' REPORTS.

Woodstock United (Karangahake, Oct. 4). —Timbering up the level is being carried on as opportunity offers, but in the meantime six of the mine hands are engaged in excavating the site for the kiln, and effecting necessary repairs at the water race fluming. Mr. H. H. Adams is making good headway with the various works in connection with the erection of the new mill, and the alterations to the bridge across the Waitawheta river are fast approaching completion. The roofing to cover the percolation plant is complete, and the front as well as both of the end walls of the entire building have been weather boarded. The balance room has been finished, and the windows are all in their places. Fair progress is being made with the tail-race, which is all in solid rock, and the battery foundations will soon be ready to receive the sills and mortar blocks.⁵⁹⁴

The bridge across the Waitawheta river is presumably to bring the ore across from the Waitawheta Road (Crown tramway).

9 October

FIREWOOD CONTRACT.

Tenders will be received till 4 p.m. on WEDNESDAY, the 17th October, instant, for SUPPLYING the Woodstock Company, Karangahake, with FIVE HUNDRED TONS (500) of FIREWOOD. Specifications may be seen, and full particulars obtained, from the undersigned at the mine. The lowest or any tender not necessarily accepted. Jno. MCCOMBIE. Karangahake, 8th October, 1894.⁵⁹⁵

Firewood for the kiln, the first at Karangahake.

13 October

Mr H H. Adams, contractor for the erection of the Woodstock battery at Karangahake, is progressing favourably with the work, and he expects to have the ten head of stampers going by the first of the coming year.⁵⁹⁶

17 October

TENDERS

Tenders will be received by the under signed up till noon on THURSDAY, the 25th inst., for CARTING (300) three hundred tons of ore (more or less) from the Talisman mine to the Crown Company's Tramway, Karangahake. Lowest or any tender not necessarily accepted. A. SHEPHERD, Manager.⁵⁹⁷

“to the Crown Company's Tramway” must mean from the mine via Scotchman's Gully, meeting the tramway at Battery Flat?

⁵⁹⁴ <https://paperspast.natlib.govt.nz/newspapers/NZH18941008.2.52>

New Zealand Herald, Volume XXXI, Issue 9636, 8 October 1894, Page 6

⁵⁹⁵ <https://paperspast.natlib.govt.nz/newspapers/THA18941009.2.28.2>

Thames Advertiser, Volume XXVI, Issue 7941, 9 October 1894, Page 3

⁵⁹⁶ <https://paperspast.natlib.govt.nz/newspapers/THA18941013.2.5>

Thames Advertiser, Volume XXVI, Issue 7945, 13 October 1894, Page 2

⁵⁹⁷ <https://paperspast.natlib.govt.nz/newspapers/THA18941017.2.23.3>

Thames Advertiser, Volume XXVI, Issue 7948, 17 October 1894, Page 3

23 October

Woodstock United (Karangahake, October : 18). —

...The water-race is getting a thorough over haul, which should be finished early next week, and then the fluming will be in a better state of repair than it ever was before. Fair progress is being made with the excavations for the site of the kiln, and next week should see this part of the work complete. The contractor for the construction of the kiln has already accomplished 50 feet of driving in the tunnel leading up there to, and the country is all that can be desired for the purpose. At the new mill good head way is being made with the erection of the cyanide plant. One of the vats was bolted together, and tested with nine tons of water yesterday, where the results were highly satisfactory. A new smithy has been erected, the ground line for the self-acting ore tram-line graded, and fair headway made with the excavations for the wheel pit.⁵⁹⁸

The contractor is driving the tunnel to the kiln. The self-acting ore tram-line is the water balance? Ore will come across the repaired (or has a new one been built?) Hauraki bridge, then lifted to the top of the kiln by water balance.

What is a water balance? A double incline tramway, one side for full ore carts, the other for a large tank of water. The two are connected by a cable over a pulley at the top. To lift the full ore cart, the water tank is filled till its weight over comes the weight of the ore cart. The tank descends, the ore cart rises. Empty the tank and repeat.

Water must be pumped to the kiln level; a large water reservoir is visible beside the kilns in some images.

31 October

KARANGAHAKE MINING.

Woodstock United Mine.—Rapid progress is being made with the erection of this company's new mill and cyanide plant, which should be ready for ore reduction purposes about the middle of December next, and so far as the construction has gone, the work and material put in by the contractor, Mr. H. H. Adams, is of the best possible description...

Talisman. — Arrangements have been finally completed with the Crown Mines Company for the treatment of a large tonnage of ore by the cyanide process, and a start has been made to cart the ore to its destination. In the meantime a large block of valuable ore is being opened up for stoping purposes, and it is said that the claim will shortly be floated into a company under the Mining Companies Act.

Earl of Glasgow.—Fleming and party, owners of this mine, have now got their little battery running full time on their second-class ore, and their first-class ore is being sold for shipment to some of the foreign ore markets.

Crown Mines Co. — Exceptionally rich ore is now being obtained from the winzes that are in process of sinking beneath the floor of the No. 6 level, north and south of the Waitawheta river respectively. At each of the places mentioned this ore disclosed to view is the richest that has yet been got from

⁵⁹⁸ <https://paperspast.natlib.govt.nz/newspapers/NZH18941023.2.5>

New Zealand Herald, Volume XXXI, Issue 9649, 23 October 1894, Page 3

the mine. This augurs well for the future of the property when permanent sinking operations are in hand, which it is expected, will be the case shortly.⁵⁹⁹

Talisman carting ore to Crown battery for treatment

15 November

THE TALISMAN. The mining property known as the Talisman, comprising 30 acres, adjoining the Crown and Woodstock Companies' properties, Karangahake, Ohinemuri, has, from its position and prospects, been long looked upon as a most valuable one; but, although some work has been going on, the shareholders were in this difficulty that, although they had a fine reef of rich ore, they were not in a position to have it treated, there being no plant suitable for the treatment of the ore available, and the shareholders had not themselves the means of erecting a plant of their own. Now, however, they have been able to arrange for a crushing of from 350 to 400 tons of ore at the Crown Company's plant by the Cassel process, and from assays and tests it is estimated that the yield will average £10 a ton, a return which should leave a very handsome profit. The crushing is to commence to-day.

The property has been for some time under offer to a London syndicate, but a letter by the recent mail asked for a further extension of time. This it was determined to refuse, and a meeting will be held to-day, in Mr. D. G. MacDonnell's office, to form a company locally. The capital, we are informed, will be 65,000 shares at 5s each, of which 55,000 will be allotted amongst the eleven shareholders now owning the property, and the balance of 10,000 shares will be held in trust for the erection of machinery.⁶⁰⁰

16 November

TALISMAN G.M. CO. (LIMITED). The shareholders owning the Talisman mining property of 30 acres, situated in Karangahake, Ohinemuri, met yesterday forenoon in Mr. A. H. Gossett's offices, Insurance Buildings. There was a full representative attendance and Mr. H. Gorrie presided. It was unanimously agreed to form a limited liability company, with a capital stock of 65,000 shares of 5s each, 1s to be considered paid up; 55,000 shares to be issued to the present shareholders, and the balance of 10,000 shares reserved as a fund for providing machinery, etc. Mr. A. H. Gossett was appointed legal manager, and his office the office of the company. The following shareholders were appointed directors of the newly-formed company:—Messrs H. Gorrie, H. H. Adams, J. R. Grey, James Smith, and Alfred Shepherd. The directors held a meeting immediately after the general meeting, and discussed the method in which future operations should be carried out; also the probable profit from the crushing of 400 tons, which is to be commenced forthwith at the Crown Company's battery and cyanide plant. It was agreed to make a call of 1d per share, in order to have funds in hand to fairly start mining operations on a permanent basis.⁶⁰¹

⁵⁹⁹ <https://paperspast.natlib.govt.nz/newspapers/NZH18941031.2.5>

New Zealand Herald, Volume XXXI, Issue 9656, 31 October 1894, Page 3

⁶⁰⁰ <https://paperspast.natlib.govt.nz/newspapers/NZH18941115.2.43>

New Zealand Herald, Volume XXXI, Issue 9669, 15 November 1894, Page 5

⁶⁰¹ <https://paperspast.natlib.govt.nz/newspapers/NZH18941116.2.34>

19 November

MINE MANAGERS' REPORTS. Woodstock United (Karangahake, Nov. ember 15). —

...At the mill the ore reduction portion of the plant is fast approaching completion, and the work of constructing the storage hoppers is under way. On Friday next the contractor expects to effect connection between the top of the kiln and the level, and dressing down the walls will be next in the order of things. The wire ropes are now being strained for the firewood tram line, and the contractors have got about 150 tons ready for transit.⁶⁰²

Woodstock firewood wire tram, kiln

Wire ropes plural, suggesting a self-acting setup. Photographs suggest that perhaps this cableway connects in the vicinity of Rand' Eyrie (original) immediately above Battery Flat (could be as little as 304m). Or more likely to the County Road, where it climbs the Karangahake Spur (310m). It was reported as 1000ft, or 304m⁶⁰³. See entry for 5 February 1895 and GIS.

27 November

Mine Managers' reports

Woodstock United (Karangahake, Nov. 22).—

...At the mill the crushed ore bin is about finished, and fair headway is being made with the storage hopper behind the ore feeders. All the platforms and ladder ways leading from the battery to the percolation plant have been finished, and a start made to put the driving shaft and pulleys in position. The contractor for construction of kiln has holed through to the level, and the rise for ventilation purposes is now underway.⁶⁰⁴

28 November

THE KARANGAHAKE BOOM.

BONANZA GOLD MINING CO. Auckland, November 27. A meeting of shareholders in the Bonanza mining lease at Karangahake, adjoining the Talisman was held to-day. Nearly all the shareholders were present, and Mr Gray was called to the chair. It was decided to form a company with a capital stock of 65,000 shares at 5s each, of which 1s is considered paid up. 57,500 of the shares were allotted, and 7500 were reserved for the purpose of developing the mine and erecting machinery. Messrs Levy, Shepherd, and Grey were elected directors, with power to add two others to their number, and Mr Gray was elected chairman of the Board. It was decided to commence permanent

New Zealand Herald, Volume XXXI, Issue 9670, 16 November 1894, Page 5

⁶⁰² <https://paperspast.natlib.govt.nz/newspapers/NZH18941119.2.40>

New Zealand Herald, Volume XXXI, Issue 9672, 19 November 1894, Page 5

⁶⁰³ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1895-I.2.1.4.4>

REPORT ON GOLDFIELDS: WARDENS' REPORTS., Appendix to the Journals of the House of Representatives, 1895 Session I, C-03a

⁶⁰⁴ <https://paperspast.natlib.govt.nz/newspapers/NZH18941127.2.9>

New Zealand Herald, Volume XXXI, Issue 9679, 27 November 1894, Page 3

operations as soon as the Company was registered, and preliminaries arranged.⁶⁰⁵

Talisman and Bonanza have not been amalgamated after all? Contrary to report 12 February 1894?

A rush is on at Karangahake

4 December

MINING ACTIVITY IN THE UPPER THAMES. Paeroa, Monday.

Pegging out still continues in Karangahake owing to the boom in Woodstocks, and the continued excellent results from Talisman ore. The Imperial claim next the Crown, which had been privately worked for about ten years, has been floated.

The Earl of Glasgow battery cleaned up a four weeks' crushing with five stamps to-day for 80oz gold, valued at about 46s.

The United claim, better known as the old Diamond ground, Karangahake, has been successfully floated by Mr. Gilfillan. It is a well-proved piece of ground.⁶⁰⁶

8 December

RUSH IN KARANGAHAKE.

There is a rush in the Karangahake back country, right up to the Willows. Claims were pegged out on Thursday as follows :— H. P. Barry, 100 acres, H. H. Adams, 80 acres, McNamara 30 acres, Malcolm Fleming and party 30 acres, and two other parties 30 acres each.

EARL OF GLASGOW (Karangahake.) The clean up for this mine this week gave a yield of 60ozs. This, with the return from the parcel of ore sold to Mr H. C. Wick, makes 144 ozs from the mine. The value of the gold is £2 4s per oz.⁶⁰⁷

10 December

MINING AT KARANGAHAKE. Paeroa, Saturday.

Mr. Jordan, clerk of the Warden's Court, was again rushed this morning by applications for leases at Karangahake. I understand that several disputes re pegging have arisen.

Mr. McKay has completed his contract for the delivery of the Talisman ore to the Crown battery. The clayey nature of the ore will make the time necessary to treat it longer. Mr. Adams, the managing director, informs me that as they are sinking, the dirt is increasing in value, and the lode widening.

⁶⁰⁵ <https://paperspast.natlib.govt.nz/newspapers/THA18941128.2.9>

Thames Advertiser, Volume XXVI, Issue 7984, 28 November 1894, Page 2

⁶⁰⁶ <https://paperspast.natlib.govt.nz/newspapers/NZH18941204.2.47>

New Zealand Herald, Volume XXXI, Issue 9685, 4 December 1894, Page 5

⁶⁰⁷ <https://paperspast.natlib.govt.nz/newspapers/THS18941208.2.28>

Thames Star, Volume XXV, Issue 7915, 8 December 1894, Page 4

The Crown's winze is down 40 feet, and the ore continues good. By last mail the Glasgow directors state their intention of sinking and erecting pumping gear.

TALISMAN G.M. CO. A meeting of directors of the Talisman Gold Mining Company, Karangahake, was held on Friday at the company's office, Insurance Buildings. The object was to receive an offer from a syndicate to erect a crushing and cyanide plant, similar to that now in course of erection for the Woodstock Gold Mining Company, the payment to be £500 in addition to the shares reserved on the formation of the company for the purpose of providing machinery. The syndicate were asked to put their offer in writing and it would be considered at the next meeting of the Board.

MINE MANAGERS' REPORTS. Woodstock United (Karangahake, December 6). —

...At the mill the melting, oxidising, assaying, and muffle furnaces will be all complete to-morrow night, and putting in the concrete sumps will come next. The piping to connect the vats, towers, sumps, vacuum boiler, and stock solution vat are now being put together, and very good headway is being made with the work of arranging the stonebreaker and self-feeders. The excavations for the kiln are now fast approaching completion, and the construction of the different tramlines belonging thereto is fairly under way.⁶⁰⁸

14 December

TALISMAN (Karangahake). The Talisman directors met today. They have practically agreed to the syndicate's offer to erect a battery, water race, and tramway to connect the mine, the syndicate receiving 8500 shares and £500 cash.⁶⁰⁹

Talisman to erect a battery

15 December

MINE MANAGERS' REPORTS. Woodstock United (Karangahake, December 12).

...At the mill the furnaces have all been finished, and good progress is being made with the construction of the sumps. The vacuum and launder connection pipes are all in position, and Mr. Adams is not sparing either time or labour in his efforts to prevent dust escaping from the stamper boxes. The wheel pit has been completed, and both Pelton wheels are now in their respective places. Next week should see the kiln and all its connections complete in every respect.⁶¹⁰

⁶⁰⁸ <https://paperspast.natlib.govt.nz/newspapers/NZH18941210.2.39>

New Zealand Herald, Volume XXXI, Issue 9690, 10 December 1894, Page 5

⁶⁰⁹ <https://paperspast.natlib.govt.nz/newspapers/THS18941214.2.12>

Thames Star, Volume XXV, Issue 7920, 14 December 1894, Page 2

⁶¹⁰ <https://paperspast.natlib.govt.nz/newspapers/NZH18941215.2.42>

New Zealand Herald, Volume XXXI, Issue 9695, 15 December 1894, Page 5

24 December

MINE MANAGERS' REPORTS. Woodstock United (Karangahake, December 20). —

...At the mill the sumps will be finished to-night, and concreting the floors of the assay and melting rooms is in progress. The excavations for the kiln are all complete, and the shed to cover same is now in course of construction.⁶¹¹

28 December

REVIEW OF THE YEAR'S OPERATIONS.

...Then, at Karangahake, there has also been a decided improvement in the prospects of the whole district, for not only have the older mines more than held their own, but the results attending the operations in them have induced extended prospecting in the surrounding country, which in turn have culminated in the formation of several strong companies to develop new areas of ground, so that the forthcoming year is likely to be a very active one as regards the mining industry in the Karangahake section of the goldfield.⁶¹²

AJHR 1895

Published 1895, but largely reporting on 1894.

REPORT OF THE DEPARTMENT OF MINES ON THE GOLDFIELDS OF NEW ZEALAND FOR THE YEAR 1894-95. BY H.A. GORDON, Esq., F.G.S., INSPECTING ENGINEER.

APPENDIX TO THE JOURNALS OF THE HOUSE OF REPRESENTATIVES, 1895 SESSION I, C-03⁶¹³

Mr. H. A: Gordon, F.G.S., Inspecting Engineer,

to the Hon. A. J. Cadman, Minister of Mines. — Mines Department, Wellington, 24th July, 1895. I have the honour to submit my annual report, for the year ending the 31st March last.

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Karangahake. Although this field has been opened for over twenty years there has been comparatively little work yet done to develop its mineral resources. In March, 1875, it was proclaimed a goldfield, after which it was almost deserted for many years, until a revival in mining took place in 1882, when a large number of claims and licensed holdings were taken up; but, unfortunately, there were but few of them that ever proved profitable investments to the holders. Assays of the ore from many parts of the field gave high results, but when it came to be treated by the methods formerly used very little of the assay-value was obtained. It may be said that before the

⁶¹¹ <https://paperspast.natlib.govt.nz/newspapers/NZH18941224.2.8>

New Zealand Herald, Volume XXXI, Issue 9702, 24 December 1894, Page 3

⁶¹² <https://paperspast.natlib.govt.nz/newspapers/NZH18941228.2.74.13>

New Zealand Herald, Volume XXXI, Issue 9705, 28 December 1894, Page 10

⁶¹³ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1895-I.2.1.4.3>

REPORT OF THE DEPARTMENT OF MINES ON THE GOLDFIELDS OF NEW ZEALAND FOR THE YEAR 1894-95. BY H.A. GORDON, Esq., F.G.S., INSPECTING ENGINEER., Appendix to the Journals of the House of Representatives, 1895 Session I, C-03

introduction of dry-crushing, and leaching the ore with cyanide solutions a very small percentage of the value of the bullion the ore contained was saved. A reaction in mining has set in, and a large number of claims and mining rights are now taken up on this field; but mine-owners are still making the same mistakes as formerly by erecting small plants at each mine, instead of having one large and efficient plant for several mines for the reduction and treatment of the ores.

When the Crown Company erected their plant it was thought that they would make their plant sufficiently large to be a custom plant, and that any other mine-owner would be able to get ore crushed and treated at a reasonable rate; but from the experience gained by the Talisman Company it is not likely that much ore will ever be treated at the Crown Company's plant other than that coming from its own mine. The Talisman Company got 280 tons of ore treated at the Crown plant, which yielded bullion to the value of £8 5s. per ton. The terms on which this ore was treated were said to be as follow: The actual expenses in connection with working the plant to be paid by the Talisman Company, as well as 20 per cent, of the value of the bullion extracted. This brought up the expense of the treatment to something like £3 15s. a ton, including cost of transit. It therefore would require rich ore to pay expenses. The Talisman and Woodstock Companies are now erecting two separate small plants close alongside each other, instead of combining together and having the plant under one roof and one management. Each of those companies will now require a battery-manager, and the same number of men as would be needed if their plants were double the size, or if they had combined and put up a larger plant between them. Indeed, the site chosen by the Crown Company is well suited for the construction of a large custom-mill, which could be made to treat the ore from the present claims on the field much more economically than by each separate company erecting a plant of its own. But the charge made for the ore of the Talisman Company was prohibitive, and forced that company to have a plant of its own.

Crown Company. —Below the creek-level, where a winze has been sunk some distance, this company's mine is looking better than ever, and good gold-bearing stone found all the way down. Arrangements were being made at the time of my visit to sink a shaft on the north side of the Waitawheta Creek, and to erect pumping and winding machinery.

It will be seen from this that the cost of mining, reduction, and treatment, including management and all expenses, was equal to £3 8s. 8d. per ton, while the cost of reduction and treatment of ore alone was equal to about £1 2s. 3d. per ton.

Owing to the capital of the company being exhausted, and funds required to sink a shaft and erect pumping appliances, a scheme for reconstruction was proposed by the directors, and it is believed to have been adopted —namely: That a new company be formed with a nominal capital of £100,000, in 100,000 shares of £1 each, the new company to take over the assets and liabilities of old company in consideration of an allotment to the liquidators of 77,729 shares of the new company for distribution among the members of the old company—namely, 67,836 shares paid up to 15s. per share to original shareholders, and 9,893 shares fully paid up to the Cassel Company, who hold the same number of shares in the old company.

The Crown Company was the means of introducing into the colony the cyanide process on a large scale for the extraction of gold from its ores. It made an arrangement with the Cassel Company to erect a cyanide plant and treat the ore for, it is said, a certain percentage of profits. A certain quantity of ore had to be produced weekly. The company, however, could not fulfil their part of the agreement, and it finally resulted in the Cassel Company receiving a consideration from the Crown Company, a portion of which consisted of 9,893 fully paid-up shares. The reconstruction of the company by the issue of additional shares made the Cassel Company's interest less; but, in order to meet this, an agreement was entered into whereby, in addition to the 9,893 shares the Cassel Company hold, it is to receive one-fifth of any additional capital beyond the first 77,729 shares— i.e., if 100,000 shares were issued and fully paid up, the Cassel Company would get one-fifth the value of £22,271, or £4,454 4s. The Crown Company is to have the right to use the cyanide process, and the exclusive right to grant licenses for the working of the said process within a radius of three miles from the Karangahake Trig. Station. At the present time the Crown Company pays a rental of £300 for the use of its plant; but, in the agreement referred to, the Crown Company is given the right to purchase the plant on satisfactory terms.

The mine when first opened up from the creek-level gave very promising returns; and it was expected that, having about 700 ft. of backs, payable ore would be found from the creek or No. 6 level, where the richest ore was found, to the surface. This level is in a considerable distance, and payable ore got all the way; but the shoot of ore does not seem to go up in the stopes to a great height. Numerous breaks and heaves have been met with, but the lode has always been picked up again. When No. 6 level was constructed for something like 900 ft. in a south-westerly direction the lode was found to have heaved a considerable distance to the eastward, some 102 ft., and on following it again for 70ft. another heave was met with, which threw it 40ft. to the westward.

Arrangements were completed at the time of my visit to sink a shaft about 450 ft. to the westward of the lode on the north bank of the Waitawheta Creek, where a large amount of rock-cutting will be required before sinking is commenced, in order to have room around the shaft. It is proposed to sink the shaft to a depth, in the first instance, of 230 ft., and open out at 200 ft., thus leaving 30ft. for a well. Taking the dip of the lode, which is westward, the 200 ft. level will give about 250 ft. of backs [a shaft is sunk, but on the southern side].

During the year ending the 31st March last, 4,084 tons of stone has been crushed, which yielded 9,9260z. 16dwt. gold, while an average of ninety-five men have been employed in the mine. This shows that there is rich ore in this mine; but, from what has transpired recently, there is grave doubts if anything like a fair percentage of the gold is saved. A sluicing claim was taken up by Mr. Gordon for working the waste tailings which had been subjected to the cyanide process, and the returns that he got were quite surprising, showing that a large quantity of gold has been lost, notwithstanding the treatment with a cyanide solution. Mr. Napier, the metallurgist for the company, is said to have accounted for the quantity of gold got by Mr. Gordon through it being in the tailings from the ore crushed for the Talisman Company, and not from the Crown ore. How this is ascertained is a problem not easily solved; if screens

of the same mesh were used when crushing the ore from the Talisman Mine as were used for crushing that from the Crown Mine, the fineness of the particles of gold coming through the screens would be practically the same in both instances. However, the plea set up is that the gold in the Talisman ore was too coarse to treat by cyanide. The tailings being lodged on the edge of the river, the water would naturally carry off the lightest particles first, leaving the denser material behind, and consequently it is said that Mr. Gordon succeeded in obtaining the concentrates of the Talisman Company's tailings.

In regard to the discovery of gold in the tailings from the Crown battery, the manager of the Talisman (Mr. Adams) throws a new light on the subject. He states that the tailings had to pass through a tail-race filled with loose stones, and that, when the crushing of the Talisman ore was completed, the Crown people would not allow him to clean it out, although he offered £50 for the right to do so, and also £5 per week for the right to work the Crown Company's tailings. This shows that the percentage of saving is not what it should be, and that in the case of public crushings each party owning ores should have them carefully sampled and assayed in order to ascertain what percentage of the gold or bullion is extracted. If the gold referred to came from the Talisman ore, as suggested by the Crown Company's officers, then they should have had no hesitation in allowing Mr. Adams to get whatever gold there was in the tailings; and, if it belonged to the Crown Company, the tail-race should have been cleaned up before commencing to crush for the public.

Woodstock Mine. —This mine has always been a valuable one, although part of the ground was originally held by the Maria Company, who gave it up as being worthless. For some years past it has been a steady bullion producer. Some of the ore from this mine was sold, and sent out of the country for treatment, while some was treated at the small battery belonging to the Woodstock Company; but all the mechanical appliances in connection with that battery were incapable of saving 50 per cent, of the value of the bullion in the ore. The returns from the working of this mine have been sufficient to pay for opening it up and prospecting, but have not been sufficient to pay dividends.

The No. 3 level is connected with hoppers, which are placed a little above the level of the Waitawheta Creek. On the opposite or north side of the creek a drive is in course of construction in what is known as the Truro Section, which will come under the rich shoot of ore formerly worked by the Sir Walter Scott Company.

Crushing Plant. —The plant consists of drying-kilns, similar in construction to those lately constructed by the Waihi Company, rock-breaker, ten-head stamp mill, and cyanide plant. This plant was purchased by Mr. H. Adams at Waiorongomai, being portion of the large battery erected by the Te Aroha Gold and Silver Company. The stamps are of the American pattern, 8cwt. each. It is intended to give these a drop of 5in., and run them at a speed of about ninety-five blows per minute. Dry-crushing is to be resorted to, and the fine pulverised ore treated in a cyanide solution. The ore is brought from the hoppers on a ground tramway, leading from the Crown Company's mine and over a bridge across the Waitawheta Creek, near its junction with the Ohinemuri River, where the loaded trucks are then raised on an inclined tramway by means of a water-balance to the level of the top of the drying-kiln,

which is about 50ft. above the level where the ore has to be emptied for the rock-breaker. The kiln where the ore is dried is 40ft in depth and 17ft. in diameter on top, having an egg-shaped bottom, and is covered with a shed. The drying of the ore is continuous. When a certain quantity is taken out at the bottom, more raw ore and firewood is placed on the top, and by this means the kiln is always kept full and burning. The kiln being constructed on the side of a hill, a drive is put in from the face to its bottom, and by a tramway from this point the dried ore is delivered into two hoppers, which in turn deliver it automatically to the rock-breaker. The broken ore from the rock-breakers is delivered into automatic Challenge ore-feeders, which feed the stamps, and the pulverised ore from the latter is conveyed into the percolation-vats. The ore is conducted by gravitation through the whole of the different processes from the time it leaves the hoppers which feed the rock-breaker until the gangue is landed on the waste heap.

Cyanide Plant. —The cyanide plant consists of eight square percolation tanks, each capable of treating 7 tons of ore, a solution tank, and three sumps, 10ft. by 10ft. by 3ft. deep, made with brick walls and lined with concrete. Close alongside the cyanide plant is a laboratory fitted up with all necessary materials and appliances for testing and assaying ores; and adjoining this is the smelting room, with furnaces and all appliances. The whole of the plant, although small, is very complete; but if the quantity of payable ore in the mine justifies a larger plant being erected there is plenty of room for the erection of same.

During the year ending the 31st March last there was 546 tons of stone crushed, which yielded 796oz. by amalgamation and 1,972oz. by the cyanide process; while forty-five men have been employed about the mine and works.

Talisman Mine. —This mine adjoins the Woodstock and Crown Mines, being on the upper side of the range going towards the trig. station. This mine was put on the London market with the view of forming a company with sufficient capital to thoroughly develop it and to erect machinery; but the local shareholders, after waiting a considerable time without receiving any encouraging information that a company would likely be floated, formed a local company, and after prospecting for some time determined to have a trial of 280 tons of the lode tested, and made arrangements with the Crown Company to have this done at its reduction-works. The result of this crushing and treatment of the ore with cyanide solution gave bullion of a value of £2,348 12s. Although the cost of the crushing and treatment of this ore was very high, it nevertheless was the means of establishing confidence that the mine was a valuable property, and enabled the company to get a syndicate to construct a plant such as has been erected for the Woodstock Company already described, on the payment of £500 in cash, and giving the syndicate the reserved shares which had not been disposed of. Messrs. Price Brothers, of the Thames, have got the contract for the machinery and plant. This, in itself, is a sufficient guarantee that good plant will be put on the ground, as nothing but first-class work has ever been known to be done by this firm whether the contract price pays them or not. As soon as it is completed this company is likely to get good returns from its mine.

The property comprises an area of thirty acres, through which the lodes found in the Crown and Woodstock Mines are likely to pass; but it was not known at

the time of my visit whether the lode in the Talisman Mine from which the crushing was taken was one of the lodes in other mines or not. Sufficient work has not yet been done to determine this. A level has been continued along the lode in a northerly direction towards the Woodstock with the view of identifying it with one of the lodes in the Woodstock Mine. The lode averages in this level about 2ft. in thickness. Again, the same level has been continued for 270 ft. along the lode in a southerly direction, and it was from this place that the crushing already referred to was taken. A winze was in course of construction in the southern end of the level at the time of my visit to this district, and the lode continues to maintain its width, having the quantity of the ore quite equal to that found in the level. A large supply of ore is on hand, ready to send to the crushing plant as soon as it is completed; but the company will have yet to get an economical means of transit of the ore from the mine to their reduction plant, which is to be erected at nearly 1,500 ft. lower level than the mine-workings. An aerial tramway will probably be the most convenient means of accomplishing this; but the steep character of the ground will necessitate a powerful brake being applied if a large quantity of ore has to be delivered. During last year there were fifteen men employed in the mine.

Bonanza Mine. —This mine adjoins the Talisman on the top of the range and on the watershed falling towards, the Rotokohu Gorge. The lode being worked in the Talisman Mine should pass through the ground. The operations at the present time are purely of a prospecting character.

Earl of Glasgow Mine. —This mine adjoins the Crown and Bonanza Companies' properties. Two small lodes are being worked, which are said to give a yield of from 4oz. to 8oz. of gold to the ton by the ordinary battery process, the tailings being saved for future treatment. This company has a small battery of five heads of stamps, situated on the side of the Waitawheta Creek, and the intention is to erect a larger battery with cyanide plant if, after prospecting the various lodes which run through the ground, the value of the ore in them warrants the expenditure. During the last year there were eleven men employed in the mine, and 194 tons of stone was crushed, which yielded 297oz. 12dwt. of gold.

Other Mines. —Owing to the rich discoveries in the Crown, Woodstock, and Talisman Mines, there have been a number of claims taken up on this field. There are a number of lodes which have never yet been prospected, and there is no reason why some of these should not be equally as rich as the lodes which have been opened up. It has only been by steady perseverance and persistency that the Karangahake field has been proved to contain ore of payable character. For many years after the field was opened, the ore in the lodes was considered of far too low grade for working, and even when patches of rich ore were found, after it was worked out very little prospecting was done to prove whether another shoot of gold would be found in the same lode. The greatest difficulty heretofore experienced was getting the ore tested at a battery. When the Adeline Company got a rich patch of ore a few years ago it had to be sent by drays to the Thames to be crushed; and the same difficulty has to be encountered at the present time. Although there will be three or four crushing batteries on the field, these will all have cyanide plants attached to them, and the cost of treating a small parcel of ore at one of these plants would be considerable, owing to the time it takes to clean up. There is very little

doubt, however, but that the Karangahake has a great future before it, and that valuable mining properties will yet be found all the way along the range to Waiorongomai.

REPORT ON GOLDFIELDS: WARDENS' REPORTS.

APPENDIX TO THE JOURNALS OF THE HOUSE OF REPRESENTATIVES, 1895 SESSION I, C-03A⁶¹⁴

No. 3. Mr. George Wilson, Inspector of Mines,

to the Under-Secretary of Mines, Wellington. — inspector of Mines' Office, Thames, 21st May, 1895. I have the honour to forward the following report on mines in the Hauraki District for the year ending the 31st March, 1895:

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Karangahake District.

Woodstock United Mine. —A large amount of work has been done in this mine, and a ten stamp dry-crushing mill, with complete cyanide plant, erected on the side between the Waitawheta and Ohinemuri Rivers. Mr. John McCrombie [McCombie], the mine-manager, gives the following report on the mine: "The quantity of ore treated for the year was limited, owing to the fact that treatment by amalgamation was superseded by the adoption of the cyanide process, and the transition necessitated a stoppage of ore-reduction for a period of eight months. Prior to this innovation the ore was dealt with by amalgamation, and subsequent thereto by the cyanide process, with the following results: 300 tons, by cyanide, yielded 1,972oz. of bullion, value £886 9s. 6d., 70 per cent. extracted; 246 tons, by amalgamation, yielded 796oz. of bullion, value £453 17s. 2d., 37 per cent. extracted. A contract was let in December last for driving a level in the Ivanhoe section of this company's property. At present the company's new mill is running full time in the reduction of ore from the No. 3 lode, and the results are so satisfactory that the erection of an additional ten head of stampers, together with an increase of the capacity of the cyanide plant, is likely to be carried out very shortly. A self-acting wire tram-line, 1,000ft. in length, has been erected for the conveyance of firewood from the bush to the kiln, and the average number of men employed during the year was forty-five—viz., contractors, sixteen men; and twenty-nine wages-men." Woodstock United Mine, 8th April, 1895.

Crown Mine. —Work in this mine has been steadily carried on during the year. The air-compressor (a Hirnante, 40-h.p.) has been put in position, and eight rock-drills are used in the working of the mine. The mine is well opened up; and 107 wages-men were employed. It is intended to sink a main shaft to the westward to work below water-level. This, however, will take some time to accomplish, and no extensive work can be done below the adit until the ground is drained by the shaft.

Talisman Mine. —This mine, which last year was under offer to an English syndicate, was not disposed of, and the shareholders registered under the

⁶¹⁴ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1895-I.2.1.4.4>

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Companies Act, and formed a company in Auckland. Arrangements were made to have a trial crushing at the Crown Mine battery, and 280 tons were conveyed by sledge and trolly to the tramway leading to the mill. [to County Rd and then Scotchman's Gully?] The ore was crushed dry, and treated by the cyanide process for a yield of 2,421oz. of bullion, of the value of £2,348 12s. The return being satisfactory, a commencement was at once made to drive a new level, and to erect a ten-stamp mill on a site adjoining the Woodstock Company's mill, on the Waitawheta Stream. The machinery will be driven by water-power, and a tramway is to be constructed from the new low level to convey quartz to the mill. Fifteen wages-men are employed.

Earl of Glasgow Mine. —This mine was steadily worked. In the month of June last year they started to erect their battery of five stamps and a berdan. It is situated on a branch of the Waitawheta Stream, and driven by water-power. The battery is connected with the mine by two ground tramways, 13 chains, and a self-acting grade 11 chains in length. This work was completed about the end of October, when crushing operations were started. In the mine 240 ft. of cross-cut and 132 ft. were driven, and 80 fathoms of reef stoped out; 194 tons of quartz yielded 297oz. 12dwt. of gold; 8 tons of ore sold to Mr. Wick were valued at £20 per ton. Eight owners and eleven wages-men were employed.

The Imperial, United, Bonanza, Golden Treasure, and Marmion have been worked, and the prospects are encouraging. A number of new licenses—viz., the Royal Mail, Wealth of Nations, Tenakoe, Red Gauntlet, Golden Fleece, Waverly, and Impulse have been lately taken up, and prospecting-work commenced.

1895**28 January**

In Karangahake there is not now a great deal of room for new houses, but old ones are being improved and enlarged. There is now a large fixed population besides a constant stream of traffic to and from Waihi and Waitekauri as well as the main coach traffic to Katikati and Tauranga, and the place has therefore a very busy appearance. A building formerly used as a store and telephone office, adjoining the Tramway Hotel, has been renovated to adapt it to its present use as a billiard saloon, and it is provided with an excellent table. The proprietor, Mr. A. Shepherd, is about to enlarge the Tramway Hotel, by building another storey on it, as its present capacity is altogether insufficient for the streams of travellers requiring accommodation. Mr. Ryan, of the Karangahake Hotel, is also enlarging his premises by excavating under them for the purpose of giving another storey, and at the same time to bring the building, which is at present on a bank, to the level of the main road.⁶¹⁵

Tramway and Karangahake hotels to get 2nd storeys**30 January**

EARL OF GLASGOW (Karangahake)

A day or two ago I paid a visit of inspection to this mine, which comprises an area of 27 acres, and is bounded on the north by the Crown and United mines, on the south by the Bonanza and Golden Run, on the east by the Golden Run, and on the west by the Talisman and Bonanza. Messrs M. Fleming and Jas. Liddell very kindly showed me over the various workings, a detailed description of which should prove interesting now that such a large amount of public interest is being directed to the Karangahake district. The Earl of Glasgow contains four claims well-known in the past history of Karangahake, and which even in the days of the old battery treatment of the ores of the district yielded handsome returns of gold, viz.: the Adeline, Rose, Dubbo, and Bonnie Jean.

The first section visited was the Adeline, where at No. 1 level the Adeline lode is exposed to view at the end of the stopes. It is a splendid looking body of ore, some 6 or 7 feet in thickness, and a trial parcel of five tons recently treated by the ordinary battery process gave the exceedingly satisfactory result of 1½ozs gold to the ton. To my mind, however, past experience has conclusively demonstrated the unsuitability of the old battery process for the successful treatment of the ores of this district, and when such an excellent result is obtainable by this primitive method, it is safe to predict that were the cyanide process adopted, the returns would be nearly double, only about 50 per cent, of the assay value being saved by the present mode of treatments. From a close examination of the lode, I am thoroughly satisfied that it is a valuable body of ore, gold being visible to the naked eye in some of the stuff broken out, and there can be no question that the whole 6ft or 7ft would prove highly remunerative if a cyanide plant were erected on the property, and the ore treated by that process. At No. 2 level of the Adeline section, the whole

⁶¹⁵ <https://paperspast.natlib.govt.nz/newspapers/NZH18950128.2.58>

New Zealand Herald, Volume XXXII, Issue 9729, 28 January 1895, Page 6

level has been timbered up to solid ground, and preparations are now being made for stoping on the 7ft reef. At the same level, what is known as the No. 2 lode, which varies from 4in to 8in in thickness, has been driven on a distance of about 80ft, and has produced some exceedingly rich ore, about 40 tons treated by the 5-stamp battery belonging to the Earl of Glasgow having yielded gold to the value of over £700, or at the rate of £17 10s per ton. Crushing is now in progress on ore from this lode, and is shaping for a handsome return. At the low (or No. 3) level of the Adeline section, which gives 100 ft of backs from No. 2 level, the reef averages some 12 or 15 inches in width, and is practically undeveloped. Gold is visible in the ore, and assays have conclusively proved that it is of excellent quality. In this (Adeline) section of the mine, what is known as the Sutro reef, which is about 2ft thick, has been cut, and looks well, but no work of any consequence has yet been done upon it. There are also three or four other lodes traversing this section, and running nearly parallel with the main Adeline reef, two of which have given excellent prospects, but very little work has yet been done to ascertain their real value.

In the Rose section, which is doubtless equally as well known as the Adeline to all who were connected with the Karangahake district some years ago, the No. 1 or top level gives some 40 or 50ft of backs, from the surface, and I am informed that in the days of the former proprietors 700ozs of gold were obtained from 100 tons of ore. The main Adeline reef has been driven on 150 ft north and 80ft south from the low level—which gives about 150 ft of backs from No. 1 level. In the latter drive the lode is from 10 to 15in in width, and it is estimated that by driving 300 ft the point would be reached underneath where the big patch was got in the Adeline reef when worked some years ago. The Earl of Glasgow proprietors have driven on this lode 30ft in a westerly direction, and a further 30ft should intersect the No. 2 reef, which has produced rich ore above when previously worked by the tributers.

There is not much to be said regarding the Bonnie Jean section, upon which comparatively little work appears to have been done at any time, but in the Dubbo portion the lode is from 3ft to 5ft in width, and a comparatively unlimited supply of ore is available. Some years ago, by battery treatment, 180 tons gave £560 worth of gold. The lode looks really well in places, nice blue streaks running through the ore, and there is no reason why it should not prove at least payable if a cyanide plant were on the ground.

Talking of the necessity that exists for the erection of a cyanide plant recalls the fact that the proprietors some time since erected a five-stamper battery, and one berdan, at which the ore broken out is being treated. The plant is a neat and compact one, and is driven by a 5ft Pelton wheel, motive power being obtained by means of a water-race 14 chains in length [282m], from a branch of the Waitawheta stream, the supply of water available being ample to meet all requirements. From the low level of the Adeline section of the mine a substantial ground tram has been laid for a length of 14 chains [282m], from whence the ore is emptied into a wooden hopper. From this hopper it is passed down a self-acting ground tram of easy grade. 11 chains in length [221m], which empties into a large receiving hopper capable of holding some 80 or 100 tons of ore, and is then trucked by means of a small tram a couple of chains [40m] in length straight into the mill.

It will thus be readily seen that the connection between the mine and the plant is all that could be desired, every detail having been carried out in an exceedingly satisfactory manner; but I trust the proprietors will pardon me when I say that the mode of treatment in vogue is of a too primitive description and altogether unsuitable for the nature of the ore. No blankets are used and there is only one berdan, and as a natural consequence it is not by any means surprising to learn that only about 50 per cent of the assay value is being saved. Even with this unsatisfactory mode of treatment, however, the crushing now in progress is shaping at the rate of over 40zs to the ton.

Having carefully inspected the mine, I am thoroughly convinced that the property is a valuable one, and if the cyanide process were adopted and suitable reduction works erected, there is no reason why the Earl of Glasgow should not be one of the largest bullion producers in the Karangahake district. The lodes are numerous, and some of them of large dimensions, while some of the smaller lodes of ore are rich, as is proved by very the handsome results obtained by the present proprietors. In addition to the lode's already mentioned, the outcrop of the Talisman reef is visible on the surface in the Earl of Glasgow ground, close to the Talisman Company's boundary, so that the operations of the latter company cannot fail to lend additional interest to this valuable area of ground. The proprietors have done a vast amount of useful work, extending over a period of three years, and have expended a considerable sum of money in systematically prospecting and developing the property, and it is gratifying to note that at last they are being suitably rewarded for their enterprise and perseverance.⁶¹⁶

5 February

Karangahake District. (by our own reporter)

...it was pointed out to me as an anomaly that while all the mines in the district are situated on the Waitawheta and south bank of the Ohinemuri river, there is no traffic bridge across the river. There is a suspension bridge, but it is only available for foot traffic, or for such material as can be conveyed across on a narrow truck. Of course, heavy machinery cannot be conveyed across it. The Woodstock new plant had to be conveyed across the river by means of a wire tramway; and no doubt the same course will have to be adopted with the plant now about to be erected for the Talisman, unless the County Council convert the present foot bridge into a traffic bridge. It is said the same suspension ropes and material would meet all requirements, and that at a cheap rate the bridge could be widened so as to make it available for wheel traffic. I am not sufficiently skilled in civil engineering to be able to express an opinion on this head, but the necessity for a bridge of some description must soon force itself on the local authorities.

The Woodstock new plant had to be conveyed across the river by means of a wire tramway.

THE WOODSTOCK. This mine has ways been looked upon as a most valuable property, and it has proved itself to be a steady gold-producer from time to time, but it has come into greater prominence of late than ever it

⁶¹⁶ <https://paperspast.natlib.govt.nz/newspapers/THS18950130.2.15>

Thames Star, Volume XXVI, Issue 7958, 30 January 1895, Page 2

occupied before. Twelve months ago I referred to the absolute necessity which existed for the erection of a suitable reduction plant with the necessary cyanide plant attached, as all previous experience had proved that mechanical appliances, even of the best description, were incapable of saving even 50 per cent. of the assay value of the gold. The company did, and still does, possess a little five-stamp mill with the necessary appliances for pan amalgamation, and ore was treated which was comparatively free milling quartz. The returns were sufficient to pay for opening up the mine, but not sufficient to pay dividends.

It was wisely decided by the directors of the company during the last year to erect a 10-head battery for dry crushing, and a cyanide plant, and this is now so far completed that it will be ready to start crushing in a few days. The battery is built close to the old one, which has not been dismantled, and is so placed against the side of the hill that the whole of the operations, except that of raising the ore from the tramway to the kiln, are on the gravitation principle, saving labour as much as possible. The ore is brought along the main tram line leading from the Crown mine through the Woodstock Company, and is then trucked across the bridge over the Waitawheta at its junction with the Ohinemuri river. Thence the loaded trucks are carried up on an incline tramway, operated by an ingenious contrivance, the motive power being supplied by iron tank trucks which, when filled with water from the race on top of their own incline, are allowed to descend nearly to the creek level, and the weight of these descending tanks which empty themselves automatically when they reach the bottom is sufficient to hoist the laden quartz truck to a platform on a level with the top of the kiln, a height of 50 feet above the stonebreaker on top of the battery.

The weighting of the tanks and adjustment of the ropes and drums required a great deal of care, but Mr. H. Adams, who has had the erection of the plant and the carrying out of all the details in charge, has proved himself perfectly competent to work everything into good going order. The kiln, where the ore is to be roasted before being delivered into the battery, is 40 feet deep and 17 feet in diameter on top, the bottom being egg-shaped. It is covered with a shed, and is connected by rail and a travelling tram with the platform on top of the incline tramway. The bottom of the kiln leads into a drive in the face of the hill, and by a tramway the burnt ore is delivered into two hoppers which deliver it automatically as required to the stonebreaker, the whole of the operations being by gravitation.

The battery consists of two five-stamp mills, the stampers weighing 8cwt each, having a 5-inch drop, and falling at a speed of 94 per minute. The quartz is delivered from the stone-breaker to the automatic feeders into the mills, and is in the regular course conveyed as crushed ore to the cyanide vats.

The cyanide plant is very complete. The solution comes from the mixing tank by gravitation into the eight percolation tanks. These are square, and each is capable of holding 10 tons of crushed ore, but it is intended for the present to work only seven ton charges. There are concrete sumps and towers for mother solutions and washings. With the exception of the square percolation tanks, the whole of the appliances of the plant are of the latest designs, every principle being adopted which has been found to be advantageous in other plants, and speaking of the reduction works and appliances generally the manager, Mr. McCombie, says that Mr. H. Adams deserves the highest credit

for the material and workmanship he has put into it. The laboratory and furnaces and weighing room are fitted with all requisite appliances, everything being now ready for a start.

Of course, a good deal of firewood will be required for the kilns, and the conveyance of this by the cheapest means has engaged the attention of the manager. To effect this an aerial tramway, 1000 feet span, has been extended from the high hill on the right-hand side of the Waitawheta to the side of the kiln, and along this the wood is delivered over the long span automatically, thus effecting a saving of at least 2s per ton, which is a very material item of saving in a necessary article.

In the mine itself I found that the year's operations consisted more of pushing forward the works then in hand, and opening up the lodes and levels advantageously, than in new workings or investigations. The main or No. 3 level opens on the side of the gorge a considerable height above the creek level. The level is connected with a quartz hopper on the opposite side of the creek by means of an aerial tram, and the quartz from this hopper falls into the trucks on the horse tramway for conveyance to the mill. On this No. 3 level the lode known as the Welcome reef, which is only one of three parallel lodes in the mine, has been opened up for a total distance of 420 feet...

The Shepherd's lode mentioned below would be that portion of it on this same side of the river. It is on the western side of the Woodstock Blow. The Truro section is on the other side of the river, on Taukani ridge.

A contract drive is now in progress at the No. 3 level to intersect the reef known as Shepherd's lode...

On all those reefs additional levels can be opened at a greater depth of 250 feet on the line of the main tramway leading up the gorge, so that the quantity of ore available seems to be unlimited. The manager, however, has still other works in progress. A contract has been let for driving 200 feet in what is known as the Truro section of the mine, on the opposite side of the river, which should bring the level under the rich shoot of ore formerly worked by the Sir Walter Scott, and giving 150 feet of backs on the Sir Walter Scott reefs, from which ore can be easily taken to the kilns by a ground tramway 15 chains [302 m] in length.

Is this ground tramway at kiln-top level, later extended to become the Windows tramway? "Windows" were created 1897.

It will be seen that the present aspect of the mine is in every respect encouraging, and as to its future prospects, the company have their mine so extensively opened and tested that they can look forward with confidence to steady, profitable returns. Last year I pointed out the necessity for a battery. The company now possesses a very efficient one, but I think before very long they will find it necessary to increase it to at least double its present capacity.

It was expected that the battery would be ready to start crushing this week, and it is probable that the directors and leading shareholders in Auckland will visit Karangahake to inspect their mine and battery on that occasion.⁶¹⁷

⁶¹⁷ <https://paperspast.natlib.govt.nz/newspapers/NZH18950205.2.49>

New Zealand Herald, Volume XXXII, Issue 9736, 5 February 1895, Page 6

Water balance and ore kiln installed

Reported in AJHR 1895. Search: water-balance. ⁶¹⁸

6 February

KARANGAHAKE DISTRICT (CONTINUED).

THE TALISMAN G.M.C.

The Talisman mine, adjoining the Woodstock and Crown on the upper side of the range, is one which within the last month or two has come into great prominence. Its situation is such that it has always been looked on as a promising property, but for a long time it has been held for speculative purposes, barely sufficient men being employed to save the property to the shareholders, who, despairing of being able to obtain local capital for the erection of machinery and the development of the mine, had it under offer in the London market. Tiring of continued delays in that market, the shareholders wisely determined to form a company locally, reserving a portion of their capital stock to aid in the purchase of machinery. The shares at once sprung into popularity, and the mine now gives promise of being one of the best gold producers in the Karangahake district. Some of the old shareholders were often laughed at and twitted, when they spoke of the high percentage afforded by assays from the main reef on which they had driven, and were chaffed with keeping such a valuable ore untried, but those who so chaffed the shareholders forgot that there was no means of getting the ore treated. The Crown Company's reduction works and cyanide plant were the only appliances in the district capable of treating refractory ore, and these were kept fully employed on the Crown mines' ore, and were not available for public crushing. Shortly after the company was formed, however, an opportunity was offered under certain terms to treat a quantity of the ore on hand from the Talisman reef at this plant. The terms were high, but the result of the crushing was such as to at once establish public confidence in the resources of the mine. The parcel treated was no picked lot nor was it a small sample. It was 280 tons of ore obtained from the drive along the reef, and it realised bullion to the value of £2348 12s. This was surely convincing proof that in this reef alone the company had before them assured prospects sufficient to warrant the necessary outlay of capital for the erection of a crushing plant, and no time was lost in entering into negotiations for it. A syndicate offered to erect a 10-head battery with complete cyanide plant all new and similar to that just completed for the Woodstock, taking as payment the reserved shares and cash to the amount of £500. The company already possessed the necessary water rights, and in fact the flume track - an old one—is almost ready for fluming in the water of the Waitawheta River as a motive power. Operations have been started. A machine site is being excavated on the face of the hill a short distance above the junction of the two rivers, tenders for the plant were called for, and that of Messrs. Price Bros., the well known Thames engineers, having been accepted, they have already made a start with the manufacture of the

⁶¹⁸ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1895-I.2.1.4.3>

REPORT OF THE DEPARTMENT OF MINES ON THE GOLDFIELDS OF NEW ZEALAND FOR THE YEAR 1894-95. BY H.A. GORDON, Esq., F.G.S., INSPECTING ENGINEER., Appendix to the Journals of the House of Representatives, 1895 Session I, C-03

plant. It is to be erected under the supervision of Mr. H. H. Adams, who has so successfully completed the Woodstock plant.

As already indicated, the mine— 30 acres lease—is advantageously situated on the strike of the principal reefs of the Crown and Woodstock mines, all of which run through it. Whether the Talisman lode, now being worked, is one of them I do not know - probably it is—but at all events it is of itself of sufficient importance to constitute a good mining property. In the upper level the drive is being continued along the lode in a northerly direction towards the Woodstock, the intention being to come out to the surface at that point so as to locate the reef, and fix its identity. In this level the reef averages two feet or more of ore, and in the present face it is forty feet from the surface. On the same level the lode has been driven on 270 feet in a southerly direction, and it was from this drive mostly that the ore recently crushed with such satisfactory results was taken. A winze is being sunk 20 feet from the south face, and it is now down 66 feet, making a total depth from the surface at this point of 270 feet, or thereabouts, while the lode continues to maintain its size and regular appearance through an excellent class of country, and assays and tests made daily show that the ore is of high grade, equal, if not superior, to any found in the level. There are already stored at the mine, waiting the completion of the battery, 150 tons of ore which has accumulated since the crushing.

Arrangements will no doubt soon be made for opening the reef on still deeper levels, and developing some of the other reefs on a systematic plan of operations. The conveyance of the ore to the battery would appear to present great difficulties owing to the precipitous character of the ground, and the great height above the creek level - upwards of 1000 feet - at which the workings are situated, but the very nature of the ground of itself affords good opportunities and facilities, and a self-working aerial tramway will be constructed which will convey the ore direct to the battery site or rather to the kilns, where it is to be roasted before it is passed into the mill for pulverising. The mine is now in competent hands, and I am satisfied from present appearances that the company has a prosperous career ahead, and that the mine will be a steady gold-producer and dividend-payer when the battery is fairly at work.

THE BONANZA G.M. CO. This is another mining property which is coming into prominence, and which, if I am not mistaken, is likely to become a very valuable asset in the mineral wealth of Karangahake. It adjoins the Talisman, on the top of the range, but is situated on the other watershed, emptying towards the Rotokohu Gorge. It is on the line of the Talisman reefs, and it is probable that in the near future arrangements may be made for working it through the Talisman drives and levels. At present the operations are more of a prospecting character, and to Mr. John Bowler, a well known Thames mine manager and prospector, has been given the charge of the mine. During my visit to Karangahake Mr. Bowler and his men had discovered on the surface a nice-looking leader six or eight inches thick, which, although not showing gold, gives good dish prospects, and this is now being opened up, the manager being of opinion that it is either the Talisman lode or a branch leading into it, but to make certain a shallow crosscut is commenced in order to intersect it, after which, should appearances warrant, it will be further opened up. I may add that in forming the company shares were reserved for the purchase and acquisition of a crushing plant when it is required.

EARL OF GLASGOW. Adjoining the Crown and Bonanza is a claim known as the Earl of Glasgow holding, which for some time has been producing steady gold returns at a small five-head battery owned by the company, and situated on the Waitawheta creek. It is claimed for it, and apparently on good authority, that in this company's ground there are at least a dozen valuable reefs including the Crown and Talisman lodes and the once famous Adeline lodes, which although small in size were at one time rich gold producers. Two of these small lodes are at present being worked on, and I am informed that the ore is yielding six to nine ounces to the ton from the battery process, and that the tailings are being saved for further treatment, the intention being as soon as arrangements as to finances can be made to procure a larger battery and a cyanide plant, there being, it is stated, ample power to drive 15 head of stampers. Meanwhile prospecting is going on, developing some of the other lodes in the mine. The resources of the Earl of Glasgow and its numerous lodes are considered very promising by those who are best acquainted with the district.⁶¹⁹

11 February

UPPER THAMES GOLD MINES.

PRESENT ASPECTS AND FUTURE PROSPECTS. (BY OUR OWN reporter.) KARANGAHAKE DISTRICT (Continued)

CROWN MINES COMPANY. My visit to the Crown Mines Company was that which on the whole proved least satisfactory to me on this occasion, for when I paid my last previous visit to it prospects seemed to be opening up which gave to the mine a stamp of permanence and wealth which subsequently resulted in disappointment to some extent. The company then seemed to be entering on a prosperous career, and to have overcome all initial difficulties. They had erected a splendidly equipped 20-stamper battery, with a complete plant for saving gold by the cyanide or Cassel patent process, and this had been connected with the mine by a horse tramway, so that all that appeared to be required was a continuation of the output of payable and rich ore, which then seemed to be inexhaustible.

The mine itself had been opened at what is known as the No. 6 level, some 20 feet above the river bed, with the vast cliff rising above it, in which the lodes had been opened at various levels, and affording backs of about 1000 feet over the tramway. At the very entrance of the level rich ore—the richest hitherto found in the district—was discovered, and this was followed in for a considerable distance, and in January, 1894, an entirely new run of gold had just been reached in the reef in a most promising class of country. The manager was jubilant; but this run of gold was neither wide in extent nor, unfortunately, did it continue upwards in the stopes.

The reef has proved to be a troublesome one to work, for it is itself hard, and is encased in hard country; but, worse still, it is liable to faults, which render following it a work of great difficulty and anxiety. Since my previous visit operations have been greatly extended, and as I followed the manager, Mr. McGruer, through the workings, I could observe some material changes. The

⁶¹⁹ <https://paperspast.natlib.govt.nz/newspapers/NZH18950206.2.61>

New Zealand Herald, Volume XXXII, Issue 9737, 6 February 1895, Page 6

lode has been followed with greater or less regularity in a south-westerly direction for a length of 950 feet at this No. 6 level. Numerous heaves and breaks had been met with in that distance, and often the manager must have been puzzled to judge in what direction he had to look for the missing reef, but to a close observer like Mr. McGruer, who has watched the ground closely, there is always some slight indication in the direction of the slide itself to guide him, and these have seldom been in fault. But at this point, 950 feet from the mouth of the tunnel, the most serious heave or fault yet experienced occurred. A diagonal crosscut was put in to recover the reef and it was found hove away to the eastward no less a distance than 102 feet from its original course. When picked up the lode was of fair grade quality, and it was followed without further interruption for 70 feet, when, hey, presto! it again disappeared. Indications pointed to the westward as the direction in which it had jumped on this occasion, and sure enough after driving 40 feet in this direction the reef was found, and had just come into the face on the day I visited the mine recently. It is a nice promising class of stone, but none of it had then been tested.

At present the main supply of rich ore is being obtained from workings at both sides of the river and under its level. A winze has been sunk on the reef to a depth of 60 feet in the drive on the south bank of the river, and as this brings it 40 feet under the creek level, it was started some distance in the drive so as to prevent as far as possible the influx of water from the river through crevices or seams. The lode is fully six feet thick, and of excellent formation, and from its lowest depth it produced some rich specimen stone on the occasion of my visit. The reef is also opened by a winze from the drive on the same level at the opposite side of the river, and stoping is going on in both places simultaneously, but of course operations carried on in this way must necessarily be expensive, as the quartz broken has to be raised to the level, and there is necessarily a good deal of water to be baled out.

However, the supply of payable ore has to be maintained to keep the mill going from these and other workings, and provision had not been made early enough for opening up fresh levels from a shaft. The ore is supplied from these stopes, also from the stopes over No. 6 level north and No. 3 level south, and what is known as the No. 4 level is also being pushed forward. But the work of preparing for fresh levels on the reef has now forced itself on the company, and a site for an engine shaft, has been selected on the north bank of the river about 450 feet west of the No. 6 tunnel. It is the only possible site available in this precipitous locality, and it is even then estimated that 2600 yards of rock will have to be shifted before a start can be made with sinking [This is roughly the area where the smithy was later put]. The proposal is to sink 230 feet, opening out at 200 feet, and leaving a well hole of 30 feet. This it is shown would give 280 feet of backs on the underlie of the reef to No. 6. level. The estimates and plans which have been carefully worked out by the manager have been sent home by the last mail to the company's office in Glasgow for approval, and if approved work will be started forthwith. Meanwhile Mr. McGruer awaits instructions.

This shaft is never sunk. An inclined shaft is sunk from an underground chamber on the south side of the river. See later.

Of interest here is that the reef above the river level is not of high value, the company already mining below this level.

In the course of a chat with Mr. McGruer I found he had another scheme in view which he thinks could be worked out with great advantage as a means of developing fresh resources on the reef to the depths at which it is already opened, and the idea struck me forcibly when on the ground he pointed out what he proposed. It is this. He proposes that the main drive on the course of the reef southward should be continued for about 400 feet past the present face. This from the lie of the country and its geological formation would bring them into a much better strike of country such as that in which the Talisman Company is now operating, and he is sanguine that at this depth a concentration of the reef systems opened higher up and in adjoining mines would be found in a class of rock which would be eminently characteristic of auriferous ores. The scheme from my knowledge of this and adjacent mines and the surroundings generally commended itself strongly to my judgment, and I hope to see it carried out in the interest of the company and of the district as a whole, for it would be of vast importance as a prospecting work.

On visiting the battery (which has already been fully described) I found that some changes had taken place in the management, and that matters were in a transition stage. Mr. John McConnell, the general manager of the company, under whose direction the plant had been erected, had gone home to Scotland at first for a visit, but for some reason after his arrival he resigned his appointment, and no one has yet been appointed to succeed him. Mr. McGruer has sole charge of the mine. Mr. Hutchinson has the management of the plant and machinery, and Mr. Napier, the well-known cyanide expert, has charge of the Cassel process and assay department. Mr. Richd. Spratt, of Auckland, visits the mine periodically to inspect and report for the directors and to confer with the management generally. Whether the present methods will be continued, or whether the company will send out another general manager, is not known here. Meanwhile the plant, which is in splendid order, is in full operation on ore from the company's mine, which I am informed averages in value about £5 per ton.

OTHER MINES.

Recently a very large number of mining areas have been taken up, owing to the increased attention which the mineral resources of the Karangahake district is attracting, and some of these properties are very highly spoken of by those best acquainted with them. Companies have been floated to provide capital for the development of several of these properties, and many have already got beyond the initial stage. Amongst these is the Imperial G.M. Co.'s mine, formerly held by Mr. Clements. It adjoins the Woodstock and Talisman's mines, and competent mining experts such as Mr. John McCombie, manager of the Woodstock mine and property, and Mr. A. Newdick, a well-known Thames manager, have reported favourably on three distinct reef systems which traverse the ground, and some of which have been opened to a considerable extent, and they have recommended a plan of operations for the development of two of these reefs by means of a new level. The Wealth of Nations and the United are two other mines which occupy good positions, and as the companies to work them have been formed and initial steps taken for working them, they may develop shortly into good mines and steady gold

producers, regarding which I may have more to say when I next pay a visit of inspection to the mines of the Upper Thames.⁶²⁰

Woodstock battery starts 11 February

14 February

Mine Manager's Reports

Woodstock United (Karangahake, February 11). — The new mill, comprising stonebreaker, self-feeders, and ten head of stampers, was started soon after eight o'clock this morning, since when it has been running steadily for twelve hours without a single hitch, and the whole concern reflects great credit on the contractor, Mr. Adams, and his staff of workmen. At present the stampers are striking 100 beats a minute, with a four-inch drop, and the mortar boxes are so well closed in that the dust escaping therefrom is scarcely noticeable.

Tomorrow we shall begin running full time, with three shifts of hands, and then a commencement will also be made to charge the percolating vats with reduced ore. On Wednesday I hope to be able to send you the assay value of the first bulk lot of ore passed through the mill, and I think the results will be satisfactory.

The mine manager telegraphed yesterday:—" Filled first vat; eight tons general ore, assay value, £5 9s per ton."⁶²¹

The new Woodstock and new Crown batteries are dry crushing. This means dust, silicosis and the early deaths of many miners. Wet crushing will be adopted in time, the Crown first.

19 February

The Woodstock battery has been running for one week and is going in splendid order. Everybody who knows anything about the Woodstock mine speaks in perfect confidence of the returns that may be expected from the treatment of the ore, and there is enough ore in sight to keep the mill going for years. The Crown mine is just now producing a splendid class of ore from the winze. The reef improves as it goes down, but the production of first-class ore in great quantity from this mine cannot take place until the shaft has been sunk. The machinery necessary for this great work will soon be on the ground.

On the Talisman battery site, the excavation for the foundation of the mill are making very good progress, and the erection of the building itself will soon be underway.⁶²²

Talisman battery erection underway

27 February

Crown Mine.— The Crown Mines Company have recently re-constructed, and so increased their capital, with the object of providing funds for developing the lower levels of their mine in this place. They have a very rich property

⁶²⁰ <https://paperspast.natlib.govt.nz/newspapers/NZH18950211.2.49>

New Zealand Herald, Volume XXXII, Issue 9741, 11 February 1895, Page 6

⁶²¹ <https://paperspast.natlib.govt.nz/newspapers/NZH18950214.2.64>

New Zealand Herald, Volume XXXII, Issue 9744, 14 February 1895, Page 6

⁶²² <https://paperspast.natlib.govt.nz/newspapers/THA18950219.2.22>

Thames Advertiser, Volume XXVI, Issue 8052, 19 February 1895, Page 3

here, but it is in hard country, and the workings on the surface have been to a great extent exhausted. At the present time some very rich ore is being got from a winze which has been put down about seventy feet on each side of the Waitawhetua stream. The appearance of the lode at this stage, as well as at other points in the mine, is such as to lead to a most reasonable presumption that at lower levels it will be both bigger and richer. The work of putting down a shaft has been authorised by the directors in Glasgow, and the necessary pumping and winding gear will shortly be putting in an appearance on the ground; and the sinking operations will be commenced.

The Crown Company reduction plant is in splendid order and condition, and is kept running on very fair stone.

Talisman. —In the Talisman mine, the operations up to date are of a limited extent when compared with the great developments which have taken place during years of work in the Crown and Woodstock mines. But limited as operations in the Talisman have necessarily been hitherto, they have already told a golden tale, and spoken volumes for the future potentialities of this undoubtedly rich mine. In addition to a parcel of very rich ore sent to a foreign market, a bulk parcel of general ore recently treated for the Talisman people by the Crown mill yielded the splendid return of nearly £9 per ton. There is plenty more of this sort of stone in the mine, and the Talisman Company have wisely decided to once to erect a battery of cyanide plant of their own. The excavations for the foundation of the Talisman mill are nearly complete, and the erection of the building is to be proceeded with at once. This mill is to be similar to the one just completed for the Woodstock, from which it is situated a chain or two further up the Waitewhetua stream and it will be connected with the Talisman mine by aerial tramway.⁶²³

Talisman to use cableway from the beginning.

8 March

In the Crown mine a Worthington pump, driven by compressed air, has been fitted in winze under No. 6 level. It throws 3900 gallons per hour, and with its aid sinking will be continued.⁶²⁴

9 March

THE WOODSTOCK. What was intended to be a very important function, the formal opening of the Woodstock battery at Karangahake, which was to have taken place on Friday, was spoiled in consequence of want of arrangement. Mr. W. Gorrie (chairman of directors), Messrs. Richard Spratt, A. Carrick, W. Frater, W. Buckland, and others, were passengers by the s.s. Paeroa, arriving at Paeroa before daylight on Thursday morning. Here Mr. Pond, who had returned from Waihi, and Mr. S. T. George were met, when it was ascertained that no invitations had been issued, and no arrangements made for the banquet intended to be given. A hurried meeting of directors was held in Coot's Hotel, and it was decided then and there to postpone the formal opening of the plant

⁶²³ <https://paperspast.natlib.govt.nz/newspapers/AS18950227.2.25>

Auckland Star, Volume XXVI, Issue 49, 27 February 1895, Page 5

⁶²⁴ <https://paperspast.natlib.govt.nz/newspapers/NZH18950308.2.65>

New Zealand Herald, Volume XXXII, Issue 9762, 8 March 1895, Page 6

for three weeks. By that time there will be a general clean up, which will, as the first return from the new plant, be an important feature.⁶²⁵

What?

The battery, which we came up to formally start, had been I found, informally working for about a month, and a very fine and efficient plant the company possesses. It is a ten head battery which dry crushes the ore received from the kilns and from thence it is passed through the regular treatment by cyanide of potassium — the Cassel process.

Nothing definite is yet known as there has been no cleaning up since the Cyanide process was started, but Mr. McCombie, the manager, has concluded as the result of the flushing of two vats that the saving is 85 per cent of gold, less, of course, of silver, but the working is very good and encouraging. Better results will no doubt be obtained when experiments guide in the direction required.

In the battery itself they were treated to a surprise. The cyanide plant is as complete as any in the district and assays of the ore passed through are carefully taken. But outside the battery is a ripple table with copper plates for the purpose of saving the gold from the ores treated by the cyanide process in the vats and scoured out by nozzles over those tables. I thought it very nice although not a new experiment for it is at work in the Golden Cross, Waitekauri, but I certainly was surprised at the result. The ore treated went through a 40 mesh, fine enough, one would think, to bring gold within the reach of cyanide. It does not do so, apparently, for Mr. McCombie showed me a nice little bottle of 3½oz of bullion, worth £2 an ounce, saved on these tables, the saving being coarse gold, which cannot be profitably attacked by the cyanide process. It is a feature in regard to cyanide treatment which mine owners will have to contemplate in the erection of new plants, and the experiment is of great interest. Mr. McCombie informs me that he will probably put wider copper plates into use, and if necessary, remove the amalgamating pan from the old battery to treat this free gold.

So far as the mine is concerned, that is to say, the main workings on the south side of the Waitawheta River, there is not very much to add to what has already been published, but on the opposite side of the creek, in what, I believe, was formerly the Ivanhoe ground, a drive has been in progress to intersect promising lodes found higher up.

THE TALISMAN. Many of the gentlemen who came up for the start of the Woodstock battery are also largely interested in the Talisman. They could not, on their return from Waihi, devote much time to investigating the mine, but what they saw was satisfactory, and the plan laid before them by Mr. Adams, the managing director, was certainly encouraging.

The work of erecting the battery is making good headway. The excavation of the battery site is just completed, and the contractors (Price Brothers, of the Thames) have already a large quantity of bricks and timber on the ground for the buildings. A strong wire tramway is also thrown across the river from the Crown battery tram to the battery site to carry the heavy machinery. The plant

⁶²⁵ <https://paperspast.natlib.govt.nz/newspapers/NZH18950309.2.72>

New Zealand Herald, Volume XXXII, Issue 9763, 9 March 1895, Page 6

when finished will be 10 head of stampers with a complete cyanide plant, exactly similar to that now working for the Woodstock.⁶²⁶

The Woodstock plant of 10 stamps is cyaniding and dry crushing the ore received from the kilns. They are discovering, as many others will, that cyanide does not easily dissolve the coarser gold in the crushed ore. Finer grinding will be required to remedy this.

Talisman battery to be exactly similar to the Woodstock battery, and also use a wire tramway to get heavy material across the Waitawheta River. Of course they have to get it to Battery Flat first.

Te Aroha News

The residents of Karangahake sent in a petition to the Council asking for a new traffic bridge, the present one at Shepherd's Hotel being too narrow, too weak, and in not a very safe condition. Any day it might be carried away, and such a thing happening would be a great blow to the various mining properties who are dependant on it for receiving machinery, supplies etc. Mr Marsland, an architect, lately arrived in Karangahake, had offered to draw up plans and specifications free of charge for a bridge. His offer was accepted and he is to be requested to prepare plans and specifications for a new traffic bridge, capable of bearing a maximum weight of 7 tons, at Karangahake, cost to be about £300.⁶²⁷

This sounds like the "Traffic" bridge that will put in beside the original suspension bridge to Battery Flat, but not until 1897. It will also be a suspension bridge. No more has been heard about the bridge mooted for the new Crown battery site?

22 March

Operations in the Talisman mine are also of a most interesting character...The work of erecting the company's new battery is making good headway. The excavation of the battery site is just completed, and the contractors (Price Brothers, of the Thames,) have already a large quantity of bricks and timber on the ground for the buildings. A strong wire tramway is also thrown across the river from the Crown battery tram to the battery site, to carry the heavy machinery. The plant: when finished will be ten head of stampers, with a complete cyanide plant, exactly similar to that now working for the Woodstock.⁶²⁸

25 March

Sludge Channel Proclamation of the 25th day of March, 1895, to take effect July 10.

Proclamation, dated the twenty-fifth day of March eighteen hundred and ninety-five, the Waihou and Ohinemuri Rivers, in the Hauraki Mining District and the Auckland Land District, were, in accordance with Mining Act then in

⁶²⁶ <https://paperspast.natlib.govt.nz/newspapers/NZH18950309.2.72>

New Zealand Herald, Volume XXXII, Issue 9763, 9 March 1895, Page 6

⁶²⁷ <https://paperspast.natlib.govt.nz/newspapers/TAN18950309.2.8>

Te Aroha News, Volume XI, Issue 1719, 9 March 1895, Page 2

⁶²⁸ <https://paperspast.natlib.govt.nz/newspapers/NZH18950322.2.80.10>

New Zealand Herald, Volume XXXII, Issue 9774, 22 March 1895, Page 2 (Supplement)

force, duly proclaimed as watercourses into which tailings, waste water, and mining debris from mining claims in their vicinity might be discharged.⁶²⁹

Or 10 July, according to AJHR C3 1899, page 165.⁶³⁰ This is when it was to take effect.

22 April

MINE MANAGERS' REPORTS.

Woodstock United (Karangahake, April 18)

...The buddle concentrates, representing about one-eighth of the bulk ore treated, are worth between £4 and £5 per ton, which will pay handsomely for second treatment, and we are now constructing a tramline for their conveyance to the kiln. This section of tramline can be worked by the water trucks, and therefore the cost of transit from point to point will be trifling.⁶³¹

It appears that McCombie is creating a concentrate from the tailings, which contains much of the coarser particles of gold not dissolved by the cyanide. He then intends to put them back through the kiln?

17 May

A definite offer has been received by the directors of the Woodstock Gold Mining Company from a London syndicate to take over the Woodstock mine at Karangahake. The proposal submitted is to form a company, the capital of which shall be £150,000, in shares of £1 each, the present Woodstock Company to receive 82,500 fully paid up shares; 55,000 shares, also fully paid up, to go to the promoters, out of which they are to provide £25,000 for working capital; the remaining 12,500 shares to be reserved, the promoters having the option of taking these up, within 12 months, at a premium of 5s per share. As to these 12,500 reserved shares, if disposed of they also to go towards working capital, making the total of that £40,625. The proposal also provides that the new company shall clear off all liabilities of the existing company, for a colonial share register and a colonial advisory board in Auckland. A meeting of the Woodstock directors was held on the 30th ult., when it was decided to accept the above offer subject to the approval of the shareholders, which was obtained at a meeting held on Wednesday last.⁶³²

⁶²⁹ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1910-I.2.1.4.30>

WAIHOU AND OHINEMURI RIVERS (REPORT OF COMMISSION APPOINTED TO INQUIRE INTO SILTING OF); TOGETHER WITH MINUTES OF EVIDENCE AND EXHIBITS., Appendix to the Journals of the House of Representatives, 1910 Session I, C-14

⁶³⁰ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1899-I.2.1.4.3>

THE GOLDFIELDS OF NEW ZEALAND: REPORT ON ROADS, WATER-RACES, MINING MACHINERY, AND OTHER WORKS IN CONNECTION WITH MINING., Appendix to the Journals of the House of Representatives, 1899 Session I, C-03

⁶³¹ <https://paperspast.natlib.govt.nz/newspapers/NZH18950422.2.52>

New Zealand Herald, Volume XXXII, Issue 9800, 22 April 1895, Page 6

⁶³² <https://paperspast.natlib.govt.nz/newspapers/NZH18950517.2.76.7>

New Zealand Herald, Volume XXXII, Issue 9822, 17 May 1895, Page 2 (Supplement)

28 May

Karangahake Tailings.— Mr. H. Gordon, who has been having a 12-ton parcel of tailings treated at the Moanataiari battery, which he obtained from his sluicing claim in the river near the Crown Company's battery, has banked a further parcel of 45ozs 1dwt melted gold, which makes a total of 111ozs 1dwt so far obtained from the tailings. A few ounces more are expected from the final cleaning up, which takes place tomorrow morning...

Woodstock United (Karangahake, May 23)

The second set of amalgamating plates will be in position tomorrow, after which time there will be an increased saving of coarse particles of bullion that are now been caught in the concentrates.⁶³³

1 June

Karangahake Tailings.— excellent yield of gold which Mr. Gordon has recently obtained from tailings procured by means of a sluicing claim at Karangahake, has naturally provoked a good deal of discussion in mining circles, such a loss occasioned in the treatment of ore being adversely criticised. I called upon Mr. Napier, metallurgist for the Crown company, and asked him if he intended making any explanation regarding the matter. Mr. Napier, however, replied in the negative, as he had nothing whatever to do with a curious public, but if any explanation should be demanded by his directors, he was quite prepared to give such a statement that would be maintained, exonerate the present management from any blame or the want of attention required in the treatment of the ore. In the course of a chat with Mr. Napier, however, I gleaned a little information which throws light on the subject, and accounts to a considerable extent how Mr. Gordon (who has undoubtedly shown himself to be a man who does not let chances for betterment pass by without improving the golden opportunity) dropped on such a payable concern.

It appears that the bulk of the tailings treated by Mr. Gordon was not from Crown ore, but from Talisman, lost during the treatment of the big parcel at the Crown battery. Immunity from loss, as far as the Crown is concerned, Mr. Napier does not claim, as he admits that Mr. Gordon did obtain some concentrates, the residue of thousands of ore treated by the Crown Company long before, and even after, he assumed control of the works, so that when the quantity of concentrates is divided up by the quantity of dirt crushed the loss is really not so large as it appears in the aggregate. Mr. Napier also states that it is only recently that the difficulty has arisen with regard to the coarse gold which is now being carried in the Crown ore, and immediately he discovered that the cyanide was not saving the percentage which ought to be recovered, and that gold was still being left in the tailings, he had the tailings saved and stored for re-treatment, so that for some months past no tailings have escaped, and whatever quantity of gold has managed to get over the tables there will be still another chance of winning it when the tailings are again subjected to cyanide or any other method of treatment decided upon.

⁶³³ <https://paperspast.natlib.govt.nz/newspapers/NZH18950528.2.64>

New Zealand Herald, Volume XXXII, Issue 9831, 28 May 1895, Page 6

Then with regard to the Talisman dirt Mr. Napier asserts that it was the desire of the Talisman Company to have their ore treated by cyanide, and accordingly negotiated with the Crown Company for the use of the plant. Everything having been amicably settled the quartz was passed through the mill, and when he discovered that the gold coming from the ore was very coarse, he immediately informed Mr. H. H. Adams, manager of the Talisman, of the fact, and to obviate the difficulty and to recover as much bullion as possible, under the circumstances, it not being expected that the Crown Company were going to erect special appliances to save the coarse gold, especially when it was thought there was no need for it, as far as they were concerned, Mr. Adams at once fitted up, temporarily, a patent amalgamator, but, owing to some reason, it did not act according to expectations, the consequence being that more tailings escaped untreated than were effectively dealt with. These tailings, of course, were lodged at the edge of the river, and were naturally concentrated by the action of the water. The light worthless stuff being carried away, while the valuable concentrated tailings were left behind, and these, it appears, Mr. Gordon succeeded in obtaining, after having made some arrangement with the Talisman authorities. This, according to what I learned from Mr. Napier, is the history of these celebrated tailings, but the whole thing clearly shows that no matter how theoretically perfect any plant may be, it is only by practical working trials on the particular ores that have to be treated, and re-adjustment to suit the special circumstances of the case, that anything like perfection can be arrived at. However, late developments should result in crushing plants being made more effective than hitherto.⁶³⁴

4 June

NEW ZEALAND CROWN MINES COMPANY. London, April 26. At the first ordinary general meeting held in Glasgow of the New Zealand Crown Mines Company Mr. Wilson, M.P., presided...

The reports from the mine read at the meeting were of a fairly satisfactory nature, and the royalties received from the Talisman and Woodstock companies for use of the Cassel process promise to give a fair monthly revenue. From the Woodstock Company the royalties upon seven weeks' crushing amounted to £66.⁶³⁵

10 June

MINE MANAGERS' REPORTS. Woodstock United (Karangahake, June 6).—

...Since starting the Pelton wheel and blower, there is splendid ventilation throughout the whole of the mine workings, and consequently the men are able to do more work than heretofore.

This is the Woodstock, or southern side of the river.

⁶³⁴ <https://paperspast.natlib.govt.nz/newspapers/NZH18950601.2.8>

New Zealand Herald, Volume XXXII, Issue 9835, 1 June 1895, Page 3

⁶³⁵ <https://paperspast.natlib.govt.nz/newspapers/NZH18950604.2.66>

New Zealand Herald, Volume XXXII, Issue 9837, 4 June 1895, Page 6

...At the mill during 24 days we recovered on the plates £80 11s 6d worth of bullion, which occurs chiefly in coarse particles, and therefore is not soluble in cyanide solution, under ordinary treatment. We are now having a third set of amalgamating plates prepared, and to these I intend adding blanket strakes. The framework for the berdan is in position, and I expect to make a start grinding concentrates within the ensuing four days...[see the 1896 plan of the Woodstock battery]

KARANGAHAKE TAILINGS. TO THE EDITOR. Sir,—

In your issue of June 1st, under the heading of "Goldfields," I see that your representative has apparently been making enquiries about the loss of gold in tailings at the Crown mill, at Karangahake, and my name has been mentioned in connection with the Talisman crushing. Now, in the first place, Mr. Napier refused to acknowledge me as the Talisman representative. He stated that the arrangements were made with Mr. C. Rhodes, and that I could not get any information direct from him. I was in no way responsible for the crushing.

It is true I put up an amalgamating machine to work the Talisman tailings, but before the tailings came to the machine they had to pass along a tail race filled with loose stones, which of course was simply a concentrator.

When the Talisman Company finished crushing I informed Mr. Rhodes of the gold being in this tail race, and asked him to get Mr. Napier to allow me to clean it up. The instructions I got from Mr. Rhodes were that Mr. Napier would allow me to use a rough broom, and sweep it out, but I was not allowed to clean up the false bottom. My men were stopped by Mr. Napier, and told that the gold among the stones did not belong to the Talisman Gold Mining Company. After the Talisman crushing I offered Mr. Hutchinson, the battery manager of the Crown, £50 for the right to clean up the tail-race from the vats to the creek, and at the same time I offered £5 per week for the right to work the Crown tailings for a period of twelve months. I am quite satisfied that the majority of the mining people of the Upper Thames will give me credit for enlightening them re the loss of coarse gold from the cyanide process, and not attempt to throw the responsibility of mistakes made by others on to me.

I am, etc- H. H. Adams. Waihi, 5th June, 1895.⁶³⁶

Course gold in the ore is not effectively treated by the cyanide process.

13 June

The Stanley G.M. Co.'s mine has been successfully floated. The mine is situated at Karangahake, adjoining the Woodstock, Waverley and Red Gauntlet. In cutting the face of the hill for the formation of the Crown tramway, a number of lodes were exposed. One in particular is a large body of stone, and gives good prospects. Another lode about 18in wide, called the magazine lode, gives a fair percentage of gold on the surface. Here a tunnel has been put in 30ft. No. 2 reef is a large body of quartz outcropping on the Crown Company's tramway, and gives fair dish prospects. No. 3 reef is further west. It is from 3ft to 4ft thick, and carries coarse, loose gold. The area of this mine is 30 acres...

⁶³⁶ <https://paperspast.natlib.govt.nz/newspapers/NZH18950610.2.66>

New Zealand Herald, Volume XXXII, Issue 9842, 10 June 1895, Page 6

“Here a tunnel has been put in 30ft”; is this the adit we see today on the Crown track?
 “Magazine lode”; suggests a lode near to the magazine, the short tunnel also off the Crown tramway?

On May 23rd an extraordinary general meeting of Bonanza shareholders was called to ratify and confirm the action of the directors in reference to the sale of the Company's property to the Talisman Co. for a consideration of 15,000 shares in the Talisman paid up to 1s 1d...

The directors of the Talisman Company were also authorised and empowered to purchase for shares in the Talisman Company, or on such other terms as the directors may think fit, the New Bonanza, Marmion, and Golden Treasure mining properties...⁶³⁷

Talisman purchase Bonanza Co.

Stanley G.M. Co drive tunnel off Crown tramway

21 June

KARANGAHAKE.

As we approach Karangahake, the country becomes more and more favourable for mining operations, and the bush scenery takes away the barre appearance characteristic of Waihi. In the neighbourhood of the township are several good grass paddocks and fair crops of maize, &c, are obtained. The two hotels are in process of reconstruction and enlargement and they both do a very large trade. Mr and Mrs Shepherd of the Tramway Hotel, the name of which is shortly to be altered to the Talisman, have a large and comfortable house, which they preside over with that cordiality and homeliness which ensure the comfort of their guests. Like Waihi, Karangahake has made wonderful progress during the past year, and bids fair to outstrip the former place in the near future. All the mines on the field are worked by tunnelling and driving, the nature of the country rendering shaft sinking unnecessary. The first visit we paid was to the

Crown Mine, where the manager, Mr George Mc Gruer, courteously shewed us over the workings. We found that the number six drive was fourteen hundred feet into the hill, following the reef all the way. With candles in hand we traversed the cutting to the end where we found that the reef increased to an enormous size, in fact the foot wall has not yet been found. Several men were at work here with rock drill and hand tools taking out the quartz which was put on the tram cars and run down to the battery as quickly as possible. The whole reef at this point is good crushing stuff and yields a handsome return. Twenty head of stampers, together with the cyanide plant, are kept going day and night and we were informed that this plant is shortly to be increased, any amount of water power being available for the purpose. Mr Mc Gruer is confident that the lower levels in No 6 when put in will prove the reef to be both larger and richer, as every indication points to this result.

The Woodstock is the next in importance to the Crown in this district. Mr J. McCombie, the courteous manager, kindly showed us over their battery of ten

⁶³⁷ <https://paperspast.natlib.govt.nz/newspapers/AS18950613.2.49>

Auckland Star, Volume XXVI, Issue 140, 13 June 1895, Page 6

head, cyanide and assay plant, all of which are very complete. This mine possesses an aerial tramway which is at present hard at work bring firewood down from an adjacent hill to the roasting kilns near the battery. It having been found that the Cassell process fails to catch the coarse gold, a berdan has been erected and muntz metal tables put in, from which the manager expects good results.

The other mines visited were the Talisman, Waverley, Imperial, Earl of Glasgow, United and Wealth of Nations, all of which are likely to be heard a good deal of shortly.

The Talisman is erecting a similar battery and plant to the Woodstock which is approaching completion; the other mines not being yet sufficiently advanced to warrant the cost of erection of expensive machinery.

All the vacant ground in the neighbourhood of the mines mentioned is being quickly taken up and every day new licensed holdings are being applied for at the Warden's office. We are satisfied from what we saw that as development proceeds, Karangahake will take a foremost place in the colony's gold production.

Leaving Karangahake we were surprised to find that a good metal road existed the whole way to Paeroa passing through much good agricultural country, which, however, is at present mostly in the hands of the Maoris. On our route, we found, as usual John Chinaman has started a garden which, from the excellent appearance of the soil just turned up, and its good position for disposing of the produce, should prove a successful venture. On our way we passed the famous Waitekauri mines in the distance which time did not permit us to visit. From information received, this should be quite as important a mining centre as Karangahake.

Paeroa exhibits all the appearance of eventually being a large and flourishing township. It is at present the distributing centre for the whole of the mining settlements in the Ohinemuri goldfields. The streets are not yet well enough constructed to keep in a good state of repair, owing to the heavy traffic constantly passing over them. To Waihi alone over twenty teams are constantly on the road, and although the waggons are drawn by from three to five horses, the average load is only about fifteen hundred weight. A large number of new buildings are now being erected in the township and house property lets before the frame work is completed.

The contractors for the new line of railway are making good progress with the work, the main interest in which now centres on the bridge which is being built to span the Ohinemuri river. The station buildings [Paeroa] will shortly be commenced and it is expected that the railway will be open for traffic before Christmas. A new wharf has been decided upon and the work will be gone on with at an early date. Our party was shown every kindness by Messrs Edwin Edwards, Jim Jordan, George Crosby and others. Mining is the principal topic of conversation and the latest quotations from the Auckland Exchange eagerly scanned by large numbers, who seem to be highly satisfied with the rise in Ohinemuri stocks.⁶³⁸

⁶³⁸ <https://paperspast.natlib.govt.nz/newspapers/BOPT18950621.2.20>

Bay of Plenty Times, Volume XXI, Issue 3280, 21 June 1895, Page 6

Tramway and Karangahake hotels have 2nd storeys

3 July

Talisman. All the works necessary for carrying on operations on a large and systematic scale are being vigorously pushed ahead, and Mr. Low, the contractor for connecting the low level of the mine with the Hauraki level by means of an aerial tramway is making good progress with the work entrusted to him, though the bad weather experienced lately has militated considerably against the speedy construction of the line...⁶³⁹

Is this a cableway from a Talisman adit (No. 4 or Low Level) to the Hauraki adit/tramway, yes, or direct to the shoulder of the Plum Pudding, where there is a cableway to the Crown tramway (the old Hauraki cableway)? No. Later reports make it clear that a new aerial cableway is constructed from the flank of the Plum Pudding/Woodstock Blow to the battery. How the ore got to the top of this cableway is not made clear here, but probably ground tramway and cableway. Later descriptions, of the No.8 level infrastructure, suggest a combination of self-acting inclines and cableways were involved.

United (Karangahake), June 29th.— The manager reports that the crosscut is extended a further distance of 6ft. The country continues to be fearfully hard, and it takes very near a half-shift to drill an 18in hole through.⁶⁴⁰

12 July

Talisman

...Everything is proceeding satisfactorily with the erection of the new plant, though great difficulty is being experienced in getting the heavy timbers and machinery across the creek. The stamper boxes have been placed in position; the framework for the hoppers, solution tanks, and percolation vats are all well underway, and there is every probability of the mill being completed in about five or six weeks time.⁶⁴¹

20 July

KARANGAHAKE— GROWING TOWNSHIP.

Perhaps in no part of the Peninsula has the recent revival in mining shown stronger evidence of substantial progress than in Karangahake. This little village, twelve months ago, was as dull and as unpretentious as any ordinary country village. The now important Woodstock mine was then in a very humble way indeed, rubbing along with the little old four stamp mill. The Talisman had not then been formed into a company, and in fact Karangahake was commonly thought of as a place with one mine—the Crown— and even this celebrated mine was not thought much of at that time. Today, however, every available area within miles of Karangahake has been taken up, and in most cases "floated" for mining purposes; and nearly every building site in and

⁶³⁹ <https://paperspast.natlib.govt.nz/newspapers/NZH18950703.2.58>

New Zealand Herald, Volume XXXII, Issue 9862, 3 July 1895, Page 6

⁶⁴⁰ <https://paperspast.natlib.govt.nz/newspapers/AS18950703.2.20>

Auckland Star, Volume XXVI, Issue 157, 3 July 1895, Page 5

⁶⁴¹ <https://paperspast.natlib.govt.nz/newspapers/NZH18950712.2.58.9>

New Zealand Herald, Volume XXXII, Issue 9870, 12 July 1895, Page 2 (Supplement)

around the township is occupied. Many tradesmen have opened new shops in the main thoroughfare, and what was not very long ago a quiet country road, is now a street thronged of an evening with busy groups of people. Among these are many who are yet comparative strangers here, people who have been attracted to the place by reports of the great revival of the mining industry in this district. These have come from almost all parts of the Thames and Auckland districts, and even from the South, a considerable number of men from the West Coast, from Otago, and even from Australia, have lately appeared here inquiring for work in the mines.

The building of places of residence has gone on at a rapid pace, and the number of houses in Karangahake must have more than doubled within the past twelve months. The two local hotels were soon found too small to accommodate the increased number of lodgers and travellers who came, and each of these houses has had carpenters at work, with the result that the capacity of Mr. Shepherd's hotel has been more than doubled, while the contractors are making substantial additions to Mr. Kelly's premises. The local school also had to be enlarged in similar proportion, while the public hall, capable of holding about four hundred people, was at the time of building thought by some to be foolishly large, but now, on festive occasions, it is found to be inconveniently small. In this building the religious services of the different denominations are held, but the public spirited people in the place are now undertaking the work of building a church, a site for which has been secured convenient to the centre of the township. For the future, there is a hopefulness which rests on solid foundation. The application of improved methods in the treatment of our low grade ores, the undoubted existence of rich ore also, and the moral certainty of foreign capital in the near future, warrant the prediction for Karangahake of an era of prosperity and permanence.⁶⁴²

23 July

TALISMAN AND MARMION G.M. COMPANIES.

A general meeting of Marmion and Golden Treasure shareholders was held this afternoon in the long room of the New Zealand Insurance Buildings. Col. Burton presided. A resolution was passed amalgamating the two companies named under the name of the Talisman Extended Goldmining Company (Limited.)...⁶⁴³

Talisman Extended Goldmining Company (Limited.) formed

To the west of the Talisman Company ground.

7 August

KARANGAHAKE GOLDFIELD.

It is now many years since this goldmining district was first discovered. It has been the source of a great amount of attention from both local and outside

⁶⁴² <https://paperspast.natlib.govt.nz/newspapers/NZH18950720.2.50>

New Zealand Herald, Volume XXXII, Issue 9877, 20 July 1895, Page 6

⁶⁴³ <https://paperspast.natlib.govt.nz/newspapers/AS18950723.2.42>

Auckland Star, Volume XXVI, Issue 174, 23 July 1895, Page 5

investors, as is the case at the present time. The result is that not only are all the old established mines being vigorously developed with greater energy, but ground that has never had a peg in it, and was lying unoccupied and unthought of, is now taken up by strong companies, and from the amount of cash available as working capital, if judiciously expended, some of them will in all probability unearth lodes that will eventually yield returns of a remunerative character. And further, if discoveries are made they may turn out to be richer in quality to anything yet unearthed in this section of our auriferous country. However, as I am told off to examine and carefully inspect the most important mines in the district, perhaps a visit to the

TALISMAN G.M. CO.'S PROPERTY and a report thereon might be appreciated by shareholders and others interested from afar. But before visiting the mine I thought it would be advisable to make enquiries and ascertain if the "boycott" that existed on the occasion of my last visit was still in vogue. Upon enquiry I was informed that under the present manager, Mr J. Goldsworthy, visitors were very cordially received, and if a few minutes could be spared the manager was only too pleased to show anyone through the mine. This information I afterwards proved to be correct. I found Mr Goldsworthy, who is one of the good old school of miners. He tendered me a hearty invitation, which, at once relieved my mind. Mr Goldsworthy being busily engaged amending to urgent business on behalf of the company, he very kindly placed me under the care and guidance of my old and trusted friend Harry Trezise.

Before proceeding further perhaps it is as well to explain the exact locality and position of the Talisman. The property was formerly the Noble G.M. Co. and was pegged out by poor old Bob Noble, who has joined the great majority. It was formerly peg and peg with the old Hauraki and lies on the north side of the Trig Station. It joins the present Crown Company on their north-west boundary, Woodstock on the north and east, Waverley and Marmion on the south west and south. It will be seen that the property occupies an excellent position and embraces all the southerly continuation of the Woodstock lodes. The belt of country crossing through the Talisman strikes south east and north west, and takes in the northern continuation of the old Adeline belt of purple country, so well known in this district. It must be remembered that the belt of country encasing the Woodstock and Crown lodes is totally different in character to that met with on the Talisman and Adeline belts. As a consequence, the class of ore is also different, and nowise resemble each other in appearance. The Talisman ore is of a flinty nature, and inclined to produce gold in very coarse particles. It is also very free, and unoxidised. On account of the coarse gold, its treatment, after it leaves the cyanide, will require very careful attention. No doubt those concerned are well aware of these facts, and will probably make provision in case of a loss in this direction. Mr Trezise led the way to the mine, and the first work inspected was the No. 3 level. From the surface entrance to a point where the lode was intersected, is exactly 240 ft. This crosscut was continued on through the lode, a further 30ft...

...The No. 4 or low level also enters from the surface, and was driven from the starting point 380 feet prior to intersecting the main reef...

... In conclusion I would like to make a few remarks about the company's aerial tramline and reduction works. In the latter, the various works now being

carried on by Messrs Price Bros., iron founders, Thames, are rapidly approaching completion; but with reference to the tramline I feel certain that a less costly line might have been provided if the line had been laid down on another course to the one it now occupies. By a careful examination of the locality this defect could be easily remedied. The handling of ore is sometimes very costly and no doubt this defect will be looked to before the line is completed.⁶⁴⁴

9 August

Regarding the New Zealand Crown mines there is not much change to report...

The company's crushing plant is also running satisfactorily. The contractor is making good progress with the construction of the two percolating vats, in which it is intended to re-treat the tailings now accumulating. These vats, it may be interesting to know, will be capable of carrying 40 tons at a charge.

The Talisman property is opening up well... The battery is almost completed. During the early part of the month Mr. Gordon, who has a river claim at Karangahake, treated two tons of tailings for a fine yield of 206oz 10dwt of melted gold, valued at £499 7s 6d.

The Marmion and Golden Treasure properties have been amalgamated during the month, and are now being developed under the name of Talisman Extended. The Victor, Stanley, Waverley, Wealth of Nations, South British, Mariner, Shotover, and Woodstock North mines are being opened up, while a low level is also being driven in the Earl of Glasgow property, recently acquired by a Melbourne syndicate.⁶⁴⁵

22 August

Woodstock. — At present high grade ore is being won from this working, some of the quartz giving an assay value equal to £19 per ton.

Talisman. — Mr. Law, contractor for the construction of the aerial tram, is now making good headway with his work, and if the present weather continues, another fortnight ought to see the connections effected in the mine. The lode is looking very promising, and is yielding fully two feet of good crushing dirt.⁶⁴⁶

28 August

KARANGAHAKE FIELD.

...The Waverley possesses splendid mining facilities, having about 1,400 feet of backs, and a most valuable forest of timber. This timber, which covers about 50 acres of the property, is, from its position and its use for mining purposes, worth probably thousands of pounds, and should be carefully

⁶⁴⁴ <https://paperspast.natlib.govt.nz/newspapers/THS18950807.2.9>

Thames Star, Volume XXVI, Issue 8115, 7 August 1895, Page 2

⁶⁴⁵ <https://paperspast.natlib.govt.nz/newspapers/NZH18950809.2.70>

New Zealand Herald, Volume XXXII, Issue 9894, 9 August 1895, Page 1 (Supplement)

⁶⁴⁶ <https://paperspast.natlib.govt.nz/newspapers/NZH18950822.2.60>

New Zealand Herald, Volume XXXII, Issue 9905, 22 August 1895, Page 6

guarded. Altogether, I was much pleased with the prospects of this property, which I cannot doubt will prove itself a most valuable one.⁶⁴⁷

31 August

Shares and MINING. By Obadiah, the Younger.

Karangahake is pretty well pegged solid, not a scrap left good, bad, or indifferent, and a busy summer they'll have.⁶⁴⁸

5 September

KARANGAHAKE.

WOODSTOCK

Since my last visit of inspection to this property it has passed into the hands of English capitalists. With £40,000 as a working capital, the Company should be in a position to carry on operations in any direction required. There is one grand feature in connection with this property, and that is that Mr John McCombie has all the levels well forward, and extensive payable blocks await the new company. The Company, I consider, have a magnificent show in front of them. The Woodstock have large and well-trying lodes already opened up, and all that they require now is extensive and additional machinery to cope with the large output of ore which is available. Mr McCombie informs me that it is the immediate intention of the Company to erect additional stamps, and considerably increase the other appliances necessary to successfully treat the ores that they have in hand.

Since the old Company erected their present primitive reduction works, it has been the aim to, if possible, ascertain the true method of dealing with the complex ores that the Woodstock lodes contain. In discussing the various methods of applying cyanide, and also ascertaining the exact value of the raw ore, Mr McCombie says that in testing the ores prior to treating them, it was always their usual course to sample the different faces on the various levels, and then subject them to assay, and not by ordinary mortar and pan tests, as is understood by the mining public generally. From the very first parcel that has been passed through the Company's old and new plant he has kept up a series of experiments from time to time, so as to enable him to ascertain the strength of the cyanide solution required for the successful treatment of the ore. He now feels impressed that his energies in this direction are at last being attended with successful results. Where they formerly used eight and nine per cent. of the cyanide he now uses a one per cent. solution — being the strongest solution that they can use. The result is most gratifying, enabling them to save a much higher percentage. Mr McCombie is perfectly satisfied that the mill is now saving 80 per cent. of the assay value of the ore. It will thus be seen that the general aspect of the new company is exceptionally good...

Before drawing my report on the mine to a close it is as well to mention that in order to supply good ventilation to those working in the level upon the No. 3 lode a Pelton wheel 2ft in diameter has been fixed about 200ft below the No. 3

⁶⁴⁷ <https://paperspast.natlib.govt.nz/newspapers/AS18950828.2.25.3>

Auckland Star, Volume XXVI, Issue 205, 28 August 1895, Page 5

⁶⁴⁸ <https://paperspast.natlib.govt.nz/newspapers/TO18950831.2.40>

Observer, Volume XV, Issue 870, 31 August 1895, Page 16

level. This fixture is connected by iron pipes with the mine. All the drainage water from here is carried down by these pipes, and is quite capable of giving a 1,200lb [120lb?] pressure. With this acquirement excellent ventilation is the result, enabling these operations to be carried on successfully, and without hindrance to the men.

The Company's reduction plant is pounding steadily on ore from the mine, and the result for the month is quite an improvement on the preceding, returns. Improvements are noticeable in almost every direction. Two large tables 18ft in length have been constructed, and were all in readiness to be placed in position. This, it is thought, will greatly manipulate all the coarse particles of gold that would otherwise pass off. It is also intended to have a streak of blankets to catch the tailings after they pass over these tables, and from thence the tailings will pass into a buddle, and the bulk will thus be saved for further treatment. It will therefore be seen that Mr McCombie is making every provision for the successful treatment of the ore under his able supervision, and he is also doing his utmost to remedy the defects in the other departments of the important cyanide process. As can be seen by the return for the month, there is either an improvement in the ore or the defects in the plant after being attended to are now showing good results.⁶⁴⁹

Also described in the above article are: United, Imperial, Woodstock United, Golden Crown, Crown, Vanderbilt, St Patrick, Shotover-Ivanhoe, Crescent Special, Prince Regent, Wealth of Nations, Stanley, The Karangahake, Hauraki Special, Victory, Imperial, Golden Fleece, New Find, Jessica, Orient, Sterling, United, Rotokohu and New Shotover. Most of these were reported to be forming new companies.

6 September

THE AUCKLAND GOLDFIELDS. Important developments, great expansion of mining.

The month of August opened under very bright auspices as regards the development of our mineral resources, and there is no doubt that the past four weeks has been a progressive period, for perhaps never in the history of the colony has so much interest been manifested in the mining industry as now. Indeed the development in some of our mines and the discovery of further good reefing properties in perfectly untried country has created quite a prodigious boom.

Of course as the result of this in connection with a restoration of confidence founded on sound improvements, and legitimate expectations, there has been generally a stimulation of investment, and all over the peninsula new areas of ground have been pegged out, for the development of which many new companies have been formed. In support of this it may be stated that the Thames and Ohinemuri portions of the field have commanded an exceptional amount of attention, and during August month there were no less than 174 special claim licenses taken up and applied for through the Warden's offices, representing in all 16,263 acres; while there were also 69 licensed holdings applied for covering 1788 acres, the total area taken up thus being 18,051 acres. In addition to this there were 49 applications for water races, and 15 for

⁶⁴⁹ <https://paperspast.natlib.govt.nz/newspapers/AS18950905.2.24.22>

Auckland Star, Volume XXVI, Issue 212, 5 September 1895, Page 6

machine sites, the total amount deposited at the Warden's offices in connection therewith being £7243 11s...

The Karangahake district has received more than a usual amount of attention from the hands of prospectors, and quite a large area of ground has been taken up from the Karangahake side of the range over towards Te Aroha. Several new companies have also commenced operations, but so far they are in an embryo state.

The Earl of Glasgow Company has made a start on an extensive scale to thoroughly prove their property. Two levels about 500 feet apart are being driven. These are being put in with a view to intersecting the same lode at different points, so that when the formation is intersected every facility will be afforded to open out on the reef in each tunnel.

Operations in the New Zealand Crown mines are being attended with great success, and during the month of July 500 tons of ore were crushed for a yield of 1387 ounces of bullion valued at £2318. This return it may be mentioned was not available at last summary, and the crushing for this month is not yet finished. However, both in the mine and plant everything is in excellent working order. A high grade character of ore is still being won from the large reef, and there is not the slightest doubt that the lode will maintain its gold-bearing qualities and continue to produce remunerative quartz for some time...

The Waverley, Wealth of Nations, Victor, Stanley, Sterling, Red Gauntlet, Woodstock North, Shotover, Mariner, South British, and Talisman Extended are all being worked, and in some of the properties most encouraging prospects are being received.⁶⁵⁰

BAY OF PLENTY LICENSING COMMITTEE.

The quarterly meeting of the above Committee was held in the Courthouse, Tauranga, on Wednesday...

Mr Moss, on behalf of Mr Alfred Shepherd, of the Tramway Hotel, Karangahake, asked for permission to change the name of the house to the Talisman Hotel. On the motion of Mr Elliot seconded by Mr Edwards the application was granted.⁶⁵¹

The name on the building remained "Tramway Hotel", but in June 1896 Mr Alf. Shepherd sold the hotel to Mr Bunyard, buying the Uretara Hotel at Katikati. It will become the Talisman Hotel, Katikati.

The following is a story invented by Gary Staples, from the Ohinemuri Regional History Journals.

In December 1897 Alf sold the hotel to L D Nathan & Co., who were brewers in Auckland. The Shepherds moved to Katikati and had the Talisman Hotel there for six years, before retiring. For a short while in 1898 Algar Bunyard was our licensee until Bill Ryan took over.

At first the hotel was a single storey, but was soon enlarged and another storey added.

⁶⁵⁰ <https://paperspast.natlib.govt.nz/newspapers/NZH18950906.2.58.14>

New Zealand Herald, Volume XXXII, Issue 9918, 6 September 1895, Page 3 (Supplement)

⁶⁵¹ <https://paperspast.natlib.govt.nz/newspapers/BOPT18950906.2.27>

Bay of Plenty Times, 6 September 1895, Page 7

The hotel was lit by electricity which was a great novelty in those days. Water from Scotchmans Gully was used to drive a generator set up in the stables out the back.

Montgomerys bought the hotel but it continued to be run by Bill Ryan until his death on 26 March 1902. His wife, Kate, carried on and after she remarried Peter Crosby, he took over as licensee.

The next event I'll never forget took place on 16 September 1906. I was having a drink at the bar with a couple of mates after a hard day up at the mine when, at 9.30, suddenly one of the maids rushed into the bar screaming, "Fire! Fire! The kitchen's on fire!" We shot out into the back of the building, only to retreat before a wall of flames as the fire took hold on the building. Everyone got out and the fire brigade soon arrived, only to find the water mains turned off. Then, when the water was turned on, the hose repeatedly burst. It had not been renewed since the Brigade was formed in 1898 and had perished. By now the old wooden building was a raging inferno which spread to the adjacent Volunteer ("Crosby's") Hall and Billiard Room nearby. These were destroyed as well as the hotel. Nothing was saved. Next day a temporary bar was rigged up (necessary to preserve the licence). I had to move temporarily into the boarding house above Scotchmans Gully but it was not long before a new hotel was built as the building had been insured.⁶⁵²

14 September

Shares and MINING. By Obadiah, the Younger.

Steady week on the Exchange. Fair business in most stocks. But everything is giving place to the floating of new properties. They are going on the market at the rate of half-a-dozen a week, and the whole lot —good, bad, and indifferent —are being readily swallowed by a too gullible public. Sometimes the concern is floated on the strength of the position of the ground — sometimes because the next company has a reef (buck or otherwise) in hand, and sometimes because the names of the promoters are 'good.' The latter recommendation is the worst of the lot. These 'names' are used for everything that will not go off otherwise, and invariably the owners of the names are 'put into' the thing at no cost to themselves. They get promoter's shares for the use of their names. They don't put up any of their own money. Therefore, the investing public should not put too much faith in what are called 'good names.'

It is a pity that so many properties are being placed on the market —and that without any enquiry into their bona fides. The Chamber of Mines was expected to put a stop to this sort of thing, but some of the people who are most active in the Chamber of Mines movement are the men who are most to blame. Yes, and they are, in some instances, the men whose mine promoting and share transactions will not bear too close a scrutiny. More of this anon. In the meantime, the public are rare goats to allow themselves to be so readily fleeced of their dollars. We have plenty of mines floated now. Let us bide a-while and see what permanency there is in this activity. Let us open a few of the mines. Let us get something out. As it is, with not a few of the concerns already floated the wily promoters have scooped the dollars subscribed into

⁶⁵² <https://www.ohinemuri.org.nz/journals/journal-32-september-1988/tramway-hotel-karangahake>

Tramway Hotel, Karangahake. Ohinemuri Regional History Journal 32, September 1988

their own pockets, and there is little or nothing with which to buy even a truck and pick and shovel. The only prospect before the shareholders is 'calls.' Let me hope all the very clever people will be clever enough to keep out of gaol. Auction sales of mining scrip are the latest thing out. They won't do much to help the boom, except in one way. They will assist to kill the 'wild cat' ventures, and as the 'wild cats' endanger the boom, it may yet happen that the auction sales will prove themselves to be a blessing in disguise. People will only try to sell by auction scrip that is of little or no value. If a man has a good thing, he doesn't try to throw it away. So, watch it well, and you will see that chiefly 'wild cat' stock will be offered at the auctions. Thus you may learn to pick out the 'wild cats'. Sell at the auctions if you like, but never buy there.⁶⁵³

27 September

Karangahake, Wednesday. The Karangahake district is growing apace, and some of the old homesteads are now giving way to nice villas. Even Mr. Kelly, proprietor of the Karangahake Hotel, found that his licensed premises were not in keeping with the advanced state of the times, and accordingly decided to enlarge his place, which it may be mentioned was originally nothing more than a wayside inn on the spur of one of the numerous bluffs surrounding the township of Karangahake. Eight months ago, however, by way of improving the main street the Ohinemuri Council cut off the end of the spur referred to, and left the hotel standing about 11 feet above the roadway. Mr. Kelly, of course, being fully alive to the growing necessities of the place, called in the services of Mr. James Marsland, architect, to design a building suitable to the requirements of the place. The result was that the old building was primarily lifted four feet, and a wing added, some 36 feet by 26 feet, a ground floor inserted underneath, and a basement below the bar. Indeed, it would seem as if the architect had been inspired by Gulliver's travels, for instead of commencing downwards and working upwards, the reverse was the case, the top floors being finished first. But however intricate and mysterious the erection was, the result has proved most satisfactory, and the genial licensee can now boast of being in possession of one of the finest hotels that may be met with outside the city of Auckland.

The accommodation is divided, as it were, naturally into three distinct parts, namely, first, ground floor, to the thirsty migratory public; second, the boarders; and third, the domestic portion. On the ground floor is a spacious bar and three parlours, piano-room and billiard room, with a splendid private entrance, and the whole is undoubtedly light, roomy, lofty, and airy. An easy ascending stair leads to the boarders quarters on the first floor, which contains a dozen double-bedded rooms, two parlours and dining-room, with a nine-foot balcony around the whole, facing the two streets. The stairs, it may be mentioned, are in the middle of the building, and had to be lighted from above with a lantern light, ten feet square, the light being now excellent. Altogether the hotel is a credit to Ohinemuri, which is now the most important goldfield of the colony, and the proprietors—Messrs. Ehrenfried Bros., of Auckland,—deserve commendation for their pluck in erecting such a fine commodious

⁶⁵³ <https://paperspast.natlib.govt.nz/newspapers/TO18950914.2.19>

Observer, Volume XV, Issue 872, 14 September 1895, Page 8

building; the licensee for the tasteful furnishing; the architect (Mr. J. Marsland) for his design; and the contractors (Messrs. Moore and O'Hara) for the way in which the thing is finished. The foreman of works was Mr Tom Penk.⁶⁵⁴

4 October

KARANGAHAKE. That this district is looked upon with much favour by mining authorities is now well known, and better evidence could not be adduced than the fact that bona fide mining ventures in the Karangahake district have been taken home, and without much difficulty the shares were fully subscribed soon after being placed on the market. The result is that now instead of having one mine owned by English capitalists we have four, namely, the New Zealand Crown, Woodstock, Victor, and Royal Mail, while a strong and influential Melbourne syndicate is developing the property known as the Earl of Glasgow. There is also every possibility of the Talisman Company's fine property falling into the hands of home investors before long, so that when all are under full swing the bullion returns from Karangahake should be correspondingly increased. Of course the only actual bullion-producers so far are the Crown and Woodstock mines, both of which are looking exceedingly well.

In the New Zealand Crown Gold Mining Company's mine...

The important work of testing the quality of the fine shoot of ore, being so successfully operated upon at No. 6 level, at a still greater depth is now under way, the means of proving the lode being the continuation of the winze below No. 7 level. So far the prospects received are very encouraging, the gold being much coarser, but the greatest difficulty is going to be found in keeping the water down. The capabilities of the Worthington steam [compressed air⁶⁵⁵] pump are now taxed to their utmost in keeping the workings free. A much more powerful pump will therefore be necessary to cope with the water, if sinking were conducted on a big scale. The prospects, as already stated, are very encouraging, in fact I was informed that the value of the quartz per ton exceeded even that at No. 6 level, so that there is every inducement to still further prosecute these important deep mining explorations...

All works in the Royal Mail and Victor properties have been suspended for the present pending the introduction of a new scheme of operations by the new home company who are now the owners of the mine.

In the Earl of Glasgow the driving of two tunnels is being pushed ahead vigorously through a nice class of sandstone, and a quartz body is shortly expected to be met with.

The Imperial, United, Golden Fleece, Waverley, Stanley, Sterling, Woodstock North, Red Gauntlet, Talisman Extended, Shotover, Ravenswood, South British, and Mariner are all carrying on prospecting operations by means of

⁶⁵⁴ <https://paperspast.natlib.govt.nz/newspapers/NZH18950927.2.59>

New Zealand Herald, Volume XXXII, Issue 9936, 27 September 1895, Page 6

⁶⁵⁵ <https://paperspast.natlib.govt.nz/newspapers/NZH18950308.2.65>

New Zealand Herald, Volume XXXII, Issue 9762, 8 March 1895, Page 6

driving, some for quartz reefs, while others again are proving ore bodies, and in several instances decidedly encouraging prospects are being obtained.⁶⁵⁶

7 October

THE GOLDEN CROWN. AN EXTRAORDINARY RUMOUR.

A somewhat startling rumour was current on Saturday in reference to the Golden Crown Gold Mining Company, the statement being that the land the company was supposed to possess had turned out to belong to other companies. As far as could be gathered the grounds for the rumour were as follow: —A piece of land 67 acres in extent (and in which the Golden Crown was presumed to be situate), had been pegged off and applications sent in on the 11th April for the Mere, 30 acres; and on the 31st May for the St. Patrick, 10 acres. The description of the St. Patrick ground stated that it was bounded by the Mere, which proved to be really 57 acres. The surplus 27 acres was claimed by the St. Patrick thus squeezing out the ground the Golden Crown was supposed to have. It was further reported on Saturday that the survey plans now showed the St. Patrick and the Mere adjoining to the exclusion of the Golden Crown. Immediately the rumour came to the ears of the Golden Crown directors on Saturday, a meeting was held, at which Mr. Purchas, the company's solicitor, was present. It was at once decided to close the transfer books of the company, and to take the name of the company off the quotation lists, for the present, pending the fullest inquiries being made. The Golden Crown Company was formed in the early part of last month, with a capital of £10,500, and was sent Home, for floatation purposes, with the St. Patrick and the ground adjoining that, viz., the Golden Fleece. No injurious effect, it is reported on authority, can be felt either by the St. Patrick or Golden Fleece.⁶⁵⁷

Oops. It seems that in their haste (and greed?), they were floating a mining company without having determined the land they were claiming.

16 October

GOLDEN CROWN. The promoters of the Golden Crown say, in our advertising columns, that they are confident of obtaining ground. Failing their being able so to do, they are prepared to make good any sums of money which have been expended by the company, and further, they are willing to pay any premiums which have been paid upon all transfers appearing upon the books up to the time of their temporarily closing on the 5th instant.⁶⁵⁸

1 November

In the Woodstock mine operations have, as already indicated, been carried on successfully during the month, 232 tons of ore having been treated for 24 days, run for a yield of 1529oz of bullion, valued at £754 10s 5d...

⁶⁵⁶ <https://paperspast.natlib.govt.nz/newspapers/NZH18951004.2.54.3>

New Zealand Herald, Volume XXXII, Issue 9942, 4 October 1895, Page 1

⁶⁵⁷ <https://paperspast.natlib.govt.nz/newspapers/NZH18951007.2.46>

New Zealand Herald, Volume XXXII, Issue 9944, 7 October 1895, Page 6

⁶⁵⁸ <https://paperspast.natlib.govt.nz/newspapers/NZH18951016.2.53>

New Zealand Herald, Volume XXXII, Issue 9952, 16 October 1895, Page 6

Everything possible is being done to have the mine well proved, as Mr. E. T. Adams, surveyor, is now engaged making a complete survey of the company's property, preparatory to extensive development being commenced on the different lodes in various sections of the mine. The company are also alive to the necessity of a larger plant as in accordance with instructions received from home, Mr. McCombie, manager of the property, has completed plans and details of a 40 - head stamper battery and cyanide plant, and these will go home by the out-going mail for the consideration of the London Board. Mr. McCombie, by his long experience and careful study of the special treatment required for Karangahake ores, has, I understand, been able to prepare plans of a plant which, if adopted by the directors, will be one of the finest and most capable in the province, for in addition to the battery there will be an efficient amalgamating plant, comprising a wide surface area of amalgamating tables, while a number of blanket strakes and berdans will be attached to the cyanide plant, so that all coarse particles of gold not soluble in cyanide solution will be caught either on the plates, blanket strakes, or concentrating buddles.

The New Zealand Crown mine is also looking well, and during the September period 442 tons of ore were treated at the reduction works for bullion valued at £2130.

...while a survey of a new water race from the Waitawheta to the mine is being completed [for the big air compressor to be installed in the "Crown Stope"]. The extension of the company's reduction works is also to be undertaken immediately; contracts for an additional 20 head of stampers, with extra percolating vats, having been let.

Another property, which is claiming a good deal of attention is the Talisman, which is under offer to a home company. This mine is situated right in the heart of the auriferous belt of country, and is unquestionably a key to the ground at the back...The battery has now been completed...

The Imperial United, Earl of Glasgow, Mariner, South British, Waverley, Talisman Extended, Ravenswood, Stanley, Stirling, Red Gauntlet, Ivanhoe, Rob Roy, New Shotover, and Woodstock No. 4 are all being worked, and the prospects obtained in some are very promising.⁶⁵⁹

Talisman battery completed, but not working

2 November

Crown (Karangahake),—The prospecting of the lower depths of this mine, which has been going on for some time past, has been most satisfactory, proving—what has been the case from the first level to the present low level—that the ore becomes richer at each successive level, and suggesting vast possibilities when a depth of, say, 1,000 feet below the bed of the Waitawheta is reached. At 97 feet below the low level the quartz assayed £30 per ton, and gold could be seen in every other stone taken out. If this increasing richness at greater depths occurs in this mine, why not in others, as the Woodstock and

⁶⁵⁹ <https://paperspast.natlib.govt.nz/newspapers/NZH18951101.2.57.16>

New Zealand Herald, Volume XXXII, Issue 9966, 1 November 1895, Page 11 (Supplement)

Talisman? It is certain it will be found in them also, and in that case Karangahake has a great future before it.⁶⁶⁰

11 November

OHINEMURI COUNTY WORKS DECIDED ON.

The Ohinemuri County Council have resolved to carry, out the following works:- A foot track from the Crown tramway to Dickey's flat to cost not more than £20...

The bridges beyond Mackaytown to be repaired, the ford at Mackaytown put in order and the track to the Earl of Glasgow mine repaired.⁶⁶¹

The first appearance of the name "Dickey's Flat"? And a foot track to be put in. This will assist the establishment of the Crown water race.

24 December

Woodstock United G.M.CO.

Active preparations are in progress for the erection of the additional crushing plant, 30 head of stampers in addition to the 10 now at work, the immediate erection of which has been authorised by the English directors. The site is being excavated, and it will extend from the present site to the junction of the two rivers, that is to say, it will be a western extension. The foundations, being blasted out of almost solid rock, will be very firm. The present plant, with the exception of the stampers, will all be done away with, and fresh arrangements made in every particular. The whole battery of 40 head will be driven by Pelton wheels, there will be a double row of circular percolating vats, 6 [hard to read; 6 shown in the drawings from AJHR 1896] in each, and the present square tanks will be used as storage vats for solutions. The plans of the plant, which have been prepared by Mr. H. H. Adams, show that it will be in most respects similar to that now erected for the Silverton Gold Mining Company [H.H. Adams built the Silverton battery], and outside these will be electro-silver plates, six in number, with blanket strakes, and six berdans to save the heavier gold contained in the ore, which is not readily taken up into solution by cyanide. The water race is to be 40inch iron pipe, the distance from the dam to the mill being 25 chains [503 m], and it will be constructed of 1/16 inch wrought iron. In most respects this will be preferable to open fluming, and less liable to accident, and it is expected that the power obtainable from the race will be equal to 100 h.p.

The open wooden flume to be replaced by steel pipe. Some pieces of this pipe remain.

TALISMAN G.M.C. In this mine operations for some time have been carried out on a limited scale, as the property is under offer to an English company, and there being a constant expectation of a close of negotiations at any time, the local directors do not feel justified in expending any large amount until the negotiations are terminated one way or the other. For the same reason, although their crushing plant of 10 head of stampers, with adequate appliances

⁶⁶⁰ <https://paperspast.natlib.govt.nz/newspapers/AS18951102.2.21.3>

Auckland Star, Volume XXVI, Issue 262, 2 November 1895, Page 5

⁶⁶¹ <https://paperspast.natlib.govt.nz/newspapers/THA18951111.2.12>

Thames Advertiser, Volume XXVII, Issue 8274, 11 November 1895, Page 2

for cyanide treatment, has been completed for some time past, they have not felt justified in starting crushing, as about £700 would be required to equip the battery with cyanide, wood, etc., and the property may go out of their hands before they have time to recoup themselves. But the operations in the mine although not extensive are in pursuit of a well-laid plan for working it advantageously when ore is required, and this object it kept steadily in view by the mine manager, Mr. Wm. Goldsworthy, a man of very large experience.⁶⁶²

Preparations for 30 extra stampers for Woodstock

25 December

THE UPPER THAMES GOLD MINES.

A TOUR OF INSPECTION. No. V. NEW ZEALAND CROWN MINES.

On visiting the New Zealand Crown mines I found that the now general manager, Mr. Daw, had taken charge of the company's mine and plant, but no alteration was made in the staff, Mr. McGruer being still in charge of the mine, Mr. Hutchinson of the battery, and Mr. Napier of the cyanide and assay plants. I was courteously received by Mr. Daw, who, although a comparatively new arrival, having only taken charge on the 27th of November, I found had taken a thorough grasp of the details, and had already inaugurated a system of operations for the future development of the mine...

...Rio Tinto in Spain, of which he has had the management before being sent to New Zealand...Mr. Daw is not only a mining engineer; he is also a geologist and metallurgist, and was for many years connected with the famous firm of Vivians, at Swansea, and in Canada as mining and metallurgical engineer. His selection for the management of the Crown mines property is apparently a most suitable one...

...but a still larger scheme is now under consideration, and has, I understand, been already submitted to the directors. This involves the construction of a water-race, which with a volume of 30 sluice-heads of water will have a fall of 74 foot, thus giving an effective force equal to 180 horsepower. With that it is proposed to work a compressor and convey it to an engine of the same power erected in the mine itself...

An extension of the reduction works is now not only contemplated, but started, operations being in progress for the erection of an additional 20 head of stampers, with the necessary cyanide plants. One building, now in course of erection, is 140 foot in length. This will be occupied by the sumps and percolating vats, and there is a second building, 90 feet in length, for the same purpose, and when completed the new system will comprise a large plant of 12 circular vats. There will also be two additional drying kilns and an extension of the old buildings. The square tanks or vats now in use will be removed to the north end of the building, where they will be used principally for the treatment of tailings. Price Brothers of the Thames have the contract for the battery, Brown Brothers for the buildings, and George Ginn for the furnaces, and all the works are being pushed ahead as speedily as possible. With the

⁶⁶² <https://paperspast.natlib.govt.nz/newspapers/NZH18951224.2.74>

New Zealand Herald, Volume XXXII, Issue 10011, 24 December 1895, Page 6

additional crushing power and increased facilities, the output from the New Zealand Crown mines should be largely increased in the near future...⁶⁶³

27 December

The rapid and extensive development of the mines at Waihi, Karangahake, Waitekauri, Thames, and Coromandel during the past year, has been the means of attracting widespread attention, with the result that many of our leading mines have passed into the hands of English capitalists, who in turn have formed strong companies for more thoroughly and vigorously developing them. Altogether some twenty English companies, with capital representing several hundred thousands of pounds, are now either in operation or are just about to commence in our midst, whilst other properties are also under offer to foreign investors. In addition to the English companies no less than 163 local companies have been formed with a total subscribed capital representing about two million pounds sterling, the various properties in the latter category being situated as follows:- 37 at Coromandel, 20 at Kuaotunu, 4 at Manaia, 4 at Tapu, 3 at Waiomo, 21 at Thames, 2 at Puriri, 4 at Tairua, 1 at Marototo, 18 at Waitekauri, 14 at Waihi, 6 at Owaharoa, 22 at Karangahake, and 1 at Te Aroha....

At Karangahake the New Zealand Crown mine's property has been placed under the control of Mr. Dawe [usually spelt Daw] - a gentleman of experience sent from Home—whose duty will be to generally superintend the whole of the workings at the mine and battery. One of the first alterations in the system of working in vogue prior to his arrival was a deviation from wages to contract, and in future all the underground workings are to be carried out under the latter regime. This, it is thought, will be more profitable to the company, and also to the men employed. The development of the company's property has been vigorously prosecuted, the results being of a payable nature, the last return to hand being £1850 worth of bullion from 442 tons of ore...⁶⁶⁴

Mr Dawe to superintend the Crown

Karangahake School building was enlarged in 1895.⁶⁶⁵

AJHR 1896

Published 1896, but largely reporting on 1895.

THE GOLDFIELDS OF NEW ZEALAND: REPORT ON ROADS, WATER-RACES, MINING MACHINERY, AND OTHER WORKS IN CONNECTION WITH MINING.

APPENDIX TO THE JOURNALS OF THE HOUSE OF REPRESENTATIVES, 1896 SESSION I, C-03⁶⁶⁶

⁶⁶³ <https://paperspast.natlib.govt.nz/newspapers/NZH18951225.2.37>

New Zealand Herald, Volume XXXII, Issue 10012, 25 December 1895, Page 5

⁶⁶⁴ <https://paperspast.natlib.govt.nz/newspapers/NZH18951227.2.75>

New Zealand Herald, Volume XXXII, Issue 10013, 27 December 1895, Page 1 (Supplement)

⁶⁶⁵ <https://www.ohinemuri.org.nz/historic-texts/karangahake-school-70th-jubilee/school-history>

School History. Karangahake School and District 70th Jubilee 1889-1959

⁶⁶⁶ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1896-I.2.1.4.3>

Mr. H. A. Gordon, F.G.S., Inspecting Engineer,

to the Hon. A. J. Cadman, Minister of Mines. Sir, — Mines Department, Wellington, 17th June, 1896. I have the honour to submit my annual report, for the year ending the 31st March last.

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QUARTZ-MINING.

In making my report on quartz-mining in the colony during the past year, it may be mentioned that a large boom in the mining industry has taken place, and there is a great demand for mining properties; indeed, being such that people are pegging-off claims with the view of disposing of them to foreign capitalists, without doing any actual work, simply getting a grant of a special claim. The present boom is the largest that ever has taken place in the colony. It commenced in the North Island district, owing to large returns of gold being obtained from the Hauraki Mine at Coromandel, and the Waihi Mine at Waihi, in the Ohinemuri district. Special claims and licensed holdings have been pegged-off in all directions. Mining engineers have sprung into existence like mushrooms, and some of them have been busily engaged in reporting on properties, showing their values in such glowing terms that people residing at a distance have great difficulty in deciding what is legitimate mining enterprise and what is not...

The Hauraki Peninsula is a large field for quartz-mining; it extends from Cape Colville to near Puriri, and the same belt of country continues still further southward. The formation of the rocks is highly indicative of gold- and silver-bearing lodes, and new discoveries have recently been made in the Tairua and Whangamata districts which go to show that valuable auriferous lodes exist, and those places which are only now held for the timber they afford will soon be opened up when capital is forthcoming to develop the mineral resources. Already several persons have netted considerable sums in taking up outside claims, and they no sooner dispose of one than they are on the outlook for another, and contesting as to who will be the first to get pegs in. Ground has been pegged by parties after others have been on similar errands, and shares sold in anticipation of claims being granted, and when their applications came to be investigated they had no standing.

Seeing that claims are taken up in this manner, and no work done to prove whether there is a likelihood of payable auriferous lodes existing or not, it cannot be wondered at if failures take place in investing capital in such ventures. On the other hand, there are many legitimate enterprises offering; and even some of those claims which are taken up simply for the purpose of floating companies to work them may turn out to be profitable investments; but there are many chances against this taking place. When one can see such large lodes as in the Waitekauri Company's, the Waihi Company's, and the Waihi-Silverton Company's mines, which a few years ago were looked on as being of little or no value, and other large lodes in the neighbourhood which are known to contain a little gold but have never been properly prospected, it

holds out a great inducement to expend a reasonable amount of money to carry on prospecting operations to test those lodes at a greater depth...

During the year ending the 31st December last, dividends to the extent of £68,000 have been paid by quartz-mining companies in the Auckland District.

Page 67

Ohinemuri District. This is the most promising gold-mining district in the North Island. Prior to about three years ago a great portion of this district could be termed *terra incognita* so far as prospecting is concerned, and very few had ever been over the country between Waitekauri and Tairua. The recent boom in mining has caused every place to be sought out wherever there is any indication of a quartz lode. No consequence whether any gold appears in the stone or not. The claim is pegged out, and application made for it in the Warden's Court, and when once it is granted a large price is asked for it from any company or syndicate who may find money to prospect the ground. Such is the method of dealing with claims at the present time. If a company can be floated to take up the property, so much the better for the original holders; but those who invest their money in ventures of this description have a great many chances against them of ever getting their money returned. The district is, however, rich in auriferous and argentiferous lodes, and no doubt many good claims will now be opened up. Roads and tracks are however greatly required to open up this district. Nothing can be done in working the ground until machinery is on the spot; but a great deal of prospecting will have to be done before machinery is required.

Crown Company. —At the time of my visit to this company's mine, in the end of January last, all the operations were confined to the No. 4 and No. 6 levels. The lowest adit-level was constructed for a distance of 1,330 ft., but, having met a fault, a prospecting drive was being carried through barren country with the view of picking up the lode on the south side of the fault. The adit-level is driven following the course of the lode; but in carrying on this level three different faults were met with, one of which displaced the lode about 45ft.

The No. 4 adit-level has been driven for a distance of 1,200 ft., and the same number of faults met with as in the No. 6 level; but the ore on this level is said to be considerably lower in grade than that in No. 6 level...

Stoping has been carried on in places between No. 4 and No. 6 levels, but, so far as yet known, the richest ore is underfoot in No. 6 level. In one place in this level some understoping was being carried on; but working the mine on this system can at the best only be termed a makeshift. The lode where this work was being done was about 8ft. wide, containing some very rich ore. Near the mouth of this adit-level an inclined shaft is being sunk following the inclination of the lode, which was down on the incline for a distance of 83ft. at the time of my visit. When this is down where it is intended to open out there is every appearance of some very good ore being obtained...

It was stated on Tuesday that the negotiations which have been in progress for some time, on the part of the syndicate owning the Earl of Glasgow property, for the acquisition of the New Zealand Crown Mines Company's property, had been completed, the terms mentioned being £3 a share for the Crown shares, this, however, being left to an arbitrator to decide. The report of the Crown

directors, presented at a meeting held in Glasgow on the 1st April, states that the negotiations had been in progress for some time with a view to amalgamation; that the Crown Mines Board had been invited to send a deputation to Paris to meet the Earl of Glasgow syndicate; but, as ultimately arranged, several meetings for the discussion of the proposed terms took place in London. The report referred to also states that 'after providing for depreciation and redemption of capital to the extent of £2,709 2s. 5d., and writing off one-third of the reconstruction-expenses, there remained a balance at credit of profit and loss account of £4,600 8s. 3d. From this sum the directors recommended the payment of a dividend of 1s. per share on the shares 17s. paid up, and of 1s. 2½d. per share on the shares fully paid, free of income-tax, which absorbed £4,390 16s., leaving a balance of £209 12s. 3d. to be carried forward to next year. This division was equal to nearly 6 per cent, on the paid-up capital. During the year 5,034 tons of ore were treated, from which 5,732oz. of gold and 6,714oz. of silver were recovered, to the value of £23,828 3s. 1d., after deducting gold duty. The average yield was £4 14s. 8d. per ton. An additional head of twenty stamps, and the necessary cyanide plant and buildings, were in course of erection. With the new plant in operation about 900 tons of ore could be put through per month."

Woodstock Company. —In reference to the Woodstock Company, the manager, Mr. J. McCombie, has given the following particulars :— "Since last annual report a considerable amount of work has been carried out in the mine, and the following is a summary of developments during the year ending the 31st March, 1896: —

During the past year 2,768 tons of ore, broken out from the Maria lode in this section of the mine, and treated by the cyanide process, gave a return of 20,292oz. of bullion, which realised £10,191. The average assay-value of this ore before treatment was £5 4s. 3d. per ton, and the value per ton recovered by cyanide and plates was £3 12s. 5d. per ton, or about 70 per cent, on the assay-value. Of course there is still a considerable amount of bullion in the slags and other residues, which will, when treated, bring the recovery up to a much higher figure. A series of experiments carried out on a small scale proved that leaching with a weak alkali solution before introducing the cyanide had the effect of reducing the consumption of the latter, with a corresponding increase in the bullion extraction. Because the percolating-vat accommodation was not equal to the mill requirements leaching could not be tested on a large scale, but ample provision is being made for its adoption in the large plant now in course of erection, and it will get a fair trial within the ensuing six months.

"No. 5 level: The starting-point of this cross-cut is about 30ft. above the bed of the Waitawheta River, and it may be said to be the lowest obtainable level — bar sinking. Since it was commenced, a distance of 78ft. has been driven, and another 30ft. of driving should bring it up to the Maria lode, upon which it will afford 85ft. of backs, up to the floor of the No. 4 level, and the distance to drive in order to reach the southern boundary is about 1,100ft.

No.5 Level is where the underground pumphouse will be situated.

"Ivanhoe section: Within the past twelve months the No. 3 level has been driven a distance of 215 ft., making the total length of this level 400 ft, and another 30ft. of driving should bring it up to the Ivanhoe lode, upon which it will afford 160 ft. of backs. From the surface-workings on this lode about

eighteen thousand pounds' worth of bullion was recovered by battery-amalgamation, which did not redeem 50 per cent, of the assay-value, and it is only reasonable to assume that present developments will be attended by satisfactory results.

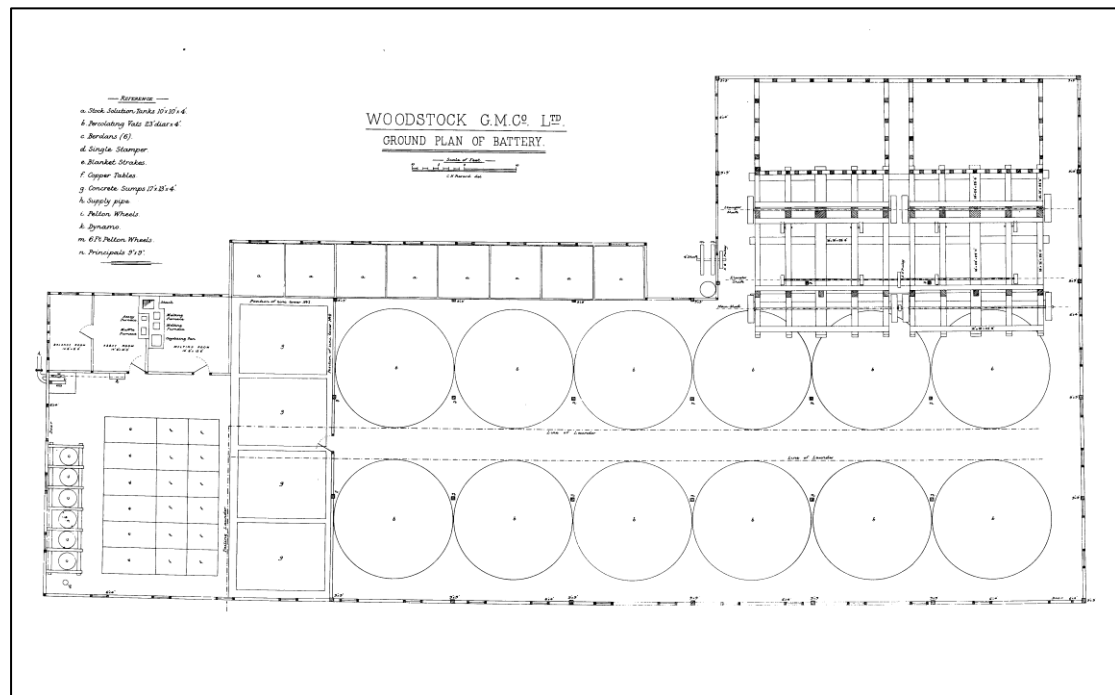
"New mill: In the month of February last a contract was let to A. and G. Price, Thames, for the erection of a forty-head dry-crushing battery, together with a suitable cyanide plant, and comprising all latest known improvements in both the milling and cyaniding departments. Towards the end of last month ore-reduction was suspended in the old battery, which has now been removed in order to make room for the new structure, with which good headway is being made. The excavations and general groundwork for the foundations of the new plant are now fast approaching completion, and it is expected that the whole concern will be in complete working order by the end of July next, being the time specified in the contract. This mill will comprise two stone-breakers, eight automatic ore-feeders, and forty head of dry-crushing stampers, capable of reducing, fine enough to pass through a forty-mesh screen, 40 tons of ore per day. The whole concern is so arranged that the ore under treatment will pass by gravitation from the kiln tramline, situate at the top of the mill, right down to the foot of the elevator, which will pick it up in its then finely-divided state, and transmit it to the dust-bins, from which it will again be conveyed automatically to the percolating-vats for cyanide treatment. These vats are composed of wood staves 3in. thick, hooped with iron, circular in form, 22ft. in diameter, and 4ft. in depth. There are twelve of them, and each one will accommodate 30 tons of ore, as well as the requisite quantity of solution. After the ore has been subjected to the cyanide process, the tailings will be sluiced over large electroplated copper-mounted tables, then over a series of blanket-strakes, and thence into a buddle concentrator. The blanketings and concentrates will be treated in six berdans, which are to be placed in position at the extreme lowest end of the plant for that purpose, and here a single stamper for the treatment of slags and other residues will also be erected.

"The excavation of the kiln-sites and the re-erection of the battery is proceeding satisfactorily, the framework of the latter being placed in position, so that, if circumstances prove favourable, the new mill should be ready for crushing about the beginning of August. With regard to the mill just pulled down, it was running exactly twelve months...

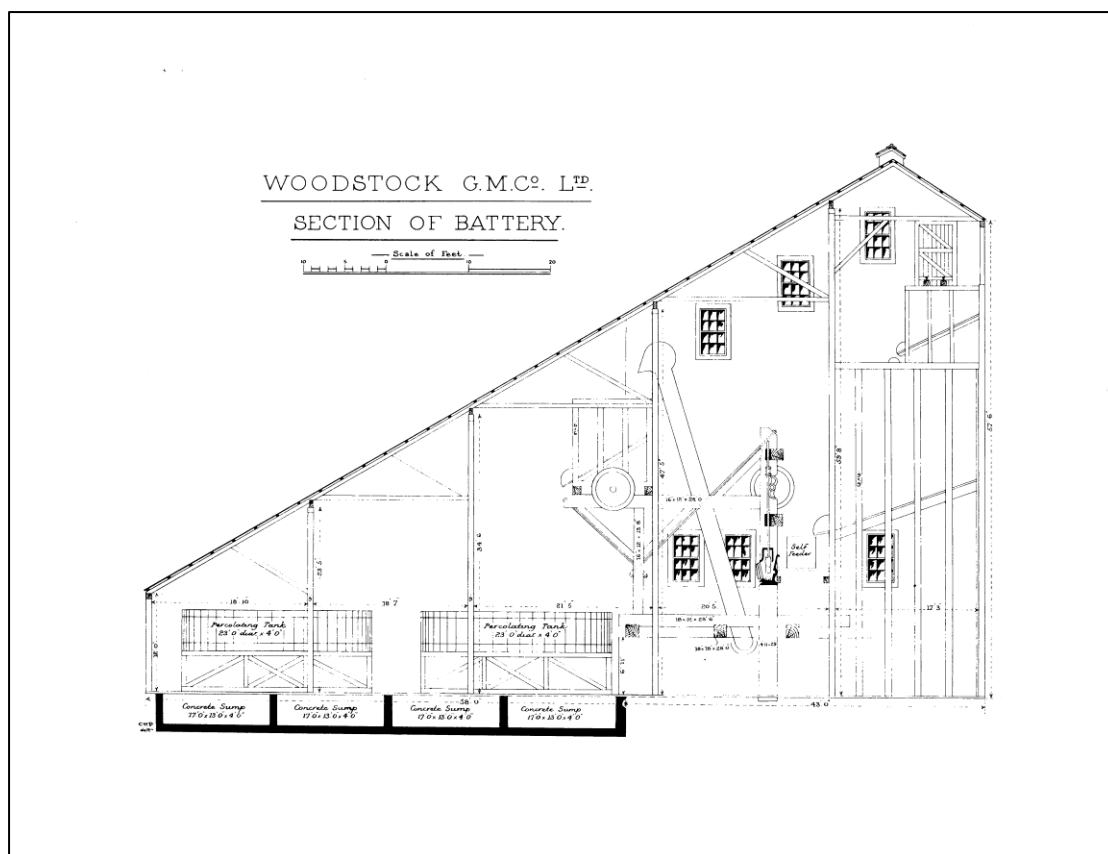
"The following is the average number of men employed during the year ending March, 1896: In the mine, forty-five; contractors, ten; and at the mill, eleven: making a total of sixty-six men.

"Talisman Company. —This company has recently been reconstructed by English capital. The mine has been fairly opened out, and there is a considerable quantity of ore in sight, which will keep a small mill going for some time, but there is no doubt but that this mine could be far more economically worked if it belonged to the same company that owns the Woodstock. Each of these companies have similar crushing-batteries erected alongside each other, requiring two staffs of men to work the mills when one is quite sufficient. If arrangements could not have been done to amalgamate the whole of the interests in one concern, it would have been an easy matter to have erected a crushing plant conjointly, each company to have the use of a certain number of stamps and vats.

A large number of claims have been marked out on the Karangahake field, but the majority of them are taken up by people who have not the means to work them; they are held more with the view of disposing of them to foreign syndicates and companies, who are prepared to find capital to develop them and place them on the Home market. And the boom in mining on the Northern goldfields at the present time is such that those that pegged out the ground think themselves entitled to get thousands of pounds in cash for undeveloped claims, besides a large number of shares in any company that may be formed.



WOODSTOCK G.M.Co. Ltd. GROUND PLAN OF BATTERY.



WOODSTOCK G.M.Co. Ltd. SECTION OF BATTERY.

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The following is Mr. Wilson's (the Inspector of Mines) report on the Ohinemuri district:

Karangahake.

Ivanhoe Mine. —Area, 70 acres; owners, Ivanhoe Gold-mining Company. — This mine is situated on the spur lying between Ohinemuri and Waitawheta. Three levels have been driven from the southern side of the spur, cutting three reefs, 10ft., 4ft., and 2ft. in thickness. Future operations will consist of driving a cross-cut to intersect the Crown reef; five men were employed.

Woodstock North Mine. —Owners, Woodstock North Gold-mining Company (Limited). —From the level of the Ohinemuri River a drive has been put in on a reef, but none of the quartz has been of sufficient value to be saved.

Sterling Mine. —Area, 30 acres; owners, Sterling Gold-mining Company.—A commencement was made on the 26th August last to drive a cross-cut to intersect a reef outcropping on the surface. This drive was continued for a distance of 60ft., and a reef was intersected. This reef, which is from 4ft. to 5ft. wide, carrying gold in the rubble, was driven on for 40ft. About 450 ft. to the southward of this drive a cross-cut was started, and extended for 150 ft., but nothing of any importance was cut in this level. A drive was put in 50ft. lower down the spur for a distance of 80ft. Two reefs were cut in this level, one 2ft. and the other 6in. thick. About 200 ft. to the southward of the prospecting drive a low-level was started and driven on 170 ft., and a formation was passed through, 10ft. in width, composed of quartz-leaders and sandstone. At 210 ft. a small reef, 15in. thick, was cut and driven on for 60ft.; 290 ft. further a new reef over 7ft. thick was cut, underlying to the westward,

and giving good prospects of gold by the dish test. The average number of men employed on the holding was five.

Stanley Mine. —Area, 61 acres 3 roods 37 perches; owners, Stanley Gold-mining Company.— Operations were-commenced about the end of May, 1895. A drive on the No. 1 reef was put in for a distance of 60ft. on its course ; a winze was also sunk to a depth of 20ft. on the reef, which is 1ft. in thickness, carrying a little gold. About 150 ft. further down the same spur a low-level cross-cut was started, and driven 400 ft. in a westerly direction. Two small reefs were cut, one 2ft. the other 1ft., but no gold was found in either. At the level of the tramway belonging to the Crown Company a lower level has been started [beside the Crown tramway walking track?], and driven 200 ft. on No. 2 reef, which has an average thickness of 2ft. 6in. It carries good walls, and is well defined; but, so far no gold has been found in any portion of it. On the Red Gauntlet section two reefs have been worked on, one 5ft. thick. This has been driven on only 10ft., but on the small reef, which averages 1ft. through, 200 ft. have been driven. Traces of gold are found in this, but nothing payable. The average number of men employed was five.

Imperial Mine. —Area, 60 acres; owners, Imperial Gold-mining Company.— A considerable amount of work has been done on this property —400 ft. of low-levels and 200 ft. on reefs have been driven. These are 1ft. 6in., 2ft., and 4ft. thick, but no quartz was crushed during the year. Five men were employed.

Wealth of Nations Mine. —Area, 30 acres; owners, Wealth of Nations Gold-mining Company.— A drive has been put in 250 ft., and a reef 3ft. thick has been intersected.

Waverley Mine. —Area, 63 acres 3 roods; owners, Waverley Gold-mining Company.—The principal work has been driving a low-level 200 ft., and 570 ft. on reefs; but no quartz was crushed. Five men were employed.

Talisman Extended Mine. —Area, 79 acres; owners, Talisman Extended Gold-mining Company. —Prospecting cross-cuts were driven 201 ft., and several reefs, varying from 1ft. to 8ft. have been discovered. No quartz has been crushed as yet. Four men were employed.

St. Patrick Mine.— Area, 35 acres; owners, St. Patrick Gold-mining Company.—A cross-cut was driven 208 ft., but, so far, no reef has been cut.

Karangahake Mine. —Area, 30 acres; owners, Karangahake Gold-mining Company.—Three prospecting-drives have been put in, and several reefs cut varying from 1ft. to 10ft. Seventy feet of driving has been done on reefs, but no quartz has been treated. Six men were employed.

The South British, Excelsior, Ruby, Shotover, Crown Nimrod, and Victor, as well as sundry other claims, have been prospected, but with meagre success.

Talisman Mine. —Area, 60 acres; owners, Talisman Gold-mining Company.—The chief work during the year was driving 550 ft. on the No. 4 level, which is 540 ft. below No. 2 and 900 ft. above the level of the Waitawheta Stream. A wire tramway has been constructed to convey quartz from the hopper at the low-level to the mill, but, from some occult cause, this mill has not been completed. The water-race has been finished, and the 10-stamp mill can soon be ready if it is wanted. Nine men were employed.

Earl of Glasgow Mine. —Area, 87 acres and 11 perches; owner, J. F. Bell.—A small crushing of 19 tons, yielding 24oz., was treated for Fleming and party early in the year, but, as the mine was shortly afterwards disposed of to an English syndicate, no further work was done at the battery. Two cross-cuts were then started to intersect the reef at a deep level, and 700 ft. were driven. Water was brought in to drive two rock-drills now in use at the mines, and the same power is utilised in driving cross-cuts. Twelve men were employed.

Crown Mine. —Area, 98 acres and 31 perches; owners, New Zealand Crown Gold-mining Company (Limited). —This company has carried on the work with great energy during the year. The adit-level on the south side has been extended, and large blocks of reef stoped out on No. 4, as well as both under and over No. 6. Preparations are now being made to sink further below the adit. The winding and pumping machinery will be driven by means of compressed air. Water will be brought in at the high-level race to drive the machinery for the air-compressors. The battery is being increased by the addition of twenty new stamps to those at present in use. The returns for the year have been most satisfactory—5,266 tons treated yielded 15,243oz. of bullion, valued at £26,310 11s. 6d. An average of 140 men were constantly employed during the year.

Woodstock Mine. —Area, 72 acres 1 rood 18 perches; owners, Woodstock Gold-mining Company (English company).—Work has been vigorously prosecuted on this mine during the year at the different levels on the Maria Reef, Shepherd's lode, Woodstock, and other reefs. A new level has been commenced about 30ft. above the bed of the Waitawheta Stream; 78ft. have been driven, but another 30ft. must be done before the Maria Reef is intersected. The blocks of quartz available on this reef, which is from 3ft. to 15ft. in thickness, are: On No. 1 level, 300 ft.; on No. 2, 268 ft.; on No. 3, 136 ft.; on No. 4, 75ft.; and on No. 5, 85ft.; making a total of 864 ft. of vertical height from No. 5 to the surface, the length on the line of reef being 600 ft. to 1,100ft. As only a moiety of this has been stoped already, it will be seen that large quantities of quartz are available, and, as the average value last year was at the rate of £5 4s. 3d., of which 70 per cent, was recovered, it will be readily understood that the yield of bullion should be considerable. It will also be apparent from the above measurements that a very large amount of ore will be obtained from the other lodes already mentioned. The total quantity of quartz treated was 2,768 tons, for 20,982oz., valued at £10,191 sterling. Sixty-one men were employed on the average through the year. The ten-stamp mill is to be replaced by one of forty stamps, with complete cyanide plant, which will be ready by the end of July. It will be driven by water conveyed through iron pipes. This method has an advantage over an open wooden race, which is exposed to injury by stones and other debris falling from the steep hill-side.

In the Ivanhoe section of the mine, on the northern side of Waitawheta, a drive is being put in to intersect the Ivanhoe lode, the surface blocks of which paid handsomely when worked many years ago.

Large areas have been taken up on every side of this district, as well as up the Waitawheta and Mangakiri Streams.

Several new discoveries have been reported, though, up to the present, none have come under my notice.

REPORTS OF WARDENS AND OTHER OFFICERS ON GOLDFIELDS.

APPENDIX TO THE JOURNALS OF THE HOUSE OF
REPRESENTATIVES, 1896 SESSION I, C-03A⁶⁶⁷

Page 3

No. 2. Mr. Warden Kenny

to the Under-Secretary for Mines, Wellington. Sir,— Warden's Office, Thames, 30th April, 1896. I have the honour to forward herewith statistical returns for the year ending the 31st March, 1896, and also the following report on the mining industry for the same period : —

Karangahake.- —The Crown Mine has been profitably worked. The battery of twenty stamps is being enlarged, and twenty new stamps will be erected. When the forty stamps are in use the quantity of quartz treated will be doubled. The mine is well opened up. The adit-level from the Waitawheta is driven a distance of 1,200 ft. Exploring works are being carried on under water level, and special machinery, driven by compressed air, is to be used for pumping and winding.

The Woodstock Company are also erecting a forty-stamp battery in place of the ten stamps formerly used. The mine is well opened up, so that the new mill can be well supplied.

The Talisman Company have a ten-stamp battery ready for use, and there is sufficient ore in sight to keep the mill going continuously. Prospecting is being extensively carried on in many places, and all the available ground round about Karangahake, and extending towards Mangakino and Owharoa, is occupied by special claims or licensed holdings, and as English capital is being invested in prospecting the Victor-Waihou, Earl of Glasgow, and other mines fresh discoveries of gold-bearing reefs are being made.

⁶⁶⁷ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1896-I.2.1.4.4>

REPORTS OF WARDENS AND OTHER OFFICERS ON GOLDFIELDS., Appendix to the Journals of the House of Representatives, 1896 Session I, C-03a

1896

14 January

Arrangements are almost completed for the lighting of the Tramway Hotel, Karangahake, by electricity.⁶⁶⁸

22 January

WATER RACES, MACHINE SITES, ETC. The following applications for water races, machine, and special sites, were granted: -Ivanhoe Gold Mining Company, water race, two miles on the Ohinemuri River, Karangahake; ditto, machine site, 6 acres, Karangahake... Woodstock Gold Mining Company, tunnel 250 feet at Karangahake; ditto, two special sites for hoppers, and also one aerial tramway, Karangahake.⁶⁶⁹

24 January

Woodstock Company sold to Woodstock Company

WOODSTOCK UNITED G.M. CO. A meeting of shareholders in the Woodstock United Company, Karangahake, whose property has been sold to an English company, was held yesterday in the large meeting room of Mr. D. G. MacDonnell's office, Insurance Buildings, to take measures for winding up the old company...

The Chairman explained that the winding up of the old company was a necessary proceeding, in consequence of the sale of the property to the Woodstock Company in England...⁶⁷⁰

1 February

TALISMAN G.M. CO. The directors of the Talisman Gold Mining Company held their adjourned meeting at the offices of Mr. D. G. Macdonnell yesterday for the purpose of receiving applications for the position of battery manager ... There were only two applications for the position of battery manager—namely, Mr. Charles H. Taylor and Mr. James Kitchener Wilson. Both gentlemen presented high testimonies as to their qualifications, and the choice of the directors fell on Mr. Taylor. Mr. Taylor has most excellent references from Mr. Napier, who has charge of the cyanide plant at the Crown Company's mine, at Karangahake, and from Mr. Park, director of the Thames School of Mines. He is a young man, and has obtained his qualifications by passing all his examinations qualifying him as an engineer and as a competent man to manipulate a battery and cyanide plant.

The tender of Johnson Brothers, for the supply of 2000 tons of firewood, rata, at 6s 9d per ton, and other wood at 5s 6d per ton, was accepted.⁶⁷¹

⁶⁶⁸ <https://paperspast.natlib.govt.nz/newspapers/THA18960114.2.8>

Thames Advertiser, Volume XXVIII, Issue 8326, 14 January 1896, Page 2

⁶⁶⁹ <https://paperspast.natlib.govt.nz/newspapers/NZH18960122.2.62>

New Zealand Herald, Volume XXXIII, Issue 10034, 22 January 1896, Page 6

⁶⁷⁰ <https://paperspast.natlib.govt.nz/newspapers/NZH18960124.2.66>

New Zealand Herald, Volume XXXIII, Issue 10036, 24 January 1896, Page 6

⁶⁷¹ <https://paperspast.natlib.govt.nz/newspapers/NZH18960201.2.31>

5 February

WOODSTOCK. At a meeting of the local directors of the Woodstock Gold Mining Company, held yesterday, the tenders of Messrs. Price Bros, for the erection of buildings, battery and cyanide plant, with concreting and brickwork; and the tender of Messrs. Seager Bros [maybe Seagar], for water mains were accepted.⁶⁷²

8 February

Woodstock —All the contracts recently let are now well under way, including, of course, the extensions of the Nos. 2.3. 4, and 5 levels, the excavations for the kiln sites, and the formation of the tramway through the gorge. The contract for repairing the dam has also been pushed ahead expeditiously, and is now almost completed, the necessary water supply having been, during the progress of the work, obtained from the Crown Company's water-race.⁶⁷³

15 February

TALISMAN G.M. CO., LIMITED. The annual meeting of the Talisman Gold Mining Company, Limited, was held yesterday afternoon at Mr. D. G. MacDonnell's office, Insurance Buildings. There was a large attendance, and Mr. James Russell presided.

Directors' report.

The Secretary, Mr. MacDonnell, read the directors' report as follows:...

a battery which, though only of 10 stamps is nevertheless complete in all respects for efficient treatment of ore, the facilities for the conveyance of ore from mine to battery are such that a considerable tonnage can be daily delivered if required, and at a very moderate cost The water supply is ample, capable of driving a much greater number of stampers than at present erected...

...and seeing that a large supply of payable ore is obtainable, far in excess of what our present crushing power can deal with, it might be well to consider as to the advisability of erecting more stampers.

You are all doubtless aware that this company's property was placed on the English market for sale, but as the person in whose hands the disposal of the property was placed cabled lately asking for six months' extension of time, we declined to grant it unless a deposit of £2,000 was paid down, which amount we promised to spend on the erection of another 10 stampers, our proposal not being agreed to, we declined to grant further time, and cabled for the return of plans and report sent home. We are of opinion you will approve of the course adopted, especially as the mine is now fairly developed, and gives promise of being much more than payable, and that we are now in a position to commence treatment of ore. We are also of opinion that owing to the improved prospects of the mine and its greater development than when first

New Zealand Herald, Volume XXXIII, Issue 10043, 1 February 1896, Page 5

⁶⁷² <https://paperspast.natlib.govt.nz/newspapers/NZH18960205.2.66>

New Zealand Herald, Volume XXXIII, Issue 10046, 5 February 1896, Page 6

⁶⁷³ <https://paperspast.natlib.govt.nz/newspapers/NZH18960208.2.40>

New Zealand Herald, Volume XXXIII, Issue 10049, 8 February 1896, Page 5

placed under offer that the terms of which it was offered would not now be good enough to accept. The balance-sheet as presented exhibits statement of receipts and expenditure, assets, liabilities, and capital account, and if you compare the expenditure with the work carried out in the development of the mine, the erection of crushing and cyanide plant, the construction of tramline, hopper, and water-race, the increase in the company's area by the addition of the Bonanza mine, and the company's position financially, that is the liabilities as compared with the assets, we think you will admit that the affairs of the company have been well and wisely administered...

MINE MANAGER'S REPORT.

I beg to furnish you with the following report, on your mine for the information of shareholders at the annual meeting, since taking charge of your mine on the 17th June last:—...

Tramway: A self-acting aerial tramway and hoppers has been erected, connecting the No. 4 level with the battery, a distance of fully 3000 feet [914m] , this will enable the ore to be delivered at the mill at a cost of 1s 9d per ton.

This doesn't seem credible! It must include a ground tramway or more? See 26 March below, and 13 June. Aerial cableway from No. 4 level down to the Hauraki level, then by ground tram? to the shoulder of the Plum Pudding, then a new aerial cableway to the battery.

Battery: A good ten stamper battery and cyanide plant has been erected, and a good substantial iron water-race has been erected to bring in the water, of which there is an ample supply. A contract has been let to cut and deliver 2000 tons of firewood to dry the ore, the first lot to be delivered by the 4th of March. The battery manager, Mr. C. Taylor, is busy engaged getting the plant in order, and I anticipate all will be in readiness to commence crushing soon after the first lot of wood is delivered. With the number of reefs already discovered in your mine and the facilities to work them by tunneling, which is the most economical method of mining, I have no hesitation in saying that when these reefs are fully developed your mine will prove to be one of the most valuable properties in the district. — W. GOLDSWORTHY...

The Chairman in moving the adoption of the report and balance-sheet, said he had little to add to the voluminous information contained in the reports submitted to them. He thought it right, however, to refer to one matter. It was stated in the directors' report that everything was complete at the battery, but since that report was written Mr. Taylor, who had been appointed battery manager, had made a report as to details which were required, and would require time to furnish. The directors insisted on the contractors making the plant complete before they took it over. In regard to the delay which had occurred in the negotiations for the floating of the company in England the Chairman explained that it was not the fault of the directors for they had done what they could to facilitate the negotiation, but the depression in the London market was the cause. The gentleman who had the negotiations for the sale of the company's property in England, Mr. Byles, asked for an extension of time during which he should have the company under offer, and the directors said they were willing to grant the extension asked for to six months if £2000 was deposited in proof of bone fides. Mr. Byles, however, was only able to offer £500, and the negotiations were broken off. Now, however, they had taken

over the property into their own hands he hoped they would soon have a dividend-paying property. Mr. Rogerson seconded the motion, and it was carried unanimously.⁶⁷⁴

Talisman: A self-acting aerial tramway connecting the No. 4 level with the battery

The connection is a short ground tramway with an aerial cableway at both ends.

Substantial iron water-race has been erected to bring in the water to Talisman battery

We see this today, unloved and dissolving.

A contract has been let to cut and deliver 2000 tons of firewood to dry the ore at Talisman battery

2000 tons!

20 February

Woodstock

An extraordinary general meeting of shareholders in the above Company was held on Feb. 10th at Mr D. G. MacDonnell's, for the purpose of confirming the resolution winding up the old company, prior to issuing scrip in the English Company to Auckland shareholders, which was agreed to.⁶⁷⁵

21 February

KARANGAHAKE.

The Karangahake district is undoubtedly looked upon with great favour by foreign investors, as, in addition to the three English-owned mines, another property has, during the past month, been acquired by Home capitalists, and will no doubt before long be adding to the wealth of the district. This is the Ravenswood special claim, advices concerning which were received on the 28th ult., stating that the mine had been sold in London for cash. A deposit of £1000 had been paid, and the remainder would be forthcoming at the end of May. Regarding the special claim in question it may be of interest to state that the Ravenswood consists of 90 acres, and is situated north of, and near to the, Woodstock Company's property, and on the same line of auriferous country...

The claim, it may be mentioned, was originally taken up by private individuals, who have also secured valuable water-rights and machine site, and who, as already stated, have disposed of the whole property to English capitalists. The terms have not transpired, but it is said that there will be a large amount of capital available for mine exploration; if so, the result should be highly satisfactory to all concerned.

At the Woodstock mine ...

⁶⁷⁴ <https://paperspast.natlib.govt.nz/newspapers/NZH18960215.2.40>

New Zealand Herald, Volume XXXIII, Issue 10055, 15 February 1896, Page 5

⁶⁷⁵ <https://paperspast.natlib.govt.nz/newspapers/AS18960220.2.10.31>

Auckland Star, Volume XXVII, Issue 43, 20 February 1896, Page 11

Since starting the No. 5 level crosscut a distance of 60 feet has now been accomplished, leaving 90 feet to be driven to reach the Maria lode, upon which this level will give about 90 feet of backs. A start has been made to drive the tunnel...

New mill: A contract has been let to Messrs. A. and G. Price, Thames, for the erection of a 30-head dry-crushing stamper battery, in addition to the 10-head battery now in use, together with a suitable cyanide plant,—the whole concern to be constructed on the latest and most improved principle, and be in complete working order by the end of July next. This plant will be capable of treating about 1300 tons of ore per month; and independent of developments in progress, there is already an abundance of ore opened up to keep it in full swing for a long time to come. To meet the requirements of this new plant, three kilns are in course of construction. These will each hold about 150 tons of ore, and they will all be placed on the hill-side above the mill, so that the ore will pass right down through the plant by gravitation.

Ten stamps require one kiln, so forty stamps require four kilns, and the corresponding firewood! We can see this stacked between the kilns in photographs.

The three extra kilns get emptied via the Stanley Cross-cut, and a new section of tramway.

The New Zealand Crown Mines Gold Mining Company's works are all in full swing...

The hauling engine has now arrived from Home and fixed in position, so that in a few days a start will be made to pump the water from the winze below.

No. 6 level: When the winze has been freed from the water sinking operations will be resumed...

A commencement has also been made to construct a large water-race in the Waitawheta, which will give an additional 180 effective horse power for the development of the mine below the No. 6 tunnel. At the battery the contractors are making good progress with the new additions, and the whole of the sheds will probably be completed next month.

The Talisman Gold Mining Company, which possesses one of the most valuable properties in Karangahake, are now going to work in earnest, and already the staff of miners has been augmented so much so that the mine presents signs of renewed activity.⁶⁷⁶

Woodstock to add 30 stamps to their mill, and three new kilns are being constructed

Crown start construction of large water race on Waitawheta River

22 February

ACCIDENT AT KARANGAHAKE. (by telegraph,—own correspondent.)

Paeroa, this day. A serious accident occurred this morning to a young man, named Joe Hayes, and who was excavating one of the Woodstock kiln sites at Karangahake. Hayes and mates had undermined and prepared for a fall of earth, which suddenly and unexpectedly gave way, and the earth and a large

⁶⁷⁶ <https://paperspast.natlib.govt.nz/newspapers/NZH18960221.2.71.12>

New Zealand Herald, Volume XXXIII, Issue 10060, 21 February 1896, Page 2 (Supplement)

boulder came down and caught Hayes' leg, pinning him to the ground. It took him some time to dig him out, when it was found one leg was broken and badly bruised, and the ankle also badly twisted. The unfortunate fellow suffered a lot of pain, and it was found advisable to have him carried into Paeroa on a stretcher. This was at once done by a dozen volunteers, and Hayes was examined by Dr. Forbes, who did everything possible for the injured man. This afternoon he will be removed to the Thames Hospital.⁶⁷⁷

26 February

Talisman.-The manager, Mr. Goldsworthy, is doing his utmost in pushing ahead the works of this mine with a view to commencing crushing operations as expeditiously as possible. The outside shoot for the conveyance of ore from the No. 3 level to No. 4 paddock is now completed, and now the lower section of the tramway as well as the finishing details to the battery are receiving attention and are well under way, so that it should not be long before the Talisman company supplements the list of local bullion producers.⁶⁷⁸

Ore from No. 3 level (adit) conveyed by chute to No. 4 level. The ground here is very steep; would suit a chute. From No. 4 level by cableway.

7 March

KARANGAHAKE.

SCENERY ON THE FAMOUS GOLDFIELD. EXQUISITE AND PICTURESQUE VIEWS FOR THE ARTIST

The scenery round Karangahake is certainly beautiful enough to inspire anyone, but it should be studied early in the morning in the grey dawn before the rush and turmoil of the day with its clangour of machinery and its troupes of shouting work-people render reflection impossible. Karangahake is about four and a-half miles from Paeroa, the busy little port for the mining districts which surround it on every hand. A paddock of land in Paeroa, which eighteen months ago could have been got for a mere song, is now a good fortune to anyone. The trade with Auckland and the general advance made is astonishing, and those who now visit Paeroa after a six months' absence are scarcely able to recognise that once sleepy township. It is bustling, jovial, brisk, and full of money, as mining townships are all over the world. Several lawyers have settled there, so the place may now be said to contain every modern convenience.

To return, however, to Karangahake. Much that has been said of Paeroa applies also to that mining township. It, too, is busy from morning till night. Everyone is in a hurry in Karangahake. It is a business town, and everyone seems to have twice as much work as he expects to get done in the time at his disposal. There is a constant coming and going from other mining centres, and the talk is of nothing but goldmining topics, the chances of new mines, the output of those working, the crushings, the calls, the divs, and the prospects of all these things. There is in the air the hum of many great engines and the

⁶⁷⁷ <https://paperspast.natlib.govt.nz/newspapers/AS18960222.2.16>

Auckland Star, Volume XXVII, Issue 45, 22 February 1896, Page 2

⁶⁷⁸ <https://paperspast.natlib.govt.nz/newspapers/NZH18960226.2.71>

New Zealand Herald, Volume XXXIII, Issue 10064, 26 February 1896, Page 6

clanking of trucks as they run up and down the tramways, while the stamping of the batteries produces a sound that is bewildering till time has accustomed the ear of the uninitiated.

Take a view of the township from the Crown Mine cable line [Woodstock or Talisman?]. The town —suburbs so to speak—appears to be situated in an immense arena with little huts dotted about over the face of the hills, some even merging into the heavy bush which tops the summits. Far down below is the township proper. Alongside it runs the river, with its big boulders checking the direct course of the water, cutting it up into pretty little eddies, turning first this way and then that, making graceful curves, together with the onward sweep of the current, forming miniature rapids of no mean order. The plash of the water blends with the jarring noise of machinery into rhythmical murmuring music.

In our illustrations we show the Karangahake Hotel, which makes a very pretty picture as viewed from the river. Then we come to the bridge as seen from the river, which by no means is the least useful article. It is greatly in use; in fact, it is constantly being repaired, owing to the immense traffic wearing it out. It is a wooden cable bridge with rails for trucks, and these are always heavily loaded...⁶⁷⁹

This is still the original suspension bridge, “pedestrian only”, but obviously accommodates other traffic, including “trucks”. The new Traffic bridge is constructed 1898. The illustrations don’t help us.

14 March

Paeroa, Friday. Woodstock. — Systematic operations in this mine are now in full swing, and the new company evidently intend to spare neither money nor labour in order to thoroughly develop their property....

All the outside works are progressing satisfactorily, and good headway is also being made by the contractors with the erection of the suspension bridge over the Ohinemuri River connecting the county road with the mill site. This bridge, when completed, will expedite the conveyance of machinery for the construction of the battery. It is intended to keep the mill running until about the end of this month, when the final clean up will take place under cover of the present battery, after which the removal of the building will be commenced, in order to give place to the fine 40-head stamper battery which is to be erected.⁶⁸⁰

Woodstock erecting suspension bridge over Ohinemuri for machinery for battery

This bridge may actually be a swing bridge, and may be the bridge that shows in some images. If so, it is a little upstream of the new battery.

⁶⁷⁹ <https://paperspast.natlib.govt.nz/periodicals/NZGRAP18960307.2.6>

New Zealand Graphic, Volume XVI, Issue X, 7 March 1896, Page 254

⁶⁸⁰ <https://paperspast.natlib.govt.nz/newspapers/NZH18960314.2.32>

New Zealand Herald, Volume XXXIII, Issue 10079, 14 March 1896, Page 5

20 March

KARANGAHAKE. In the Talisman mine stoping operations are still in progress, and a good class of ore is being broken out. The battery is now about completed, and I understand that the kilns [only one] are to be filled with quartz at once, and roasting commenced immediately, so that in another fortnight crushing will probably be commenced.⁶⁸¹

26 March

Talisman (Karangahake, March 21).— Stopping operations have been carried on in the No. 3 and 4 levels, from which some good payable ore has been broken out. This will be forwarded to the mill as soon as the excavation is finished on the tramway.⁶⁸²

10 April

WOODSTOCK COMPANY. DETAILS OF OPERATIONS

... an intermediate level which is about to be put in from the Hauraki gully on the western side of the main spur [Woodstock Blow]...⁶⁸³

13 April

The Talisman mine, Karangahake, has been absolutely sold to the London and New Zealand Investment Company.⁶⁸⁴

16 April

KARANGAHAKE. TALISMAN MINE. SALE NEGOTIATIONS CLINCHED.

During the last few weeks shares in the Talisman G.M. Company, Karangahake, have advanced about 2s in price owing to the fact being known that negotiations for the sale of the property were proceeding. That these are now approaching a satisfactory termination is shown by the fact that on March 24th the following notice was posted on the Exchange by Mr D. G. MacDonnell, Secretary to the Talisman Company:—"On behalf of an influential London syndicate, Mr D. E. Clark has paid £2,000 by way of deposit on the purchase of this Company's property." Later on the following satisfactory notice was posted on 'Change:—"Talisman G.M. Company: A cable has been received from London, from which the directors understand that the purchasers will complete the purchase at once without waiting for the period of option (15th June) to expire." The sale of this property may now be considered assured, as news was received by cable that the mine has been absolutely sold to the London New Zealand Investment Company. ...⁶⁸⁵

⁶⁸¹ <https://paperspast.natlib.govt.nz/newspapers/NZH18960320.2.70.13>

New Zealand Herald, Volume XXXIII, Issue 10084, 20 March 1896, Page 2 (Supplement)

⁶⁸² <https://paperspast.natlib.govt.nz/newspapers/NZH18960326.2.59>

New Zealand Herald, Volume XXXIII, Issue 10089, 26 March 1896, Page 6

⁶⁸³ <https://paperspast.natlib.govt.nz/newspapers/NZH18960410.2.62>

New Zealand Herald, Volume XXXIII, Issue 10102, 10 April 1896, Page 6

⁶⁸⁴ <https://paperspast.natlib.govt.nz/newspapers/EP18960413.2.36>

Evening Post, Volume LI, Issue 87, 13 April 1896, Page 2

⁶⁸⁵ <https://paperspast.natlib.govt.nz/newspapers/AS18960416.2.55.9>

Talisman Gold Mining Company sold to the London New Zealand Investment Company

17 April

KARANGAHAKE. At no period in the history of Karangahake has there been such activity displayed in mining — that is so far as practical work is concerned—as at the present time, this healthy state of affairs being brought about by the efficacy of the cyanide process in extracting a high percentage of bullion from low grade ores, backed up by the introduction of home capital for the development of the large reefs which abound in the Karangahake ranges.

Four properties, namely, the New Zealand Crown, Woodstock, Victor Waihou, and Earl of Glasgow, are being worked by capital subscribed at home, while the Ravenswood special claim has recently been acquired by an English company, and now negotiations have been satisfactorily concluded for the purchase of the Talisman Gold Mining Company's property. The Talisman mine should, when operations are conducted on a large scale, take a leading place among the bullion-producers of Ohinemuri. That the lodes carry good gold was proved some time ago, when an excellent bullion return was obtained—a fact which proved an incentive to further exploration, and an inducement to build a battery with cyanide appurtenances. This mill has now been completed, and crushing will doubtless be commenced before the publication of another Summary. The ore is now being prepared for the mill...

Other mines: A large amount of work is being done in other mines, chief among which are the Earl of Glasgow, Victor, Waihou, Ravenswood, Ivanhoe, Stanley, Sterling, Excelsior, Wealth of Nations, Waverley, Talisman Extended, Golden Fleece, Imperial, St. Patrick, South British, and Crescent, so that it will be seen a considerable area of ground is being developed in the Karangahake district.⁶⁸⁶

30 April

KARANGAHAKE NOTES.

Talisman.—The Talisman battery started crushing on Monday morning last, and has been running day and night since without hitch. The building has been constructed by Messrs Price, of Thames, and everything about it seems very solid and durable. The ten stampers do their duty very regularly, and everything possible has been done by coverings to minimise the dust evil. The water power seems sufficient to drive 40 head of stampers, and when the additional 30 are erected there need be no fear of insufficient water.⁶⁸⁷

Woodstock. — The following tenders have been accepted for the undermentioned works and the successful contractors have commenced work in each case... Construction of tram line, about seven chains [141 m]: H. Chalton, £4. Seven tenders were received, ranging from £12 to £4...

Auckland Star, Volume XXVII, Issue 89, 16 April 1896, Page 9

⁶⁸⁶ <https://paperspast.natlib.govt.nz/newspapers/NZH18960417.2.63.8>

New Zealand Herald, Volume XXXIII, Issue 10108, 17 April 1896, Page 2 (Supplement)

⁶⁸⁷ <https://paperspast.natlib.govt.nz/newspapers/AS18960430.2.37>

Auckland Star, Volume XXVII, Issue 101, 30 April 1896, Page 5

Talisman.—Shareholders in the Talisman Gold Mining Company will no doubt be gratified to learn that crushing has at last been commenced at the new mill, a start having been made to reduce the ore on Monday last. Several subsequent stoppages, however, were found necessary in order to tighten belts, etc., but this afternoon crushing was proceeding in earnest, and tomorrow a start will be made to charge the vats. The battery, it may be mentioned, is erected on a suitable site on the southern bank of the Waitewheta, and is situated a short distance from the Woodstock battery. It comprises ten head of stampers, and is a complete cyanide treatment plant, though I think it will be found necessary before long to increase the number of vats, there being only two at present. One pleasing feature about the mill is that everything is self-acting. No handling of ore is required from the time the ore is precipitated into the stonebreaker until it has been treated, for from the "grizzly" the quartz is shovelled into the stonebreaker, and when "chawed" up the ore is conveyed by means of an automatic feeder into the stamper boxes, thence it is elevated into the dustbin, which is a fine commodious receptacle, and is capable of holding about 24 tons of ore. From this bin, or hopper, the ore is run by gravitation into the two treatment vats, the side of each being 16 feet 9 inches in diameter, and four feet deep, while they are each capable of treating about 20 tons of ore. Of course in connection with the treatment plant there are two extractors, three sumps, one dissolving tank, mixing tank, and storage tank, while there are also the necessary centrifugal and vacuum pumps, zinc boxes, etc. The mill, which is working satisfactorily, is under the able and efficient control of Mr. Taylor, who has already proved himself a capable officer. Attached to the battery is also a fine melting and oxidising room, and everything combined makes a nice, compact and yet roomy plant, though now that an English company has acquired the Talisman property, it is expected that an enlargement will take place after a short time, as if the ore is to be treated remuneratively it must of necessity be treated on a large scale, and this is out of the question with a 10-head stamper battery. As it is, however, the present mill will undoubtedly meet all present requirements, and is as complete a battery of its kind as is to be found.

At the mine everything is proceeding satisfactorily, and good progress is made with opening up works under the management of Mr. Goldsworthy...⁶⁸⁸

Talisman battery starts, mine sold to the London New Zealand Investment Company

9 May

WOODSTOCK G.M. COY., Ltd. TO CONTRACTORS AND MINERS.
Tenders will be received by the undersigned till noon of FRIDAY, the 15th inst, for carrying out the under- noted works by contract:
Providing Material and erecting No. 1 Aerial Tramline.
Removing and re-erecting No. 2 Aerial Tramline.
Providing Material and building three Ore Hoppers and one Ore Paddock.
Cutting out sideline for ground Tramway...

⁶⁸⁸ <https://paperspast.natlib.govt.nz/newspapers/NZH18960430.2.55>

New Zealand Herald, Volume XXXIII, Issue 10119, 30 April 1896, Page 6

JNO. McCOMBIE, Manager.⁶⁸⁹

14 May

KARANGAHAKE. THE KARANGAHAKE FIELD.

The interest manifested in this district is shown by the great increase during the last year or two in the amount of money lodged at the Warden's Court, Paeroa, on account of properties pegged out and applied for. From January, to April in 1893 the total deposited was £172 15s, and for the same date, '94, it was only £118 1s. In 1895 for the same period the sum jumped to £2,558 19. 3d, and even this was excelled for the past four months of the present year, when the deposits totalled £3,987 1s 2d.

WOODSTOCK.

...Owing to the pulling down of the old battery, of course no ore is being treated, and the various works carried on are of a preparatory nature, making ready for the supply of ore to the 40 head of stampers being erected.

The first I visited was the No. 1 level, or Hauraki. This is an old cross drive which cut the reef, and its width at the point of intersection was 16ft...

In No. 5 level a crosscut is in 83ft to cut the reef, which is expected to be to hand after another 30ft. This level is 20ft above the tramway, the object being to guard against the flooding of the drive by a sudden rise in the Waitawheta River. I think this a very wise precaution, seeing the way in which the bed of the river is being filled up by the Crown and Woodstock tips, and it is likely enough the benefit of it will be felt before the present winter is over. At the mouth of the crosscut an ore paddock has been cut out of the rock large enough to hold 50 or 60 tons of quartz, and emptying into the trucks on the tramline below. This tramline runs round the hill and joins the Crown tramway, after 290 feet of excavating and 100 ft of tunnelling. It will be completed probably by the end of this week.

As I mentioned above, the distance from No. 1 to No. 2 level is 260 ft, and an intermediate crosscut has just been started below the Hauraki level to split this block in two, so that it can be more easily worked. It is the intention to construct a tramway from No. 1 level round to where this intermediate level is being put in, then a line will be run along the side of the hill to a hopper, and the ore from both levels will be thence conveyed by aerial tramway to a hopper above the level of the kiln site, and on the same side of the river [same side as the kilns?]. This tramline is now being constructed.

A crosscut is also being driven in the Ivanhoe section on the right bank of the river to cut the main reef, and is in 460 feet.⁶⁹⁰

⁶⁸⁹ <https://paperspast.natlib.govt.nz/newspapers/OG18960509.2.18.3>

Ohinemuri Gazette, Volume VII, Issue 238, 9 May 1896, Page 4

⁶⁹⁰ <https://paperspast.natlib.govt.nz/newspapers/AS18960514.2.36.12>

Auckland Star, Volume XXVII, Issue 112, 14 May 1896, Page 6

Woodstock intend to run an aerial tramway from No. 1 level to a hopper above the level of the kiln site

A new tramway from the No. 1 (Hauraki) Level via the Intermediate Level to a cableway that crosses the Waitawheta to a hopper above the level of the kilns. Ore can then be delivered to the kilns by ground tramway. Do we learn more? Image maybe?

No. 2 Aerial Tramline.

Re-erecting this to deliver to the level of the kilns. Is this the No. 2 level tramway/cable?

Woodstock connect No. 5 level tramway with Crown tramway

This is the presently closed section of tramway/walkway that gave access to the underground pumphouse (which doesn't exist at this date).

14 May

NEW ZEALAND CROWN MINES COMPANY.

Recently I had the pleasure of an inspection of this Company's property, under the guidance of Mr Daw, the general manager, whom I have to thank for an extremely pleasant three hours...

As is pretty generally known, the property lies on both sides of the Waitawheta, east of the Woodstock and part of the Talisman, and north of the Earl of Glasgow, whilst on the east it is bounded by the Imperial. The Crown reef crosses the river and has been worked on both sides, but at present work is confined to driving south on it from the left bank. The level at the river is known as No. 6, and is in a distance of about 1,500 ft without allowing anything for crosscuts...

Stoping operations are also being carried on here [No.7 Level], and certainly, the reef never looked as well as it does at this level and below it to the bottom of the winze. The reef appears to be high grade for its full width, whilst a magnificent seam about six inches wide is running through the centre of the lode, and is as fine-looking stone as anyone might wish to see. Mr. Daw states this to be worth, with slight variations, £400 per ton. It is not a "spot" either, for there are tons of it in sight...

A new vertical Tangye pump has just been got into position, and at work. This pump empties the shaft at the rate of 3,200 gallons an hour, and prevents any trouble with water. It is intended to start at once, continuing the shaft downward, and in about three months two more levels will be ready for opening out. It is also intended to start immediately driving north on the lode under the bed of the Waitawheta. As I stated above, a drive was put in some years ago north on the reef from the river level, and was extended several hundred feet till the reef pinched out. Underhand stoping was then carried on, and ore of the value of £40 and £50 was recovered, till the influx of water compelled the cessation of work. Now, with the powerful pumping machinery available, no such difficulty need exist, and this drive north along the No. 7 level will lead to the opening up of a tremendous stretch of reef. The power for the driving of the pump, winding engines, etc., and for supplying air in the drives is obtained by the air compressor [compressor house/old Crown/ex Railey's battery].

The splendid timbering in the drives, with the excellent ventilation and precautions taken for the safety of the miners in the stopes and shafts, is a feature of the mine, and reflects most creditably on the mine manager, Mr McGruer. Every truck of ore is numbered as it comes out of the drive, and its value decided by daily assays so that the value of the ore at the different points of operation is known exactly. All the mine work is done by contract, under the supervision of Mr McGruer, and seems to act very well.

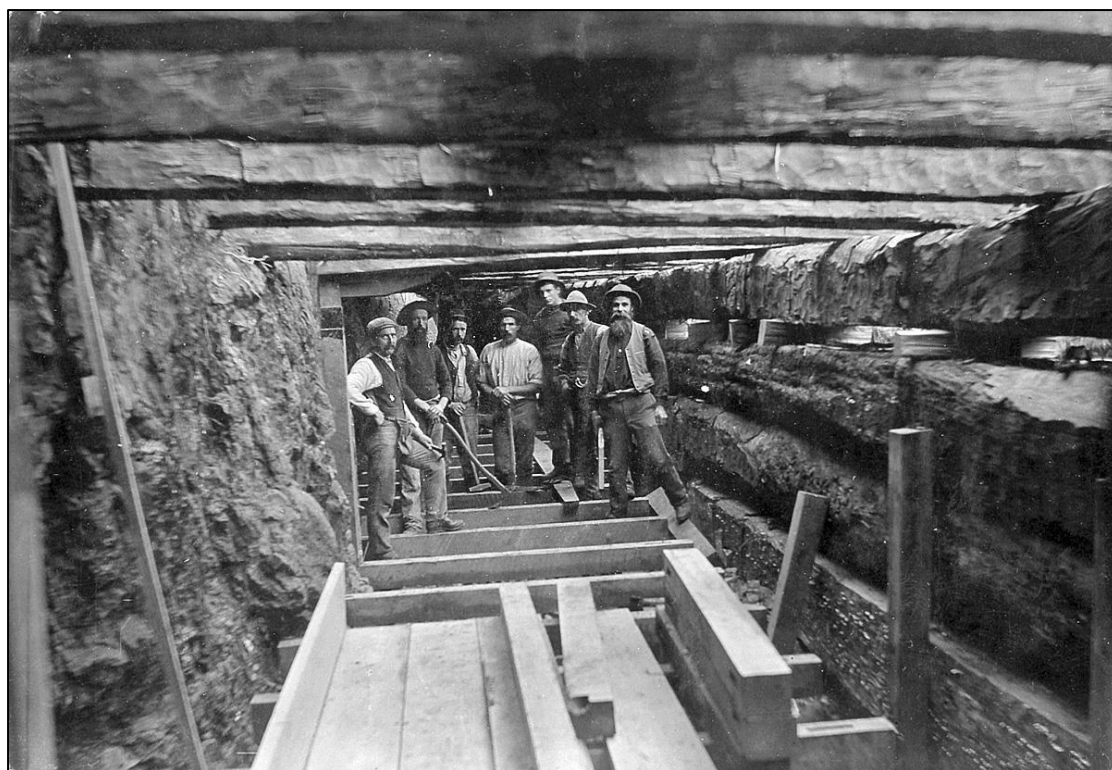
A large water race, one and a-quarter miles long [2012 m], is being constructed from the upper end of the Waitawheta, for utilisation in a more extensive scheme of pumping and winding. A tunnel 112 feet long, is being driven through the hill, and a natural dam will then be available, giving a fall of 74 feet and 30 sluice heads of water, which will prove equal to 252 theoretical horse power, out of which the Company will be able to utilise a power of 180 effective horse power. The battery enlargement is expected to be ready within two months, when the Company will have the service of 40 stampers instead of 20. This addition to the crushing power was badly needed for anything like a proper development of the mine, and I am sure the Company will have no difficulty in keeping this 40 head going for many years to come. Sufficient ore is visible now for that purpose without any more developments, but the Company are very wisely keeping a couple of years or more ahead of their requirements.⁶⁹¹

Crown Waitawheta water race under construction

The water race headworks are at the swimming hole immediately below the Paeroa municipal water supply pipeline route tunnel. The tunnel mentioned above discharges water to this day. Evidence of the headworks remain.

⁶⁹¹ <https://paperspast.natlib.govt.nz/newspapers/AS18960514.2.36.13>

Auckland Star, Volume XXVII, Issue 112, 14 May 1896, Page 6



Construction of the Crown Waitawheta water race head works, later half of 1897.

This is the upstream end of the wooden water race flume that feed water to the pelton wheel opposite the Crown No. 6 level. Not visible behind the seven workmen seen here is the short tunnel through the rocky headland from the dam.

Cliff is on the left, river beyond the timbers on the right. The sawn kauri timbers the men are working on are the basis of the flume. The large, hand adzed timbers above and to the right are armouring timbers to protect the more delicate flume from flood damage. The bottom of the flume is here only half a metre above stream level.

The large roof beams are notched into the cliff, and these notches can be seen today. So too remains of the very large foundation logs, and their fasteners.

The dam that fed the tunnel and then flume was a low wooden structure; only a little evidence remains. Water flowed through the tunnel into the flume. Water flows through the tunnel to this day. The pool here is a popular swimming hole.

The tunnel here through which walkers travel to Dickey's Flat was put in in 1959 for the Paeroa municipal water supply pipe.

Staples Collection.

19 May

NEW ZEALAND CROWN. IMPORTANT DEVELOPMENTS

The manager informed me the Company had sufficient reef opened out and known to them to keep 40 head of stampers going for 30 years, without working on the reef further ahead, and without developing any other reefs on the property.⁶⁹²

Hmm.

20 May

WARDEN'S COURT. TUESDAY, 19th MAY, 1896

⁶⁹² <https://paperspast.natlib.govt.nz/newspapers/AS18960519.2.15.2>

Auckland Star, Volume XXVII, Issue 116, 19 May 1896, Page 3

The following applications were granted or recommended...

Woodstock G.M. Co., tramway, 600ft [183 m] at Karangahake, granted on condition that a shoot be erected over the tramway to enable the Talisman Extended Company to shoot their stuff from the kiln to the battery;

Woodstock G.M. Co., aerial, tram way, 660 ft [201 m] at Karangahake...⁶⁹³

The 600ft [183 m] tramway is presumably at the bottom of the new cableway (from No. 1 and Intermediate Levels), and goes behind the Talisman battery. Ore can then be taken to the Woodstock kiln(s). This tramway must be part of the bench we walk on today to the Windows. An earlier length figure was about seven chains [141 m]⁶⁹⁴

The condition stipulated above appears to indicate that the Talisman (Talisman Extended? Error?) wish to be able to shoot ore over the top of the tramway if they wish. This chute appears in a photograph of the first Talisman battery.

30 May

Mr A. Shepherd, the popular landlord of the Tramway Hotel, Karangahake has leased his hotel to Messrs Brown and Campbell for a term of years and is going to take a well-earned rest after having been for 13 years in business. Mr Shepherd has always taken a great interest in mining matters ever since he came into the district, and at the present time he is a director in the Talisman as, well as being a shareholder in other mines. The Hotel, we understand, will be taken over from Morris Brown and Campbell by Mr and Mrs Bunyard, late of the Commercial Hotel, Whangarei...⁶⁹⁵

6 June

COUNTY COUNCIL.

School track.

Cr McGruer moved, and Cr. Thorpe seconded, that £15 be spent on making a 4 foot/track to the Schoolhouse Karangahake.—Carried.⁶⁹⁶

12 June

KARANGAHAKE.

Woodstock.

...It may also be mentioned here that several men who camp on the ground were cutting a track to their whare which is built on the Woodstock property, and intersected a reef two feet wide. The quartz is very clean and has some nice blue seams running through it. That the discovery is a valuable one so far as the Woodstock Company is concerned is undoubted, inasmuch as several ore samples were taken, the average assay value being £5 5s per ton...

⁶⁹³ <https://paperspast.natlib.govt.nz/newspapers/OG18960520.2.6>

Ohinemuri Gazette, Volume VII, Issue 241, 20 May 1896, Page 2

⁶⁹⁴ <https://paperspast.natlib.govt.nz/newspapers/NZH18960430.2.55>

New Zealand Herald, Volume XXXIII, Issue 10119, 30 April 1896, Page 6

⁶⁹⁵ <https://paperspast.natlib.govt.nz/newspapers/OG18960530.2.14>

Ohinemuri Gazette, Volume VII, Issue 243, 30 May 1896, Page 4

⁶⁹⁶ <https://paperspast.natlib.govt.nz/newspapers/OG18960606.2.12>

Ohinemuri Gazette, Volume VII, Issue 245, 6 June 1896, Page 4

With regard to other works, a contract has been let for constructing an aerial tramline in addition to altering No. 2 aerial tramline, and erecting three ore hoppers and forming one paddock. When this work is completed all the ore obtainable from the different blocks being opened up above the No. 2 level will be delivered at the top of the kilns, thus obviating the necessity for ore elevation so far as that section of the mine is concerned. The contractors are making fair headway with the erection of the new mill, while the contractors for the construction of the water-race are busy excavating the ground to receive the water mains, etc. All the iron plates for construction are punched ready to be put together.

The Talisman, Earl of Glasgow, Victor, Waverley, Imperial, Ivanhoe, Wealth of Nations, Stanley, Sterling, Karangahake, Talisman Extended, Golden Fleece, and St. Patrick are with others conducting progressive works...⁶⁹⁷

Woodstock altering No.2 aerial tramline, from delivering ore to the Crown tramway (used to be Woodstock tramway) to delivering directly to just above kiln level? And constructing an additional one (as mentioned above, 14 May?). Where? From the west of the Blow to above the kiln level?

The No. 3 level ore will still have to come to the battery via the Crown tramway?

The new Woodstock water race is to be a large steel pipe; lengths to be riveted together (quite a job, especially for the boy inside the pipe!). Sections of this pipe remain.

13 June

EARL OF GLASGOW

This Company was registered last week with a capital of £152,000, divided into 133,000 "A" and 19,000 "B" shares of £1 a-piece. The primary object of the Company is to adopt and carry into effect an agreement expressed to be made between the New Zealand Exploration Company (Limited) of the one part of this company, and the other part, for the acquisition of certain mining rights, licenses, and authorities situate in the Karangahake mining district, Auckland, New Zealand, granted by mining licences, numbered 373, 80, 87. and the water race license No. 8,210, and the machine site license No. 1,757, and the benefit of an application for a further water race and machine site license, and for a special claim of 100 acres, to develop and turn to account the said or such other properties as may from time to time be acquired by the company.⁶⁹⁸

THE STANLEY MINE. HOW THE REEF WAS FOUND. NZ Graphic

Our illustration this week is of special interest to those interested in mining, as it shows how an important find in the shape of a rich gold-bearing leader was made in the Stanley mine at Karangahake. This discovery is also a reassuring one, as it proves how impossible it is to judge what is or is not a valuable property. A month ago these shares were freely offered at 6d, but they met with little enquiry. Latterly they have sold by the thousand as high as 1s 9d,

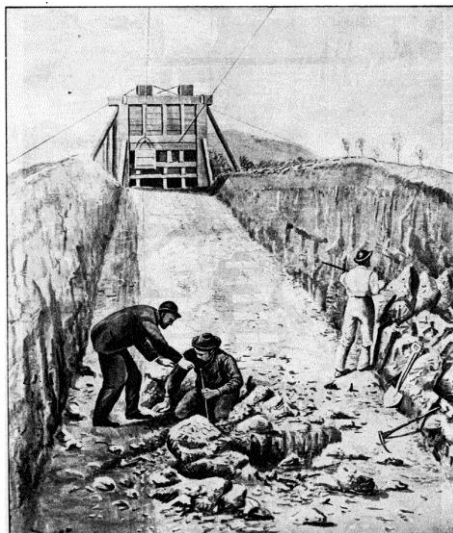
⁶⁹⁷ <https://paperspast.natlib.govt.nz/newspapers/NZH18960612.2.62.4>

New Zealand Herald, Volume XXXIII, Issue 10156, 12 June 1896, Page 1 (Supplement)

⁶⁹⁸ <https://paperspast.natlib.govt.nz/newspapers/AS18960613.2.7.2>

Auckland Star, Volume XXVII, Issue 138, 13 June 1896, Page 2

and at the time of writing there is still a brisk enquiry for large parcels at 1s 6d. The cause of this sudden change in value was the discovery of an entirely new reef, which shows gold freely, and as it partakes of the nature of the romance of mining, a relation of the facts will be of interest to readers of the Graphic.



THE STANLEY FIND

[See Mining News.]

Our artist was fortunate in being at hand when the new find was examined by a director of the Stanley Company and two mine managers who had been appointed for that purpose. He at once took advantage of the opportunity afforded, and secured a capital sketch of the location of the new find. As will be seen by the illustration, the leader is nearly in the centre of a cutting. This is the track cut for the wire tramway from the Talisman mine to the battery of that Company, which is situated on the Stanley ground. At the top of the picture may be seen the Talisman hopper and the bucket which runs along the wire to

carry the quartz to the battery. It was a fortunate thing for the Stanley shareholders that this bucket caught on the side of the hill, because it was the cutting away of four or five feet of ground to let it run clear that led up to this discovery. After the ground had been removed the reef was discovered in the middle of the track by Mr R. Stagpole, junior. An examination resulted in the discovery that the leader carried rich gold, and some of the stone obtained from it subsequently, may be classed as fair picked stone, a rather unusual thing in the Karangahake district. The discovery was duly reported to the Company, and the directors appointed one of their number to visit the mine and report upon the value of the reef. This gentleman obtained the services of two experienced miners—Mr Link, manager of the Earl of Glasgow Company's property, and Mr Goldsworthy, manager of the Talisman mine.

Our illustration shows these gentlemen testing the reef, which was broken down for a length of 10 or 11 feet, with the result that several pounds of stone, showing rich dabs of gold, were obtained. The new reef is situated 300 feet from the boundary of the Woodstock mine, and is running parallel with the Woodstock reef, but right through the Stanley ground to the Waverley mine. Where discovered, the reef is from two to ten inches wide, and is evidently a dropper out of a 3 foot reef which shows on the surface some 5 feet away. From the present strike the dropper should junction with this reef some distance ahead.

The present Stanley low level is 200 feet to the westward working on another parallel reef. In order to cut the new find at a lower level a tunnel will require to be put in from behind the Woodstock hopper above the Crown tramway. It is estimated that after driving about 70 feet the reef should be intersected. This tunnel will give from 90 to 100 feet of backs. As this level will be started 200 feet above the Crown tramway, there is ample room for other levels. The

Stanley mine comprises an area of 60 acres, and is bounded on the east by the Woodstock and on the south by the Waverley mines.⁶⁹⁹

The graphic shows the Talisman hopper and cableway that takes the ore across to the battery, so no continuous cableway from No.4 to the battery. In an attempt to make sense of the Talisman tramway/cableway, without the benefit of a map:-

An outside shoot for the conveyance of ore from the No. 3 level to No. 4 paddock. Then an aerial cableway from Talisman No.4 adit down to old Hauraki adit, then make use of, or reconstruct, Hauraki tramway to their old cableway hopper, or new replacement of, then new cableway across the Waitawheta to the Talisman battery. It may be this complicated route that the reporter was alluding to in his comment of 7 August 1895 ("with reference to the tramline I feel certain that a less costly line might have been provided if the line had been laid down on another course to the one it now occupies. By a careful examination of the locality this defect could be easily remedied. The handling of ore is sometimes very costly and no doubt this defect will be looked to before the line is completed."⁷⁰⁰)

15 June

Mr Alf. Shepherd, of the Tramway Hotel, Karangahake, having sold that hotel to Mr Bunyard, has paid Mr Barney MacDonnell £2000 for the Uretara Hotel at Katikati.⁷⁰¹

It will become the Talisman Hotel, Katikati.

19 June

OUR MINING SPECIAL.

By special wire we learn that the terms of the amalgamation between the N.Z. Crown Mines Co. and the Earl of Glasgow properties at Karangahake are as follows : —Capital of new company £200,000, in £1 shares; Crown shareholders to receive 36,000 shares, equal to share for share, and £50,000 cash; Earl of Glasgow owners to receive 14000 shares. The sum of £50,000 is to spent in further developing the joint properties.⁷⁰²

⁶⁹⁹ <https://paperspast.natlib.govt.nz/periodicals/NZGRAP18960613.2.40>

New Zealand Graphic, Volume XVI, Issue XXIV, 13 June 1896, Page 695

Image:

<https://paperspast.natlib.govt.nz/periodicals/NZGRAP18960613.2.38>

New Zealand Graphic, Volume XVI, Issue XXIV, 13 June 1896, Page 694

⁷⁰⁰ <https://paperspast.natlib.govt.nz/newspapers/THS18950807.2.9>

Thames Star, Volume XXVI, Issue 8115, 7 August 1895, Page 2

⁷⁰¹ <https://paperspast.natlib.govt.nz/newspapers/THA18960615.2.11>

Thames Advertiser, Volume XXVIII, Issue 8455, 15 June 1896, Page 2

⁷⁰² <https://paperspast.natlib.govt.nz/newspapers/DTN18960619.2.30>

Daily Telegraph, Issue 7788, 19 June 1896, Page 3

Earl of Glasgow and Crown mines combine**27 June****THE FLOOD.**

PAEROA. The flood on Wednesday last was about the heaviest that has been experienced for many years...

KARANGAHAKE. At Mackaytown the bridge near Mr Nash's was floated by the water that came down the small creek, and traffic for the great part of Thursday was stopped. It is now however repaired.

The swing bridge over the Karangahake river to the Crown battery was swept away, and over three chains of water race belonging to the Crown Mines Co. destroyed [the Crown workers' bridge?].

Mr T. Quigley, the contractor for supplying timber from the Waitawheta for the Crown and Woodstock lost heavily from the timber being swept away.

All along the main road and the banks of the river blocks of wood, sawn timber and other debris, are strewn, showing the effects of the flood.

The most disastrous incident of the flood was the lamentable accident by which Mr C. S. Brown, who was caretaker of the Crown Mines water race, lost his life by drowning. The evidence given at the inquest reported in another column shows how this happened. The news caused quite a shock to the community throughout the district, as the deceased was very widely known and highly respected. He was 55 years of age, and leaves a wife and five children, the youngest of whom is only two months old. Mrs Brown is a daughter of Mr Ralph Pennell, of Karangahake...

The Waihi coach had a very narrow escape of being swept into the river when crossing Doherty's Creek, on the Paeroa side of Karangahake, the driver, Mr Crimmins having managed with the greatest difficulty to steer his horses to the other side, much, it is needless to say, to the comfort and satisfaction of the passengers. Owharoa was then reached in safety, but the coach had to remain there for the night.⁷⁰³

A SAD FATALITY. DEATH OF MR C. S. BROWN.

THE INQUEST.

The inquest to enquire into the of Mr Charles Spence Brown was held on Thursday at 2 p.m. at Kelly's Hotel, Karangahake, before C. Mitchell Esq., J.P. Coroner, and the following jury:— Messrs W. F. Brown, Geo. E. Morris, W. Barry, J. Farrell, W. J. Foubister, and Samuel Adam...

Thomas Alfred Dudley, plumber, residing at Karangahake, sworn, deposed: I am employed at the Crown Battery. I received a message from Mr Hutchison yesterday to Mr Brown, to see what was wrong with the race. I found Mr Brown at his house and delivered the message to him. We both went to the water race to see what was wrong, I was walking on the race about ten yards ahead of the deceased on the foot-plank. I was kneeling down with my back to him when I heard a cry, and turning round I was just in time to see the deceased reach the water. I did not see him again alive. The foot-planks of the

⁷⁰³ <https://paperspast.natlib.govt.nz/newspapers/OG18960627.2.22>

Ohinemuri Gazette, Volume VII, Issue 250, 27 June 1896, Page 5

race were wet and slippery and the river was in high flood and very rough. It would be about five feet of a fall from where the deceased was to the river. I saw the body of the deceased taken out of the river this morning about half a mile from where he fell in. When the deceased fell in he seemed to me to strike the water head first. There are some very large boulders in the river at this spot...

This concluded the evidence, and the jury, without hesitation, returned the following verdict: "The death of the deceased, Charles Spence Brown, was accidental while in the performance of his duty."⁷⁰⁴

4 July

Tracks to Mines. - The Ohinemuri County have accepted the tender of L. McNamara, at £190 10s, for forming 1¾ miles hill track from Karangahake to the Earl of Glasgow mine at Karangahake.⁷⁰⁵

10 July

The Woodstock Gold Mining Company's property...

Before passing from this No. 1, or Hauraki level, it may be mentioned that until the ore paddocks are completed and the aerial tramline connected with the kilns, no further work will be done in the drive going south on the Maria lode, there being no storage for the ore broken out.

The most important development at No. 4 level has been the junctioning of the three lodes passed through in the crosscut.⁷⁰⁶

No mention of a cableway from Woodstock No. 4 level. A photograph hints at one.

15 July

WOODSTOCK

The "Graphic" follows up its fine mining pictures of last week with a large sketch of the Woodstock mine, Karangahake. A more romantically situated mine than the Woodstock could hardly be imagined. As the picture shows, it is situated in a deep gorge in the hills. At the bottom of precipitous cliffs, in which are the drivings of the mine, the Waitawhita River brawls along amid great boulders. It seems an ideal locale for hidden treasure.⁷⁰⁷

The image appears to show a stylized view of the No. 5 Level entrance, beside the Waitawheta River. It can be found here:

<https://paperspast.natlib.govt.nz/periodicals/new-zealand-graphic/1896/07/18/7>

22 July

WOODSTOCK.

⁷⁰⁴ <https://paperspast.natlib.govt.nz/newspapers/OG18960627.2.19>

Ohinemuri Gazette, Volume VII, Issue 250, 27 June 1896, Page 4

⁷⁰⁵ <https://paperspast.natlib.govt.nz/newspapers/NZH18960704.2.31>

New Zealand Herald, Volume XXXIII, Issue 10175, 4 July 1896, Page 5

⁷⁰⁶ <https://paperspast.natlib.govt.nz/newspapers/NZH18960710.2.60.4>

New Zealand Herald, Volume XXXIII, Issue 10180, 10 July 1896, Page 1 (Supplement)

⁷⁰⁷ <https://paperspast.natlib.govt.nz/newspapers/AS18960715.2.54>

Auckland Star, Volume XXVII, Issue 165, 15 July 1896, Page 5

The Woodstock G.M. Company are shipping to Auckland for transhipment to London seven tons of quartz, taken out of different parts of the mine.⁷⁰⁸

25 July

N.Z. TALISMAN G.M. CO. Limited. TENDERS FOR EXCAVATING.

TENDERS will be received up to the 25th inst at 12 noon, at the Company's office, for Excavating and Removal of 2,100 cubic yards of Earthwork for site for Cyanide Plant.

Specifications to be seen at the Company's Battery. C. H. TAYLOR, Battery Superintendent.⁷⁰⁹

Is this on Battery Flat, for the vat house? There will also be earthworks at the battery?

Mine Manager Talisman Extended Gold Mining Company (Limited). R. Stackpole, Jun.

...When No. 7 and No. 8 are cut, there will be 700 feet of backs over this tunnel. From this point a ground tramway, about six chains in length, can be made on the Woodstock spur by erecting an endless wire aerial tramway; the quartz could be conveyed to the Talisman [Extended?] Intended machine site at a cost of about 2d per ton, and the company having the right to 30 sluice-heads of water, all that is wanting is a fair working capital to open up the different reefs that have already been found, and I have no hesitation in saying that the Talisman Extended will turn out to be a dividend-paying mine. I have the honour to be, Gentlemen, Your obedient servant, (Signed) R. Stackpole...⁷¹⁰

This is the Talisman Extended Gold Mining Company, to the west of the Talisman property. They are considering a tramway and cableway, and have a machine site.. Do they ever do this? They amalgamate with the Talisman Company (1900), who use the Extended Company's machine site to extend their battery up stream, therefore no longer needing their vat house on Battery Flat.

To sum up:- there are two hoppers and cableways on the western side of the Woodstock blow, both terminating a little above the kilns level; Woodstock from the No. 1 Level, Talisman from the No. 4 Level.

Additionally, there are two on the eastern side of the blow. No. 2 cableway has been redirected to a hopper above the kiln level. No. 3 Level Woodstock continues to deliver ore to the Crown tramway as before.

Talisman No. 8 Level cableway will arrive in 1900.

13 August

Selection of Teachers. —The following appointments were authorised:—Mr A. N. Scott to be head teacher Karangahake School [Father of Nellie Scott Climie?].

⁷⁰⁸ <https://paperspast.natlib.govt.nz/newspapers/AS18960722.2.10>

Auckland Star, Volume XXVII, Issue 171, 22 July 1896, Page 2

⁷⁰⁹ <https://paperspast.natlib.govt.nz/newspapers/OG18960725.2.15.2>

Ohinemuri Gazette, Volume VII, Issue 258, 25 July 1896, Page 4

⁷¹⁰ <https://paperspast.natlib.govt.nz/newspapers/NZH18960725.2.6>

New Zealand Herald, Volume XXXIII, Issue 10193, 25 July 1896, Page 3

15 August

MISCELLANEOUS APPLICATIONS. The following were dealt with William Goldsworthy...

New Zealand Talisman Gold Mining Company, water-race on Hauraki Creek.⁷¹¹

This is the stream in Scotchman's Gully. This will be for process water in the vat house on their Special Site, Battery Flat.

Crown battery has 40 stamps at work**22 August**

By Obadiah, the Younger.

Crown. — The whole forty stampers are now at work, and I hear the result of the present crushing will be a first-class one. The mine is looking well lately, also. Karangahake will be well boomed by the Crown bullion yields, even before the Woodstock gets a start.

Woodstock — The big battery will not be at work so soon as was expected. But it will talk dividends when it does get under way.⁷¹²

28 August

PAEROA WARDEN'S COURT. [BY TELEGRAPH.—OWN CORRESPONDENT.] Paeroa, Thursday.

APPLICATION FORFEITURE. Another case was then commenced in which a large amount of interest was centred, namely, an application made by J. McLelland, of Auckland, for the forfeiture of the Ravenswood special claim at Karangahake, on the grounds of non-working.

Mr. Baume appeared for the complainant McLelland, while Mr. Parr appeared for Elijah Brokenshire, the licensee of the claim, which, it may be mentioned, was recently acquired by a Home company with a working capital of £30,000.

A large amount of evidence was adduced, showing that about 600 feet of driving and about 800 feet of trenching had been accomplished, the expenditure in connection with which amounted to over £700. Three men had been regularly employed in carrying out the works undertaken, but a greater number could not have been profitably employed. Mr. Parr, for the objectors, addressed the Court at some length, pointing out that after spending about £600 in wages, etc., and finding that operations were not of a remunerative character, efforts were made to secure English capital. The result of these negotiations was the actual sale of the property in London during the month of January, since when word has been expected every day that the present holders were to hand over the property to the new company. These negotiations were concluded so far that a sum of £3000 was at present awaiting the shareholders at the Bank of New Zealand at Auckland, while

⁷¹¹ <https://paperspast.natlib.govt.nz/newspapers/NZH18960815.2.46>

New Zealand Herald, Volume XXXIII, Issue 10211, 15 August 1896, Page 6

⁷¹² <https://paperspast.natlib.govt.nz/newspapers/TO18960822.2.20>

Observer, Volume XVI, Issue 920, 22 August 1896, Page 13

according to the terms of sale a working capital of £30,000 had been provided for the systematic development of the property.

Now, after all this had been done, said Mr. Parr, McLelland comes along and says, 'I want the property.' Mr. McLelland's action he designated as a great piece of impertinence. He submitted that if this were tolerated by the Warden, incalculable harm would be done thereby to the district, namely, by the driving away of the capital so much desired for the development of our fields. He contended that the syndicate, or holders of the ground, could not have profitably employed more than two men, and as a consequence it was not a case for a decree for forfeiture. The new English company had now issued instructions that more men should be employed, and though a breach of the regulations had been committed, he maintained that a fine would meet the case.

Mr. Baume, in the course of his address, submitted that the ground had been held by Brokenshire merely for speculative purposes, and the whole affair was simply a gamble. He deprecated the holding of ground with such an object in view, and he contended that where ground was held and not worked according to the regulations, an example should be made of the delinquents. If His Worship did not forfeit then he should inflict such a fine that would be a punishment to the company, and a warning to others. The Warden said that he would like to consider the matter, and would reserve his decision until next Court day...

THE NAMING of CLAIMS. During the course of to-day's proceedings, the question of the propriety and good taste exhibited sometimes in the naming of claims was commented on by the Warden, and in two or three instances where questionable names occurred a change was made. His Worship, whilst speaking upon the subject, referred to an application which would come before him shortly for a special claim that had been named 'Rock of Ages.' This, he considered, was a very improper name to give to a claim, and was likely to give offence to a great number of people. Such a designation would not, in his opinion, be creditable to the goldfield, or enhance the value of the property if sent home under such a title. Consequently he should insist upon a change of name before he finally dealt with it.⁷¹³

29 August

NEW ZEALAND TALISMAN.

...Arrangements for the reconstruction and enlargement of the mill are already well in hand, and the necessary excavations are nearly completed. A Howe Truss bridge will be erected across the Waitawheta River, and a tramway laid over it to connect the mill site with the Company's special site and the County Bridge. The new office is completed providing accommodation for the mine manager (Mr. W. Goldsworthy), the battery manager (Mr. C. A. Taylor), and the necessary clerical staff. Residences for the mine and battery managers are in course of construction.⁷¹⁴

⁷¹³ <https://paperspast.natlib.govt.nz/newspapers/NZH18960828.2.62>

New Zealand Herald, Volume XXXIII, Issue 10222, 28 August 1896, Page 6

⁷¹⁴ <https://paperspast.natlib.govt.nz/newspapers/NZH18960829.2.28>

New Zealand Herald, Volume XXXIII, Issue 10223, 29 August 1896, Page 5

4 September

WOODSTOCK. A contract has been let in the Ivanhoe section for continuing the kiln tram line through on the right hand bank of the Waitawheta, and this will intersect all known lodes on route. When this has been done it is the intention to commence driving on the lodes, so that the Company should have an immense supply of ore to deal with in the near future.

CROWN. The New Zealand Crown Exploration Company are determined to give the low levels of the Crown mines a thorough trial, and it is understood that with a view to conducting low level explorations on a large scale, a capable electric and air compressor plant will most probably be used in connection with the workings, specifications for the machinery having been sent Home, and now being considered by the Home directorate. A fine supply of ore is being won from the various workings, and not the slightest difficulty is being found in keeping the 40 head of stampers going...

The preliminary works connected with the proposed development of the Rhoderick Dhu reef are about complete, and work is now to be commenced on the lode.⁷¹⁵

“Continuing the kiln tram line through on the right hand bank of the Waitawheta” sounds like the “Windows” as we know them.

“Windows” tunnel to be started

4 September

KARANGAHAKE.

One of the features of the past month has been the commencement of the new 20 head of stampers at the Crown Mines Gold Mining Company's reduction plant. This event took place about the 10th ult. The full complement has been running ever since, and the new machinery gives the utmost satisfaction. The plant now consists of 40 head of stampers, with 12 large percolation tanks, 9 solution tanks, and 11 vats for the treatment of tailings, with of course other concomitants. Altogether the mill is most complete, and one pleasing feature is the small amount of handling required. The crushed ore is now conveyed from the stamper-boxes to the large storage hoppers by means of eight revolving tubes, and these minimise to a considerable extent the dust evil, though the Crown employees have not been troubled much with dust, inasmuch as the mill is very high and well ventilated. The monthly cleaning-up took place about two weeks ago, and resulted in 1169oz of bullion being recovered, the value of which was £1866. This was the product of 1169oz of bullion.

At the mine everything is proceeding satisfactorily, and a splendid supply of crushing material is being graced from the workings...

And in connection with the development works, specifications for an electric and air compressor plant have been sent home, and are now being considered by the directors. The preliminary work connected with the operations on the Rhoderick Dhu lode have been completed, and work is to be commenced at once upon the reef.

⁷¹⁵ <https://paperspast.natlib.govt.nz/newspapers/THA18960904.2.24>

Thames Advertiser, Volume XXVIII, Issue 8524, 4 September 1896, Page 3

At the New Zealand Talisman Gold Mining Company mine, the Maria reef has been cut in No. 5 adit, its width at the point of intersection being 18 inches. It is expected that the ore body will considerably increase in size as driving on it proceeds, since at the bottom of the winze now being sunk from No. 4 level it averages three feet in width. No. 6 adit has been commenced and is making satisfactory progress. Arrangements for the reconstruction and enlargement of the mill are already well in hand, and the necessary excavations are nearly completed. A Howe Truss bridge will be erected across the Waitawheta River, and a tramway laid over it to connect the mill site with the Company's special site and the County Bridge. The new office is completed, providing accommodation for the mine manager (Mr. W. Goldsworthy) the battery manager (Mr. C. A. Taylor), and the necessary clerical staff. The first cleanup at the mill will take place at an early date. Operations on the Woodstock property are being continued with success, and the various works in hand are producing a good supply of remunerative ore...⁷¹⁶

Talisman Company to erect Howe Truss bridge across the Waitawheta River, to connect battery with Special site. The battery to be enlarged.

The special site will accommodate the Vat House, with percolation tanks for which there is no room at the battery, and is where the old Ivanhoe battery stood.

19 September

The New Zealand Exploration Company, who own the New Zealand Crown mines at Karangahake, are negotiating for the purchase of the Woodstock and Talisman companies' property.⁷¹⁷

Bold. But nothing more is heard.

29 September

Mr Scott takes up headmastership of Karangahake School.⁷¹⁸

8 October

THE MINING POSITION.

An Interview with Count d'Abbans...

BAD ROADS AND THE REMEDY. But there is a drawback. The roads are only not execrable because they are not at all. The country is a sort of panorama of waggons hopelessly stationary in spite of the exertions of six-horse teams stimulated by the profanity of drivers who are past masters of the art of plain speech. There is a bit of road of five or six miles, and the rest—the Count laments and mourns eloquently over the rest. Then his eloquence takes a hopeful turn. The very place this for light railways. He has just read the Public Works Statement of Mr Hall-Jones. He subscribes to that part of it

⁷¹⁶ <https://paperspast.natlib.govt.nz/newspapers/NZH18960904.2.58.4>

New Zealand Herald, Volume XXXIII, Issue 10228, 4 September 1896, Page 1 (Supplement)

⁷¹⁷ <https://paperspast.natlib.govt.nz/newspapers/HBH18960919.2.28>

Hawke's Bay Herald, Volume XXXI, Issue 10412, 19 September 1896, Page 4

⁷¹⁸ <https://paperspast.natlib.govt.nz/newspapers/WAIGUS18960929.2.22>

Waikato Argus, Volume I, Issue 35, 29 September 1896, Page 3

which deals with the subject of light railways. Cheaper than ordinary roads, smooth, capable of enormous traffic at cheap rates, they afford the solution of every one of the difficulties which beset the miner and the progress of civilisation in that difficult country...⁷¹⁹

12 October

A TRIP AMONGST THE MINES.

KARANGAHAKE. It is at Karangahake that one gets an idea of what capital has to be expended before a mine with a six foot reef that will crush say £5 per ton can be made to pay. To start with before even work can be commenced expensive suspension bridges have to be built to cross the river which at times is in heavy flood. On the side where the operations of the Crown, Woodstock, etc., are in progress the cliffs rise almost abruptly several hundred feet, and a bit back at the trig a height of about two thousand feet is attained. Now these cliffs are not what we in Tauranga are used to, but composed of solid rock, through which the water has worn its way during past centuries. Every bit of tramline, water race, etc., has to be hewn out, and the construction of these alone must have cost immense sums of money.

The Crown Battery. After having paid our respects to Host Kelly, of the Karangahake, we crossed the suspension bridge connecting the town on either side of the stream, and then proceeded to inspect the Crown Battery, which lies the furthest down the stream. Here the machinery was going at a great rate, and everything appeared in a flourishing condition. We noticed that here they have a different mode of drying their ore to that adopted in most batteries where cyanide is used. Huge furnaces are erected in the battery itself, and after being burnt the ore is taken out from the shoots and fed into the crusher. As far as we could see this is the only variation from the mode adopted at Waihi, which will be described later. The power is derived from water which is brought along the river side a distance of about half a mile. A horse tram brings the quartz from the mine, and the same line is also used by the Woodstock Company. We were informed that the arrangement was that the Woodstock Company had the use of the line for keeping it in repair.

The Talisman Battery. Although this battery had been working immediately preceding our visit for a very good return, crushing operations were then at a standstill owing to extensive improvements now being made. Large excavation works are in progress for the purpose of permitting the erection of twenty extra heads of stamps [10 head], three new kilns have just been excavated with a tunnelling to connect there with the battery [the reporter has confused the three new kilns of the Woodstock Company here. Talisman only put in one], and a new water race is being made to give the power. The Talisman Company have a lot of ore on hand, and the way matters are tending lead one to suppose that this mine will come even more to the front than formerly.⁷²⁰

The Woodstock Battery. This too is being enlarged, and three cyanide vats are now being erected. The water race also being altered, and instead of the usual

⁷¹⁹ <https://paperspast.natlib.govt.nz/newspapers/NZTIM18961008.2.24>

New Zealand Times, Volume LVIX, Issue 2945, 8 October 1896, Page 3

⁷²⁰ <https://paperspast.natlib.govt.nz/newspapers/BOPT18961012.2.7>

Bay of Plenty Times, Volume XXII, Issue 3461, 12 October 1896, Page 2

wooden fluming iron piping having a diameter of 3ft 6in is being put in its place.

The Crown Mine. Having "done" the batterie we were now conducted along the tram line towards the Crown mine. Noticing a number of wires overhead we enquired what they were for, and were informed that these were aerial trams, used for bringing firewood to the batteries. Another wire along the face of the cliff attracted our attention, and being again inquisitive, we learned that the Crown mine was connected with the battery by telephone. We now reached the mouth of the drive, and being provided with a candle each at the expense of the Company we proceeded into the bowels of the earth. We were told that this level, which is called No 6, is 1600 feet long, and it is mainly in this and No 4 that the ore is being taken at present. As we went along we could catch the gleam of a couple of candles above our head where the workmen were breaking out the reef and again below us we could see the men, each working by the light of a single candle, breaking out the quartz. The reef varies in thickness, usually from 4 to 8 feet, but from what we learned it appears that there have been times when the manager has had difficulty in following it owing to "faults," as a branch here and there in the drive clearly shows. The course of the reef is north, and south, and although a slight variation occurs occasionally it always returns to its true course after being driven on for a while. The reef has been sunk upon for about 130 feet below the level of the river, and this level where the drive is now would give about two thousand feet of backs, leaving a good body of stone to operate upon without sinking any further.

We were told by one who ought to know that the present main tunnelling of the Crown was no very great distance from the Earl of Glasgow ground, which, however, now belongs to the Crown Company. A scheme is also on foot to amalgamate with the Woodstock and Talisman, which, if carried out would certainly make the Crown's property one of the most valuable in the world, but if such is to eventuate it seems a pity that so much independent work is being done by the Woodstock and Talisman Companies.

As mentioned above the reefs here live in solid rock, and consequently blasting operations go on night and day. They have two diamond drills going all the time, the power used to drive the drills being compressed air, which is conveyed in pipes from the air compressor a considerable distance up the river. Being curious on this matter we proceeded up stream along a rather unsafe path, until we reached another suspension bridge, which is thrown across at a rather acute angle. The bridge is made of wood supported by two steel ropes, with another loose above as a guide line. We were informed that the wire ropes for this bridge alone cost close upon £1000. On a level with the upper end of the bridge is the building containing the air compressor, a No. 3 Hirnant made by Larmuth and Co., of Manchester. To provide power for this another water-race had to be constructed, and the water turns a turbine below the building. Although there is here apparently nothing to generate heat we were unpleasantly surprised on putting our hands on the pipe that leads the air to the chamber, to find it much too hot for comfort. It seems that the management intend putting on more drills at the mine, and the present power being only equal to drive those used at present, electrical power is to be called into requisition.

From the air compressor we proceeded up the stream, this time having to walk along a six inch board fixed on top of the water race. When we had gone along about half a mile or so we noticed a couple of large buildings on a spur above, and seeing women and children about, wanted to know how they got there. We were informed that several families lived here, and all their supplies as well as themselves had to be brought along the way we had come. Robinson Crusoe was hardly more cut off from the world than are these people.

The Excelsior. Our reason for going so far up the river was to see the Excelsior mine in which a number of Tauranga people are interested. We had some difficulty in finding where the men were working, although we found several drives that had been abandoned. Eventually we came across the men, who were driving alongside a reef which outcrops about a hundred feet above the river. They are working two shifts, but the country is not the same as at the Crown. Here the solid rock gives place to a sort of hard clay and sandstone combined, which however is too hard for the pick except in places, and blasting has to be resorted to. We were told that a little gold could be obtained by washing, but the nature of the stone did not favourably impress us.⁷²¹

29 October

NEW ZEALAND TALISMAN. Good progress is being made with the excavations for the additional ten stampers for the crushing mill, but a substantial bridge has yet to be erected over the river from the Crown tramline before the necessary machinery can be got to the battery site, so that some months must still elapse before the additional crushing power is available.

This bridge will be the double-decker Howe Truss.

At the mine development works are proceeding satisfactorily, and by the time the mill is ready there is no doubt a sufficient supply of payable ore will be ready for treatment. The reef in the lowest or No. 5 level is a fine body of stone, and gives first-class results by assay, whilst the upper levels have been sufficiently proved both by assays and by the last two crushings to show that the ore is of more than average value. There is still a depth of 800 feet to be operated upon before the level of the river is reached, and from the developments in the Crown and Woodstock mines, it is only reasonable to suppose that the ore will improve in quality as depth upon it is attained, or at the worst maintain its present value.⁷²²

30 October

KARANGAHAKE.

Crown...

I may also state that the winze, being sunk from the No. 6 level, is the site determined upon from which the deep sinking operations of the future are to be carried on. This the company has now definitely decided upon, and a costly pneumatic plant has been ordered from home for the purpose of hauling, etc. The shaft is to be of an incline nature, with a double tram road, and is to be

⁷²¹ <https://paperspast.natlib.govt.nz/newspapers/BOPT18961012.2.7>

Bay of Plenty Times, Volume XXII, Issue 3461, 12 October 1896, Page 2

⁷²² <https://paperspast.natlib.govt.nz/newspapers/AS18961029.2.21.15>

Auckland Star, Volume XXVII, Issue 256, 29 October 1896, Page 6

sunk on the course of the lode. Of course this means the expenditure of a considerable sum of money, but a handsome return should accrue from the deep level operations, especially as it has been proved that the lode is richer as depth is attained. The superintendent, Mr. Daw, is getting matters in hand as quickly as possible, and as he is full of energy and 'go', and possesses a thorough knowledge of his duties, the company has in him one who will see that its wishes are given effect to with expedition. The No. 7 tunnel is also in progress, and shareholders will doubtless be gratified to learn that in this working the lode has been recovered, and the sample of ore broken out and tested proved it to be of great richness...

During the last monthly crushing period 1017 tons of ore were treated, for a yield of 1597ozs of bullion, valued at £3041.

At the **Woodstock** Gold Mining Company's mine work is being carried on a very extensive scale, and the manager (Mr. J. McCombie) has his hands full in supervising all the operations in progress...

In the Ivanhoe section the tramline level is being pushed ahead expeditiously, while battery is also well under way, though it is hardly likely that crushing will be commenced before the end of the year.

Since the **Talisman** property fell into the hands of English capitalists no time has been lost in getting the mine well opened up, and just now a good deal of work is being carried out under the management of Mr. W. Goldsworthy, who is possessed of a very large mining experience.

At No. 3 level...The ore body here proved itself to be rich in precious metal, as nearly all the quartz broken out for the first crushing, was obtained from here, and yielded a very high average indeed. The tailings which had been sluiced from the cyanide vats into the river were also subsequently recovered by private enterprise, and enriched those who took the matter up; so that it will be seen the run of ore must be a really good one, and speaks well for the blocks under foot now being opened up...

The reduction plant, it may be stated, is still under the control of Mr. Taylor, who is undoubtedly highly qualified for the position. The mill, however, is too small for the requirements, and it is shortly to be enlarged. The company are also constructing a splendid bridge across the Waitawheta to the battery site, while a contract has been let to Messrs. Seager Brothers for the construction of two water-races. It will be seen that the company are not losing any time in getting all the necessary works in hand for the systematic development of their property.⁷²³

Two water races? On the Waitawheta from the big dam, and pipe from the Hauraki Stream?

7 November

Ohinemuri County Council.

Cr McGruer moved that work be done on the Willow track to the extent of £20, from Karangahake to the Victor and Union Jack mines. Cr Cassrells seconded.—Carried.

⁷²³ <https://paperspast.natlib.govt.nz/newspapers/NZH18961030.2.62.4>

New Zealand Herald, Volume XXXIII, Issue 10276, 30 October 1896, Page 1 (Supplement)

ELECTRIC LIGHTING.. An application was received for the right to carry wires across the streets in Paeroa for the purpose of electric lighting. This was unanimously agreed to. (We understand that Mr C. B. Gentil was the applicant.)

TRAMWAY COMPANY. Cr McGruer moved "That the Ohinemuri Tramway Company be allowed to use the County road as far as the Crown mine, Karangahake, not interfering with the public traffic". Cr Edwards said it was possible that the tramway would not touch the County road at all. Certainly it was never intended to go along the County road, it may touch the road for a chain or so here and there, where the road is widest. The road would be made under the supervision of the Engineer. The motion was seconded and carried, with the exception of Cr Cassrells, who voted against it.

KARANGAHAKE FOOTPATHS. It was arranged that Cr McGruer meet the County Engineer and confer with him where the £150 allocated for the Karangahake footpaths should be expended...

At the suggestion of Cr Nash, it was decided to make a recommendation to the incoming County Council to look after the Karangahake Bridge, and prevent excessive loads being taken over it, as also butcher boys and others galloping over it.⁷²⁴

16 November

Quite a number of the larger mining companies are following the example of the Waihi Company in providing their batteries with electric light. The Crown Company have just had a new electric lighting plant erected at their battery at Karangahake, the installation being successfully completed last week. The plant consists of a 200 light Electric Construction Company's dynamo, driven by a Pelton wheel. Beside the battery, the houses of the Company's manager, engineer, and mine manager are also lighted from the same dynamo, and sufficient power is still available for lighting the new 40 head battery which the Company are about to erect. The work of lighting has been carried out by Messrs Chambers and Son, of Fort-street Auckland, who also have in hand the lighting of the Woodstock and Talisman batteries. In addition to using electricity for lighting purposes, the latter company purpose using it also for transmitting the power necessary for driving the berdans and pumps at the cyanide plant to be placed at the other side of the Waitawheta River, opposite to the battery. This will be the first instance of the transmission of power by electricity in the district. The same firm above mentioned have secured the work of lighting the forthcoming Auckland Exhibition by electricity, and their electrician, Mr E. J. Fenn, is already busy making preparations.⁷²⁵

⁷²⁴ <https://paperspast.natlib.govt.nz/newspapers/OG18961107.2.12>

Ohinemuri Gazette, Volume VII, Issue 286, 7 November 1896, Page 4

⁷²⁵ <https://paperspast.natlib.govt.nz/newspapers/AS18961116.2.8>

Auckland Star, Volume XXVII, Issue 272, 16 November 1896, Page 2

Electric lighting for all three batteries**16 November**

One of the urgent wants of Karangahake for some time past has been a traffic bridge to connect the two sides of the river. To start the matter Mr Algar Bunyard, licensee of the Tramway Hotel, has offered the Ohinemuri County Council a subscription of £100 towards the work. The cost will probably be £1000. The Crown. Mines Co. are about to erect a bridge to connect their battery with the proper right bank of the river at a cost of £1200.⁷²⁶

Never happens?

19 November

Mr Bruce Lloyd, representing the Union Ironworks of San Francisco, has arranged with the Talisman Company to erect at Karangahake mine an additional 10 stampers of the latest design, being double mortar discharging. In addition to this six cyanide vats are to be constructed. Mr Lloyd is also to erect a revolving ore driver [dryer]. This will bring the crushing power at this mine up to 20 head, and as the new stampers will be 1080lb weight each, a large quantity of ore should be put through.⁷²⁷

Talisman to erect additional 10 double mortar discharging stampers, six cyanide vats and a revolving ore dryer**23 November**

WOODSTOCK GOLDMINING COMPANY.

In the Ivanhoe section the gorge tram line is now only about 25ft away from the first of the lodes expected to be met by it. So far, 128 feet of tunnelling has been done and 103 feet of scarfing. This drive will explore all the reefs on that side (the right bank) of the Waitawheta, besides being of the greatest service should anything happen to the old tramway. The battery is nearing completion and it is possible a trial run may be got out of her before Christmas.⁷²⁸

27 November

KARANGAHAKE. Good progress is, being made with the opening up of the New Zealand Talisman Gold Mining Company's property, and some highly remunerative ore is being won from the different works on the reef. The directors are wisely going in for an increase in the size of the reduction plant, the present power to be supplemented by 10 additional stamps and the requisite percolation vats, besides which they will be augmented by a rotary ore dryer. This will, of course, do away with the roasting kilns, and from what I can gather of the adaptability of the machine, a wise alteration has been made. The dryer is extensively used in American mills, where a large amount

⁷²⁶ <https://paperspast.natlib.govt.nz/newspapers/THA18961116.2.12>

Thames Advertiser, Volume XXVIII, Issue 8586, 16 November 1896, Page 2

⁷²⁷ <https://paperspast.natlib.govt.nz/newspapers/OW18961119.2.71>

Otago Witness, Issue 2229, 19 November 1896, Page 19

⁷²⁸ <https://paperspast.natlib.govt.nz/newspapers/AS18961123.2.17.4>

Auckland Star, Volume XXVII, Issue 278, 23 November 1896, Page 3

of ore is handled. It appears that the rotary ore dryer consists of a conical cast-iron cylinder made in sections for convenience in handling, and is of a larger diameter at the fire end than that into which the ore is fed. The axis of the cylinder being horizontal, the ore gradually travels towards the fire end of the cylinder as it slowly revolves, and is finally discharged into bins ready for being crushed dry in the battery. Shelves running lengthwise are attached to the inside of the cylinder, and as it revolves the shelves raise the ore and drop it through, the flame assisting to quickly and thoroughly dry it. The dryer occupies but a small amount of space, and one pleasing feature is that it is economical in consumption of fuel, and requires but little power for its operation. The whole of the plant is to be lighted by electricity.

At the Woodstock Company's property ...

In the Ivanhoe section the Gorge tramline is being advanced speedily, 228 feet of the work having now been done; half this distance is tunnelling, and the other-half scarfing. Another 25 feet of driving should bring the level up to the Woodstock lode. The battery is nearing completion, but it will probably be towards the end of January before crushing will be commenced.⁷²⁹

“Windows” tunnel created

The “gorge tramline” would appear to be the “Windows” that we are familiar with. The ore dryer at the Talisman means that the ore kiln constructed for the 10 stamp mill had little use. The kiln was used later as an ore storage hopper for the battery. In fact the whole 10 stamp mill had little use, only 285 tons crushed.

George Wilson, Inspecting Engineer.

The mill [Talisman], which comprised ten stamps and a complete cyanide plant, was not used to any great extent, it being found that the number of percolating-vats was insufficient, and that a great deal of time was lost in treating the crushed quartz by the cyanide process. From April to September, 1896, 285 tons of quartz was crushed, 280 tons being treated by cyanide, for a yield of 1,429 oz. 5 dwt., and 5 tons by amalgamation, for 5 oz. 14 dwt. The whole of the tailings from the 280 tons were, after the cyanide treatment, run over amalgamation-tables, and yielded 55 oz. 18 dwt. of gold. The value of bullion recovered by cyanide was 19s. 10d. per oz., and by amalgamation £1 10s. 4¾d. The average value of the ore before treatment was £5 17s. 6d. per ton.⁷³⁰

16 December

A contract has been let to Messrs Griffiths Bros., of Paeroa, for laying a 1½ inch pipe from a creek above the Tramway Hotel at Karangahake, to the middle of the Karangahake township. The pipe is to bring in a temporary

⁷²⁹ <https://paperspast.natlib.govt.nz/newspapers/NZH18961127.2.55.4>

New Zealand Herald, Volume XXXIII, Issue 10300, 27 November 1896, Page 1 (Supplement)

⁷³⁰ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1897-II.2.1.4.3/4>

THE GOLDFIELDS OF NEW ZEALAND: REPORT ON ROADS, WATER-RACES, MINING MACHINERY, AND OTHER WORKS IN CONNECTION WITH MINING., Appendix to the Journals of the House of Representatives, 1897 Session II, C-03

water supply for that township, and the work is to be completed before Christmas.⁷³¹

This is the Hauraki Stream, beside Scotchman's Gully.

21 December

Talisman.— Union Company of San Francisco are the successful tenderers for the additions to the Talisman Company's battery, and a commencement has been made to carry out the enlargement scheme. The battery, as is already known, is to be augmented by 10 new stampers; while an entirely new cyanide plant is to be erected on the old site opposite the Woodstock battery. This plant will comprise 10 large percolation vats 22 feet in diameter, besides the two already in use in the present plant, thus making 12 vats in all. There will also be six berdans and the necessary sumps, etc.; while one new feature will be that the whole plant will be driven by means of electricity to be generated on the opposite side of Waitawheta and transmitted across the river. The new works are being carried out under the supervision of Mr. Payne.⁷³²

24 December

It must be understood that only two returns were secured from the Woodstock mine as in the early position of the year, the old battery was pulled down, and a new and finer plant consisting of 40 head of stampers erected, and this will probably commence running about the latter end of January next. Then the Talisman Company are going in for additions to their plant, so that only one return was obtained from that mine during the year. That return, however, was very satisfactory, and a sufficient inducement to the directors to supplement the crushing power and treatment plant, by an additional ten head of stampers, and ten large percolation vats.⁷³³

AJHR 1897

Published 1897, but largely reporting on 1896.

THE GOLDFIELDS OF NEW ZEALAND: REPORT ON ROADS, WATER-RACES, MINING MACHINERY, AND OTHER WORKS IN CONNECTION WITH MINING.

APPENDIX TO THE JOURNALS OF THE HOUSE OF REPRESENTATIVES, 1897 SESSION II, C-03⁷³⁴

⁷³¹ <https://paperspast.natlib.govt.nz/newspapers/THA18961216.2.10>

Thames Advertiser, Volume XXVIII, Issue 8612, 16 December 1896, Page 2

⁷³² <https://paperspast.natlib.govt.nz/newspapers/NZH18961221.2.62>

New Zealand Herald, Volume XXXIII, Issue 10320, 21 December 1896, Page 6

⁷³³ <https://paperspast.natlib.govt.nz/newspapers/NZH18961224.2.66.4>

New Zealand Herald, Volume XXXIII, Issue 10323, 24 December 1896, Page 1 (Supplement)

⁷³⁴ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1897-II.2.1.4.3/4>

THE GOLDFIELDS OF NEW ZEALAND: REPORT ON ROADS, WATER-RACES, MINING MACHINERY, AND OTHER WORKS IN CONNECTION WITH MINING., Appendix to the Journals of the House of Representatives, 1897 Session II, C-03

Mr. George Wilson, Inspecting Engineer,

to the Hon. A. J. Cadman, Minister of Mines. Sir, — Mines Department, Wellington, 29th June, 1897. I have the honour to submit my annual report, for the year ending the 31st March last...

Page 87

Karangahake District.

Woodstock Mine (Area, 72 acres 1 rood 18 perches).—

Work in this mine has been vigorously carried on during the year, and development of the different reefs effected in order that in the future a supply of quartz may be maintained to fully employ the new forty-stamp mill. The position of the new mill on the point between the confluence of the Ohinemuri and Waitawheta Streams entailed great expenditure in conveying materials and machinery to the site. Delay from this and other causes prevented the completion of the plant in August last, and crushing was only commenced on the 26th February, 1897. This delay has been the means of causing no return of gold to be possible, and the anticipation that the mine would yield an addition to the returns from Ohinemuri for 1896-97 has not been fulfilled. (The returns that have been obtained for the first cleaning-up show that for next year this mine promises to be one of the best gold-producers.) The mine is carefully and systematically worked, and the series of levels opened between the tramway-line and the outcrop of the reefs have disclosed such an abundance of quartz that no difficulty will be experienced in producing large quantities from the portion of the mine already developed. It is, however, intended to carry on operations below water-level at no distant date, and from the ascertained value of the reefs at the present lowest level there is very little doubt that when a shaft has been sunk developments in low levels will prove that the reefs continue in richness. The mine is at present one of the best conducted in the laying-off and execution of all underground work and machinery, and reflects credit on the manager, Mr. J. McCombie, who has supplied the following particulars: —...

The cross-cut west, No. 5 level, is being driven for the purpose of developing the Woodstock lode at the lowest obtainable level. It is now in 257 ft., and the lode in question should be met with in another 163 ft. of driving.

In the Ivanhoe section of the mine the kiln tram-line has been carried along through the gorge on the right-hand bank of the Waitawheta River for a distance of 500 ft. This involved 398 ft. of tunnelling and 102 ft. of scarfing. The northern continuation of the Maria and Woodstock lodes has been intersected, and driving northwards upon both ore-bodies is now in progress. The following is the average number of men employed during the year: Mine, fifty-six contractors, fifty-four wages-men; mill, twenty contractors, four wages-men: total, 134 men. Regarding the difficulty of minimising the dust nuisance so prevalent in all dry-crushing plants, we have succeeded in overcoming it, so far as the battery is concerned, by the application of an exhaust fan, which is connected with the mortar - box screens by means of a series of pipes, and we are arranging for the removal of the dust arising from the stone-breakers by adjusting thereto somewhat similar appliances. From the dust-bins to the percolating-vats the reduced ore is being conveyed automatically by a system of revolving conveyors with a spiral screw inside, and the whole concern is working splendidly.

New Zealand Talisman Mine (Area, 60 acres). —

This mine is situated at Karangahake, and adjoins the Crown and Woodstock properties. The land is favourable for carrying on mining operations, the present adit-level being 700 ft. above the level of the Waitawheta Stream. The principal workings are at No. 6, or adit-level, and Nos. 5 and 4, the levels being each 100 ft. apart. A considerable amount of work was done in driving at the different levels and stoping portions of the reef. The mill, which comprised ten stamps and a complete cyanide plant, was not used to any great extent, it being found that the number of percolating-vats was insufficient, and that a great deal of time was lost in treating the crushed quartz by the cyanide process. From April to September, 1896, 285 tons of quartz was crushed, 280 tons being treated by cyanide, for a yield of 1,429 oz. 5 dwt., and 5 tons by amalgamation, for 5 oz. 14 dwt. The whole of the tailings from the 280 tons were, after the cyanide treatment, run over amalgamation-tables, and yielded 55 oz. 18 dwt. of gold. The value of bullion recovered by cyanide was 19s. 10d. per oz., and by amalgamation £1 10s. 4¾d. The average value of the ore before treatment was £5 17s. 6d. per ton. Thirty men were employed at the mine and nineteen at the battery and buildings. On the completion of the treatment of the quartz as above, the company decided to erect a more extensive and suitable plant. The following account by Mr. W. A. Mercer gives full particulars of the mine and new works carried on during the year: —

The property of the New Zealand Talisman Gold-mining Company (Limited) is situated at Karangahake, in the Ohinemuri district, and comprises the licensed holdings known as the Talisman and Bonanza respectively, each having an area of 30 acres; also a machine-site, 1 acre in extent, on the right bank of the Waitawheta River, and a special site of the same area at the junction of the Ohinemuri and Waitawheta Rivers. On the taking-over of the property by the English company on the 15th June, 1896, the Talisman and Bonanza Licensed Holdings were converted into a special claim of 60 acres. The capital of the new company is £150,000, in shares of £1 each, the working capital being £25,000. The company constitutes the first subsidiary undertaking of the London and New Zealand Exploration Company (Limited), the general management being in the hands of Messrs. Bewick, Moreing, and Co., mining engineers, of London, represented in the colony by Mr. William A. Mercer, with whom is associated Mr. Alfred H. Curtis, another representative of the firm, these two gentlemen being also the attorneys of the company in New Zealand. Prior to the acquisition of the property by the English company some 280 tons of Talisman ore treated at the Crown Gold-mining Company's battery yielded £2,770; and subsequently 285 tons of ore treated at the company's own ten-stamp mill yielded £5 7s. 6d. per ton. Under the new direction the mine has been systematically and rapidly developed, the principal workings consisting of six adits driven at intervals of about 100 ft. below each other (for the purpose of intersecting the main reef), and of extensive drives along the reef in northerly and southerly directions. The width of the reef has varied in these workings up to as much as 8 ft., the average size being probably from 3½ft. to 4 ft. The exploratory work has proved the existence of at least two shoots of very rich ore in the main reef, which strikes into the Talisman section of the property from that of the Woodstock Goldmining Company (Limited). On taking over the property the engineers in New Zealand were confronted with numerous difficulties in the matter of the

reconstruction and enlargement of the reduction-works, owing to the want of a battery-site of sufficient area to allow of the whole of the plant being erected under one roof. This difficulty was overcome by the construction of a Howe truss bridge across the Waitawheta River for the purpose of connecting the machine-site proper with the special site. On the former area there is ample accommodation for the erection of crushing appliances, as well as for a small number of cyanide-vats; but the bulk of the cyaniding will be effected on the works at the special site.

The following is an outline of the process adopted for the treatment of the Talisman ore: The ore is conveyed from the mine by aerial tramway, and delivered into the kiln formerly used for drying the ore and now utilised as a storage-hopper. From the kiln the ore passes over a grizzly to a rockbreaker of reciprocatory jaw type, falling thence into a hopper from which it is automatically fed into a revolving ore-drier (a conical cast-iron cylinder 24 ft. in length, 34 in. in diameter at the small end, and 50 in. at the larger, erected with axis horizontal), through which the ore gradually travels towards a storage-hopper lined with sheet iron immediately over the stamper-boxes. The capacity of the drier is from 40 to 50 tons per twenty-four hours, according to the amount of moisture in the ore. The use of this contrivance is a new departure in New Zealand, and is expected to effect a considerable saving in fuel, to obviate loss of cyanide caused by the presence of pieces of charcoal and partially-carbonised wood in ore dried by the kiln process, and to prevent the fusion of fine particles of gold into globules on which cyanide solution cannot effectually act. The pulverising plant consists of ten heads of 850 lb. stamps with single-discharge mortars (these stamps forming part of the mill as originally erected by the old company and ten heads of 1,000lb. stamps

Image: 10 Ft Pelton Wheel THE NEW ZEALAND CROWN MINES COMPANY LTD. KARANGAHAKE.

with double-discharge mortars). The remainder of the plant on the machine-site consists of two wooden cyanide-vats, each 16 ft. in diameter (part of the old plant), and four new cyanide-vats each 22 ft. in diameter, into the latter of which the ore is fed by means of a revolving ore conveyor, a horizontally-laid pipe 8 in. in diameter, to the inner surface of which a worm is fitted. Over each of the four new vats there is an adjustable door in the revolving pipe, through which the ore passes when desired into a canvas hose lowered into the vats. The use of this form of conveyor obviates the necessity for the use of trucks in this part of the works, thus greatly reducing the amount of dust in the atmosphere of the building. The tailings, after treatment by the cyanide process, pass over amalgamated copper-plates for the extraction of the coarser gold, and the blanketings are subsequently treated in berdan-pans, of which there are three, 4 ft. in diameter, on the machine-site. Water for the driving of the mill is conducted from the company's dam on the Waitawheta River first through a tunnel 90 ft. in length, then through an open cutting 20 ft. in length, passing finally into a wrought-iron pipe 4 ft. in diameter and 925 ft. in length, delivering the water into a concrete-walled turbine-pit 28 ft. in depth. [this infrastructure remains] The motive-power is generated by means of two Victor vertical turbines, 21 in. and 12 in. in diameter respectively, the latter being

used for the operation of a dynamo generating electric light for the works and offices, and for the transmission of power to the cyanide works on the special site.

The cyaniding plant on the special site (to which ore, after its passage through the mortars, is conveyed by covered tram via the Howe truss bridge, newly erected over the Waitewheta River) consists of six wooden vats, each 22 ft. in diameter, with the usual accessories, including amalgamated copper-plates and three 4 ft. diameter berdan-pans. The sumps are substantially built of concrete. The centrifugal and vacuum pumps on this site are driven by an electric motor operated by the dynamo on the machine-site. Water for vat-slucing, &c, is brought to the special site from the Hauraki Creek by means of a pipe 3 in. in diameter.[a dam remains in this stream] It is expected that the mill will be able to treat a minimum of 25 tons per day, and it is hoped that the stamps will eventually prove equal to as much as 30 tons. A No. 5 Krupp ball mill, recently received from England, will shortly be erected, and may be expected to increase the crushing-capacity of the plant by at least 20 tons per day. In addition to the buildings, machinery and plant, bridge, &c, above referred to, suitable office premises and residences for the mine and battery managers (Messrs. W. Goldsworthy and C. H. Taylor) have been erected since the property was taken over by the new company.

Crown Mine (Area, 135 acres 1 rood 31 perches).—This mine, which now includes the Earl of Glasgow ground, is situated on the north and south sides of the Waitawheta River. The river flows through a very deep gorge, the rock on either side being nearly perpendicular, and its direction generally contrary to the run of the reefs. The gorge is virtually a natural cross-cut made by the river, and shows the reefs and veins of quartz as they lie in the rock on both sides. Extensive operations are being conducted. The mine development is expeditiously carried on. The splendid water-power obtainable from the Waitawheta is being utilised in driving air-compressing machinery, and the power developed will provide a supply of compressed air to work all the machinery required at the mine. The battery now consists of forty stamps, and is being converted to suit wet-crushing and the use of cyanide solution in the stamp-boxes. One hundred and ninety-five men were employed. Mr. Daw, the general manager for the New Zealand Crown Mines Company (Limited), has furnished the following short description of the mine-workings, &c. : —

During the year ended the 31st March last the mine has been worked continuously to provide quartz for the mill, and for the opening-up of reserves. The principal mining operations consist of the pushing-forward on the course of the Welcome reef of Nos. 4 and 6 tunnels, south of the Waitawheta River, and the putting-up of two main rises to connect with Coward's old workings, the latter in order to provide ventilation and to open up the immense blocks of valuable stoping ground between the river-level and Coward's No. 3 level above...

Little or no stoping has been done north and south of the winze below the river-level, owing to the incapacity of the small Tangye pump to cope with the inflow of water. During the year 11,737 tons of ore has been mined, of which 10,432 tons was milled, and yielded 7,691 oz. of gold and 9,040 oz. of silver, valued at £33,368. Over 1,600 tons of quartz is stocked at the battery, but, owing to the limited paddock-accommodation, it has been found impossible to

take advantage of the full output obtainable from the mine in its present state of development. Twenty heads of stamps were in operation up to the 10th August last, and since that date forty heads. At the reduction-works the battery, which is now a dry-crushing plant, is being converted into one of wet-crushing; the experiments in this direction up to the present have given most satisfactory results. In the No. 6 level north of the Waitawheta River a chamber has been stoped out for an air-compressing plant. The compressor to be erected is a Riedler horizontal two-stage tandem type, having cylinders of 17 in. and 26 in. diameter, and 3 ft. 6 in. stroke; working at sixty-five revolutions per minute it will deliver 1,680 cubic feet of free air per minute at 75 lb. pressure per square inch. On the south side of the Waitawheta River chambers have been excavated for pumping- and winding-engines. The cylinders of the winding-engine are 12 in. in diameter and 18 in. stroke. The diameter of the drum is 59 in. and the face 4 ft. The pumping-engine has a 14 in. cylinder by 24 in. stroke, fitted with slide-valve with Meyer's cut-off. The whole of this plant is being supplied by Messrs. Fraser and Chalmers (Limited), of 43, Threadneedle Street, London. A 10 ft. Pelton water-wheel (3 nozzles) will be attached direct to the driving-shaft of the compressor. The water-race to supply power for the air-compressor is a mile and a quarter in length [2012 m], with a present capacity of sixty sluice-heads, the pressure being 32 lb. per square inch.

A large amount of prospecting work has been done in driving cross-cuts, trenching, &c, in the following mines, but no discovery of any value reported: Hercules, Deep Lead, Excelsior, South British, Karangahake, Mariner, Rothschild, Golden Fleece, Wealth of Nations, Union Jack, Asteroid, St. Patrick, Crown Imperial, Prince Regent.

In the Stanley a considerable amount of prospecting work was done, and gold has been discovered in a reef formerly worked in the original Prospectors' Claim, but no returns are reported.

Sterling Mine. —Work has been steadily carried on and the reefs driven on.

Waverley Mine (Area, 64 acres). —This mine adjoins the Woodstock, and extensive driving works were carried on and reefs cut carrying gold, but no returns have yet been reported. Mr. Tregoweth, manager of the mine, thus describes the result of operations:—...

Work has been stopped on this at present, as it will be necessary to go deeper, and we are now cross-cutting for the old Prospectors' lode, which the manager of the Stanley has picked up in his ground, where it gives good prospects of gold. We are in hopes of getting it in our ground carrying gold, as the country is most favourable for gold where driving is now being carried on.

Imperial Mine (Area, 60 acres). —This mine adjoins the Crown, and, although there are several gold-bearing reefs in the ground, no quartz has been crushed. The work has chiefly been in driving a low level at a depth of 300 ft. below the surface, and in driving and sinking winzes in the levels above. Eight men were employed.

Prospecting operations have also been carried on in the Ravenswood, Golden Giant, Crown Nimrod, New Shotover, Victor-Waihou, Mere, Rotokohu, Leap Year, Dickson's Lead, Waitawheta, Pandora, and Golden Age.

Page 100

The Crown Company, Karangahake, has been fitted up with a complete installation of electric lighting.

Woodstock Gold-mining Company, Karangahake: We have fitted up the battery, &c, with an electric-light installation complete.

REPORTS OF WARDENS AND OTHER OFFICERS ON GOLDFIELDS.

APPENDIX TO THE JOURNALS OF THE HOUSE OF
REPRESENTATIVES, 1897 SESSION II, C-03A⁷³⁵

No. 2. Mr. Warden Bush

to the Under-Secretary for Mines, Wellington. Sir, — Warden's Office,
Thames, 7th July, 1897.

Page 4

Ohinemuri County.

Gold-mining in the Ohinemuri County has made great strides during the preceding twelve months, and unquestionably the county has a great future before it as a gold-producing district. The major part of the county has already been pegged out, and there are now existing 622 special claims and licensed holdings, of a total acreage of 44,895 acres 2 roods 38 perches. The population has gone on steadily increasing, and there are now large towns at Waihi, Waitekauri, and Karangahake, and in addition I have had to give instructions to the Government surveyor to have townships laid off without delay at Waikino, Komata, and Maratoto. During the year 936 residence sites were applied for, and in many cases very good and substantial houses have been built on them.

The Waihi, Crown, Woodstock, Waitekauri, and Talisman Mines have sustained their great reputations as gold-producers, whilst the Silverton, although slightly disappointing, promises to come back, when properly developed, to the opinion previously formed of it. In addition to the abovementioned companies, which are now in full going order, the following new batteries are in course of construction, and should considerably add to the output of gold for this and the following years : Waihi Company, 100 head of stamps, at Waikino ; the Komata Reefs, Waitekauri Extended, and Royal Standard, 40 head of stamps each; the Alpha and Jubilee, 20 head of stamps each; besides which the Hikutaia Syndicate, in the Maratoto District, proposes to erect a 100-head battery in the spring.

From the experiments lately conducted in the Crown Mines battery with a wet-crushing process (particulars of which are not yet to hand) it is believed a new era will be started in the milling process. The experiments have been so successful that the present Crown battery is being converted to meet its requirements. The advantages attaching themselves to this system are so important that it is sincerely to be hoped that it will be the success claimed. It will completely do away with the "dust" evil, which mine-managers have been

⁷³⁵ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1897-II.2.1.4.4>

REPORTS OF WARDENS AND OTHER OFFICERS ON GOLDFIELDS., Appendix to the Journals of the House of Representatives, 1897 Session II, C-03a

so much exercised over, and which has been the cause of so many deaths. This alone stamps the process as a blessing; but it will also to a very great extent assist in preserving the timber, which will all be required for bona fide mining operations, instead of being ruthlessly cut and burnt in the kilns. The ore will not require roasting in the kiln before going through the mill, thus saving a large amount of money, for the cost of cutting, splitting, &c, and conveying to battery has been a costly matter. But the greatest advantage it claims is that, whilst by the dry-crushing 1 ton of ore per diem can be crushed by each stamp, by the new process double the result can be obtained. Needless to say the practical solution of the process is anxiously awaited, but it is feared that quartz containing fine gold such as that at Waihi Mine cannot be treated with water, because when crushed there is too much clayey substance in the ore.

Karangahake. —The Crown mine has made great progress, and the workings are looking particularly well. This company has under order a large amount of new machinery, including a compressor of 180 horse-power, which will allow the shaft to be put down to the 500 ft. level below the river-bed. This will enable the mine to be thoroughly opened up. Two large chambers have been excavated, one on each side of river, to accommodate the new machinery. To drive this a water-race 110 chains in length down the Waitawheta River is being constructed. The Earl of Glasgow Special Claim has also been acquired, and as the same reefs traverse both properties, it can be worked better and cheaper. This mine has just paid a dividend.

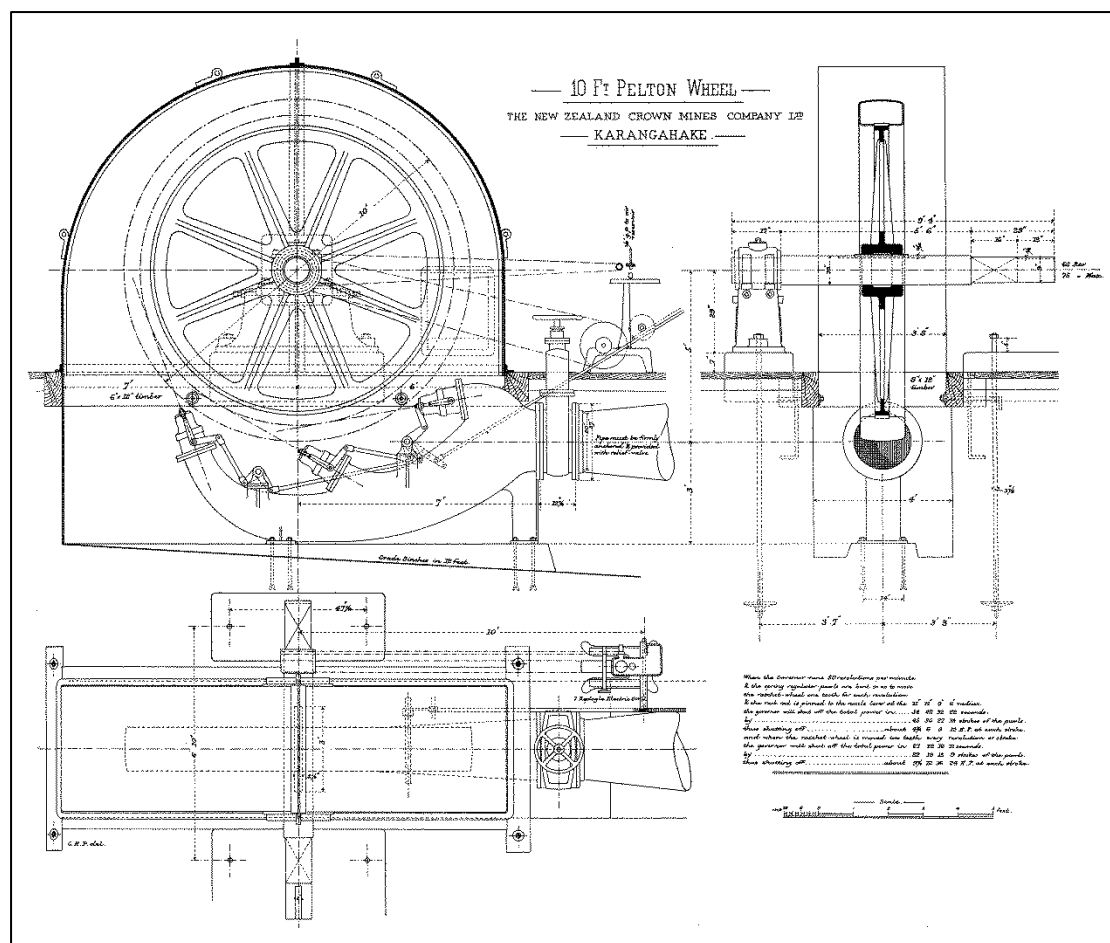
The Woodstock Gold-mining Company has started operations with its new battery of forty heads. The mine itself is well opened up and thoroughly developed, and promises to be as good a gold-producer as there is in the district. The battery, which is working smoothly and well, is of the most modern type, which can be gathered from the fact that the ore is not touched from the time it is put into the kilns until it has finished the entire course of mill. The first return, which is highly satisfactory, was £4,652 from 1,300 tons treated, and it is expected this standard will be maintained. This company has constructed a water-race, through iron pipes 4 ft. in diameter, at a great cost. This race is to be extended.

The Talisman Gold-mining Company is making rapid progress with the new twenty-head battery, which will be finished in three months' time. Great development works have already been done, and the mine has a splendid future before it.

The Ravenswood Special Claim has lately been acquired by an influential English company, and vigorous prospecting is being done. A low-level tunnel to cut the big reef is being put in from the Ivanhoe ground.

Steady development works have been carried out in the Stanley, Sterling, Ivanhoe, Imperial, Waverley, and Victor Waihou mines, and good results may confidently be expected from them.

All the available ground round Karangahake, extending right up the Mangakino and Waitawheta Rivers, also right through the Rotokohu Gorge, has been taken up.



The Crown pelton wheel and air compressor.

This is a huge wheel, 10ft (3m) diameter, three nozzles, direct coupled to an air compressor of 180 HP.
Installed during 1897, operational early 1898.

The shaft of this wheel is still in the chamber.

Papers and Reports Relating to Minerals and Mining, 1897.

1897**22 January**

Woodstock Gold Mining Company

...The mill has certainly been under way a long time, and should have been finished a couple of months ago. However, all the machinery is now at the battery, the last piece, namely, the water-wheel, having arrived from home within the past few days. This wheel is what is known as a Samson-Leffel turbine water-wheel, and it affords a wonderful amount of power contracted in an exceedingly small space, and it is contended it will produce a far higher velocity than has ever been known for turbines of the same amount of power. Although a very small wheel, it is capable of developing 100 horse power, or equal to driving 80 head of stampers, with three-quarter gateage, and as it has a most perfect adaptation, there should not be any trouble with the water supply available in keeping the stampers steadily in motion. No time will now be lost in making the necessary connections, with a view to commencing crushing operations as speedily as possible, so that another two or three weeks should see the mill in working order.⁷³⁶

19 March

KARANGAHAKE. One of the main items of news connected with the past month's operations at Karangahake is the commencement of the Woodstock Gold Mining Company's battery. Crushing with the new 40-head was started soon after the departure of the last San Francisco mail, and though there have been several short stoppages, incidental to preliminary operations, everything has been working most satisfactorily. The future operations of this company will doubtless be watched with the keenest of interest, as its success or failure will have, at all events an immediate influence upon the progress of the Karangahake district. There are, however, no fears respecting the value of the mine, as the lodes have already been proved beyond doubt to be good bullion producers. And now that the ore is to be treated on a comprehensive scale it is confidently anticipated that the Woodstock Company will, before long, take its place among the ranks of Ohinemuri dividend paying concerns. In the mine itself operations are at present limited to a certain extent as all the faces are not manned. The suspension of operations in a couple of the levels was found necessary, as all the paddocks are filled with ore. Several of the levels have also been brought into requisition for storage purposes. As soon, therefore, as the present supply has been dealt with to such an extent as to allow works to be proceeded with without inconvenience the faces now stopped will continue to be advanced.

At the New Zealand Talisman Gold Mining Company's mine good progress is being made with the development of the new reef recently intersected at No. 6 level...

Good progress is being made with the addition to the battery, and the construction of the cyanide plant, while in view of the fact that a rotary ore

⁷³⁶ <https://paperspast.natlib.govt.nz/newspapers/NZH18970122.2.59.3>

New Zealand Herald, Volume XXXIV, Issue 10346, 22 January 1897, Page 1 (Supplement)

dryer is to be utilised, the quartz from the mine is now being despatched to the old kiln, which is being used as a paddock. Excavations are also in progress for the construction of a tram line to connect with the Hauraki hopper.

At the New Zealand Crown Mines...

Good progress is being made with the excavation for the chambers both on the northern and southern sides of the Waitawheta river, and it is expected that these works will be completed this month and ready for the reception of the new machinery which is continually arriving in Auckland. During the month the Te Koa⁷³⁷ has arrived with more machinery for these mines, being a single cylinder pumping engine, 14 by 30 inches, to drive the pump ten strokes per minute, and fitted with a fly-wheel 11 feet in diameter, weighing nearly three tons, also one pair of link-motion geared hoisting engines, cylinders 12½ by 15 inches, with two drums 59 inches in diameter and 4 feet on face. [these are compressed air engines] All these parts will be forwarded at once to the Crown Mines, and will be fitted into their places prior to the arrival of the Mamari⁷³⁸, which is bringing an air compressor for compressing the air into the receiver, from which it will be conveyed to the pumping and winding engines above described, and also to the rock-drills which will be used in the near future throughout the mines. In connection with the reduction plant the contractor is proceeding with the alterations to the mill, and it is anticipated that within a couple or three months the works will be converted from a dry to a wet crushing plant. During the month 1161 tons of ore were treated for a yield of bullion valued at £2873.⁷³⁹

Crown works to be converted from dry to wet crushing plant

2 April

Paeroa, this day. At a meeting of the Ohinemuri County Council held last evening, it was decided to call tenders immediately for a traffic suspension bridge at Karangahake, opposite the township, to cost £800. The Woodstock Company gave a donation of £100; Mr Bunyard, licensee of the Tramway Hotel, £100; and the Government give a subsidy of £1 for £1.⁷⁴⁰

Still some time off, August 1898.

14 April

NEW ZEALAND TALISMAN.

The new battery will not be ready, it is anticipated, for another couple of months, owing to the delay in getting timber, but when once started it is expected an average of nearly £5 per ton will be obtained from the ore. All the ore hoppers in the hill and the kiln formerly used for drying the ore are filled (about 500 tons being in readiness here), while the paddocks at the mouths of the adits are assuming a large size, so there will be no scarcity of ore. When

⁷³⁷ Steam ship. See: <https://paperspast.natlib.govt.nz/newspapers/AS18990914.2.37.1>

⁷³⁸ Large steam ship. <https://natlib.govt.nz/records/22387764>

⁷³⁹ <https://paperspast.natlib.govt.nz/newspapers/NZH18970319.2.78.4>

New Zealand Herald, Volume XXXIV, Issue 10394, 19 March 1897, Page 1 (Supplement)

⁷⁴⁰ <https://paperspast.natlib.govt.nz/newspapers/AS18970402.2.12>

Auckland Star, Volume XXVIII, Issue 76, 2 April 1897, Page 2

the mill is working there will be 20 stamps, of which 10 will be 850lb each and 10 1000lb each. The mortars to be used for the latter will have double discharges, which will bring the output up to 30 tons a day. A parcel of ore has been sent home for decision as to treatment This came from the No. 4 level, but it has been found that at the No. 6 level the quartz is purer than in the upper levels, containing far less clayey matter. It is therefore likely that the Talisman will be able to adopt wet crushing at no distant date, certainly when the Nos. 7 and 8 levels are in.⁷⁴¹

15 April

KARANGAHAKE.

The New Zealand Talisman property is now looking better than ever before, since placed in the hands of an English Company...

A 4-inch diameter [4 foot?] pipe line has been put in from the Talisman dam, and also two Victor turbines, capable of developing 120 horse-power effective. There will be also an electric light installation. A revolving air dryer is being substituted for the kilns; this is now ready for running, and will mean considerable economy, and probably a better extraction.

The prospects of the Woodstock Gold Mining Company continue to be encouraging: and the works in hand are of a remunerative character...

Operations are now also being conducted in the Ivanhoe section of the property, and the gorge tramline having intersected the Maria reef, a commencement has been made to open up and prove it. The exploitation of this section of the mine will doubtless be carried on in a most active manner, especially in view of the fact that such a lot of new ground will be opened up; on this northern side of the Waitawheta there will be something like 400 feet of backs available in addition to a great stretch on the line of reef. The battery is working in a most satisfactory manner, but it has not yet been decided as to the exact time of cleaning up.

The New Zealand Crown mines continues to develop well, and the various works on the reef are producing payable ore. The month's yield was £3185 from 1150 tons...

For the first three months five-head of stamps have been running, with Mr. Daw's improvement on the wet process, and with great success. It is claimed that double the work can be done, which of course means great economy in establishment charges. Large quantities of new machinery continue to arrive, and at the battery a staff of men is busily engaged erecting steel tanks for the wet crushing process, and when three of these are completed, ten head of stamps will commence crushing under the new system, which will be extended to the whole mill.

The construction of the large flumes for the conveyance of water to the large Pelton wheel to be used in connection with the new development works in hand at No. 6 tunnel, has been commenced, and over 300 feet of the fluming has been partly completed. The Kauri Timber Company has delivered about 80,000 feet of timber for this work out of a total quantity of about 280,000

⁷⁴¹ <https://paperspast.natlib.govt.nz/newspapers/AS18970414.2.34.7>

Auckland Star, Volume XXVIII, Issue 86, 14 April 1897, Page 7

feet. The excavations of the chamber for the pumping plant are completed, while the excavations for the compressor and winding engine are very nearly so. It will therefore be seen that Mr. Daw, the Company's superintendent, is not letting the grass grow under his feet.⁷⁴²

24 April

Karangahake is still going ahead. At present there are several new buildings, including a boarding house and a new Roman Catholic Church, in course of erection. There is, however, some difficulty in obtaining timber, which has to be carted from Paeroa, necessarily retarding the operations.⁷⁴³

Is the boarding house the two storey square building above battery Flat? It does not show in 1896 photographs.

Crown water race fluming commenced, 280,000 feet timber required

26 April

WET VERSUS DRY CRUSHING.

When the attention of the mining public is directed towards the different advantages of wet and dry crushing a few remarks on the subject might not be out of place. Until recently it has been the general opinion that for the gold-bearing ores of the Upper Thames district, dry crushing and cyanide treatment were the best suited for the recovery of a high percentage of gold at the least possible cost. Now, however, there seems to be a change of opinion on the subject, and experiments have been and are about to be made by the leading mining companies in the district. The New Zealand Crown Mines Company have taken the lead in this matter, and after a series of experiments made with five heads of stamps and the requisite leaching vats, although the results have been kept secret, I understand the manager has so far considered them sufficiently successful as to warrant the altering the present dry crushing battery into a wet crushing mill, and is now proceeding to make the necessary alterations. The Waihi and Woodstock Companies are also, I believe, about to make experiments in a similar direction at their batteries.

The advantages claimed for wet crushing are :—First, the saving of the cost of fuel in drying the ore; second, that the dust difficulty is got over; third, that the tonnage of ore crushed per stamp is about double. The first two advantages are plain to every one, nevertheless against these must be placed the facts, that the wear and tear of shoes, dies, and screens are very much greater than in dry crushing, and that the crushed ore obtained from a wet crushing mill is much more difficult to deal with in the treatment. The ore pulp from the stamp boxes must be filtered, and for that purpose is run into a tank with a false filter bottom, and here a great difficulty occurs. The heavier particles of ore, as the pulp is run into the tank, settle hard and solid on the bottom, leaving the slimes on the top, so that when the vacuum pump is applied which is connected with the tank by means of a pipe underneath the filter, the slimes which are

⁷⁴² <https://paperspast.natlib.govt.nz/newspapers/NZH18970415.2.63.4>

New Zealand Herald, Volume XXXIV, Issue 10417, 15 April 1897, Page 1 (Supplement)

⁷⁴³ <https://paperspast.natlib.govt.nz/newspapers/THA18970424.2.9>

Thames Advertiser, Volume XXIX, Issue 8718, 24 April 1897, Page 2

uppermost settle down on the top of the ore, forming into an almost waterproof coating, through which it is very hard for the solution to pass, and makes the washing of the ore both tedious and imperfect.

This difficulty in dry crushing is obviated, as the ore is delivered into the tanks dry, and the slimes being so intimately mixed with the rougher particles when the cyanide solution is carefully run on, do not interfere materially with the filtration. Even in the treatment of ore of an exceptionally clayey nature, if sufficient care is taken in running on the cyanide solution, the difficulty of filtration is never by any means insurmountable. With regard to the dust difficulty in dry crushing, this is not so serious as it is generally given out to be, and can be easily drawn away by suction pans [fans] from wherever necessary.

The advantages claimed for wet crushing through the saving of fuel and the prevention of dust, are only obtained at the cost of additional wear and tear and extra difficulty in the handling of the ore in treatment.

The slimes difficulty in wet crushing, when the ore has to be finely crushed, and afterwards, for proper treatment, subjected to a leaching process, is a great one, and cannot be easily overcome, especially in ores containing a large percentage of clay. Such ores are much easier and more perfectly filtered and washed in the treatment, if crushed and charged into the tanks dry.

With regard to the additional output claimed for wet crushing, there is no doubt if the same mesh of screen is used as in dry crushing, the actual amount of ore crushed will be largely increased. But it must be considered that by using a 30-mesh screen in dry crushing, at least 90 per cent. of the crushed ore obtained will pass through a 60-mesh screen, where, if a 30-mesh screen is used in wet crushing, not more than about 10 per cent. of the crushed ore will pass through a 60-mesh screen.

In wet and dry crushing, when the same fineness of screens is used, the actual amount of ore crushed per stamp is in favour of wet crushing, but the fineness to which the ore is reduced is certainly in favour of dry crushing. To crush wet by means of stamps ore to the fineness of that obtained through a 30-mesh screen in dry crushing, a 60-mesh screen would almost require to be used. The advantages therefore gained in the discharge by the use of water are to a great extent overcome by the necessity of using a finer screen so that the crushing powers of wet and dry stamps when reducing the ore to the same degree of fineness may be reasonably reckoned about equal.

In the ores of the Upper Thames the gold exists in an extremely fine state of division throughout the quartz. Frequently in high grade ore not a particle of the precious metal can be seen even with a powerful glass. It is therefore absolutely necessary to reduce the ore to almost an impalpable powder before a high percentage can be extracted. The finer the ore requires to be crushed the greater are the difficulties in wet crushing. It is questionable therefore whether it will prove as successful a method of treatment as dry crushing for the ores of the Upper Thames.

The method of working being experimented on is, I believe, by crushing the ore with a cyanide solution, running the pulp into vats, filtering and washing, the solutions being drawn off by means of a vacuum pump, precipitating the dissolved gold by zinc in the usual way, and then making up the waste cyanide solutions to the required strength and pumping up to the stamps and using it

over again in crushing fresh ore. Other difficulties apart from those already mentioned are likely to crop up. The large quantity of solution necessary to be pumped is bound to become troublesome, and a considerable decomposition of cyanide will take place through action of the air as the solution is agitated and passed through the stamper boxes.

Taking everything into consideration, I think it is open to question whether wet crushing will be on a large scale as successful for Karangahake and Waihi ores as is expected.—I am etc., Gold. 22nd April, 1897.

NEW ZEALAND CROWN. Large quantities of machinery, etc., continue to arrive for the Crown mine. Yesterday and to-day the road leading to the suspension bridge looked quite lively with so many waggons unloading the various pieces of machinery.

TALISMAN... The erection of the crushing and treatment plants is now being pushed ahead expeditiously, and the new double discharge stamp boxes have been placed in position ready for the stamps.⁷⁴⁴

Which bridge is the Crown using for their machinery? The 1885 suspension bridge at Battery Flat, or a newer bridge near their battery? A suspension bridge is erected at River Road 1898. But there is apparently already a bridge for the contractors for the Crown battery in 1892.

27 April

The mining revival has evidently proved a blessing in Up-Country press circles. Beside the Waihi Miner, the Waitekauri Golden Age and the Karangahake Advocate have now sprung into existence, and the initial numbers give great promise. The Paeroa Tribune has enlarged its size.⁷⁴⁵

1 May

About the Goldfields. (Continued.)

G. E. Alderton in the "Northern Advocate."

The "Corners" of Paeroa, Karangahake—Roofing in the Mountain—Aerial Trams.

We reached: Paeroa the day before the races...

The traffic on the streets here is something quite out of the common. Between 600 and 700 horses are constantly employed on the road between Paeroa, Karangahake, Waitekauri and Waihi. That means a large fodder bill, and good business for the Waikato farmers. Paeroa has four or five stables that will accommodate upwards of a hundred horses, and the night I was there I heard one of the men in charge of one of these stables having to decline to take in a horse for want of room. Horse-flesh is king here, and the bustle on the roads is alone worth a visit to Paeroa. To drop into the Exchange in Auckland and hear old Blues deploring the slump in scrip one would think the mining business had been all wound up, but a visit to Paeroa affords very strong proof that mining is just as brisk as ever. Notwithstanding, the scrip dealer has been

⁷⁴⁴ <https://paperspast.natlib.govt.nz/newspapers/NZH18970426.2.57>

New Zealand Herald, Volume XXXIV, Issue 10426, 26 April 1897, Page 6

⁷⁴⁵ <https://paperspast.natlib.govt.nz/newspapers/THS18970427.2.7>

Thames Star, Volume XXIX, Issue 8645, 27 April 1897, Page 2

"left." He had his dream. He used to figure out how many thousands of scrip he owned, how much he would be worth some day, and how he would go Home and enjoy himself. It was a pleasant dream while it lasted, but now the speculator is awake, very wide-awake indeed, and he is not taking scrip any more.

Passing out of Paeroa towards Karangahake the road is found to be something like Kyber Pass on market day, a procession of vehicles from one end to the other. Approaching the Gorge the road is seen to be narrow and dangerous, and it is easily understood how many accidents occur in this district, where every man seems to drive and only a few know how.

A peculiar sight meets the visitor just here. It looks as if a contract had been let for roofing in the side of the mountain. There are three great squares already covered with corrugated iron. Underneath these are the batteries of the Crown, Talisman, and Woodstock Companies. There is nothing to show they are batteries. Being worked by water, they have no smoke stacks, and as the works of the batteries are laid out in so many steps down the side of the hill, the roof is simply a plain sloping cover, a lean-to to the hill as it were. The roofs cover an immense surface, and they give the appearance of an attempt to roof in the mountain side. Here we first see mining in real earnest, and there is no mistaking the genuine article. And here right in amongst the busiest of busy bees we find Bunyard erst of the Commercial, Whangarei, now having the Tramway Hotel, Karangahake. He too is up-to-date, for we got here Swepps' English soda and Apolonaris water. The house is lighted by electricity, and the only level bit of ground in the valley is in front of the hotel. This is furnished with an electric search light, and on off nights the miners hold their al fresco Court here and settle differences summarily without needless reference to the Government officials.

The Talisman and Woodstock batteries are within a stone's throw of Bunyard's hotel, and five minutes' walk around the corner brings you into one of the wildest and most picturesque gorges imaginable. The sides of the mountain rise up perpendicularly forming what in America is commonly called a canon [canyon]. Overhead are stretched innumerable wire ropes, these cross the gorge or canon and carry the ore from one side to the other. The ingenuity of the miner is here displayed to great advantage. The manner in which these aerial trams, looking like spider webs across the sky, are managed reflects great credit on the mine managers in this region.⁷⁴⁶

6 May

Warden's Court. - Paeroa.

Miscellaneous Applications. The following were granted:— N.Z. Crown Mines, Limited, bridge site at Karangahake, subject to notice being given to the County Council; N.Z. Talisman G.M. Co., tramway and aerial tramway, Karangahake.⁷⁴⁷

⁷⁴⁶ <https://paperspast.natlib.govt.nz/newspapers/OG18970501.2.34>

Ohinemuri Gazette, Volume VII, Issue 388, 1 May 1897, Page 6

⁷⁴⁷ <https://paperspast.natlib.govt.nz/newspapers/THS18970506.2.17>

Thames Star, Volume XXIX, Issue 8653, 6 May 1897, Page 2

7 May

At the sitting of the Warden's Court today the following applications were granted by Mr. R. S. Bush, warden :—

N.Z. Talisman Gold Mining Company, ground tramway, 650 feet, and aerial tram, Karangahake.⁷⁴⁸

8 May

Ohinemuri County Council.

Karangahake Bridge —A letter was received from the Secretary of the Mines Department forwarding plans of the suspension bridge for Karangahake, and asking the Council to confer with Mr Wilson on the subject when he arrives.—The Chairman stated that Mr Bunyard and the Woodstock Company had promised £100 each, and he moved that tenders be called as soon as the plans are approved of.—As the plan of the bridge shows only 8 feet width it was thought that the two contributors might be unwilling to pay and eventually it was decided that the bridge be gone on with as soon as the money is lodged in the bank and that the contributors be written to giving the reasons for the size of the bridge.

This is the “Traffic” bridge, which will be completed in August 1898. It will be wider and stronger than the 1885 bridge, alongside which it will be built.

14 May

One of the chief features of the past month was the return of bullion from the first crushing conducted at the Woodstock Gold Mining Company's new reduction works at Karangahake. This gave a yield of bullion valued at £4652 from the treatment of 1350 tons of ore, but included in the tonnage treated were 350 tons of low grade ore from No. 1 level, so that the return is a most satisfactory one to all concerned, and the company can now be safely placed upon the list of our leading bullion producers...

Operations are being continued at four different levels on the New Zealand Talisman property...

A new aerial tramway, to carry the ore from No. 5 level to No. 3 hopper, on the hillside, has been erected, and a surface tramway, to convey the ore from No. 6 level to No. 2 hopper, is in course of erection. The development work carried out for the month has been highly satisfactory. At the mill all the reconstruction works are progressing rapidly and, it is anticipated that crushing will be resumed at the end of the present month. The mine managers look forward to a handsome result from the first crushing, and think that there will be no difficulty in following it up with regular monthly returns of a satisfactory nature.⁷⁴⁹

⁷⁴⁸ <https://paperspast.natlib.govt.nz/newspapers/NZH18970507.2.61>

New Zealand Herald, Volume XXXIV, Issue 10436, 7 May 1897, Page 6

⁷⁴⁹ <https://paperspast.natlib.govt.nz/newspapers/NZH18970514.2.67.4>

New Zealand Herald, Volume XXXIV, Issue 10442, 14 May 1897, Page 1 (Supplement)

11 June

Next week, crushing operations will commence at the New Zealand Talisman, a mine which constitutes the first subsidiary undertaking of the London and New Zealand Exploration Company Limited. The general management of the mine is in the hands of Messrs. Bewick, Moreing, and Co., mining engineers, represented here by Mr. William A. Mercer, with whom is associated Mr. Alfred H. Curtis, another representative of the firm. Under this direction the mine has, during the past twelve months, been systematically and rapidly developed, the principal workings consisting of six adits driven at intervals of about 100 feet below each other (for the purpose of intersecting the main reef) and of extensive drives along the reef in northerly and southerly directions...

The workings have proved the existence of at least two shoots of very rich ore in the main reef, assays of these sections of the ore body running occasionally as high as £50 per ton; and it is confidently expected by the management that the general average of the ore sent to the mill by aerial tramway will be between £4 and £5 per ton, while the latter figure may frequently be exceeded. On taking over the property, the engineers in New Zealand were confronted with numerous difficulties, more especially in the matter of the reconstruction and enlargement of the reduction works, owing chiefly to the want of a battery site of sufficient area to allow of the whole of the plant being erected on one site. This difficulty was overcome by the construction of a Howe Truss bridge across the Waitawheta River for the purpose of connecting the machine site proper with the small special site also owned by the company.

On the machine site there is ample accommodation for the erection of crushing appliances as well as for a certain small number of cyanide vats; but the bulk of the cyaniding will be effected by the plant erected for that purpose on the special site. The process adopted for the treatment of the Talisman ore is as follows:-

The ore will be delivered at the machine site by means of the aerial tramway already referred to, and, after being crushed by a Blake ore-breaker, will be automatically fed into a revolving ore-dryer (supplied by the Union Ironworks of San Francisco)—a conical cast-iron cylinder, erected with axis horizontal, through which the ore will gradually travel towards the fire, and as the cylinder slowly revolves, being finally discharged into bins erected over the batteries of stamps. The use of this revolving ore-dryer is a new departure in New Zealand, where ore has hitherto been generally dried in a kiln. The use of the mechanical dryer is reputed to effect a considerable saving in fuel, and to obviate loss caused by the presence of pieces of charcoal and partially carbonised wood in ore dried by the kiln process. The ore will be then automatically fed into the stamper-boxes, from which a portion of the product will be delivered by a revolving ore-conveyor to the six cyaniding vats on the same site, the remainder of the material being conveyed by tramway over the bridge across the Waitawheta to the cyanide works on the opposite side of the river.

Of the 20 heads of stamps, of which the crushing plant at present consists, 10 heads are of 850lb weight each (these constituting part of the original mill). The capacity of these 20 heads will be from 25 to 30 tons per day. The second 10 heads weigh 1000lb each, their mortars being of double-discharge type, that is to say, being fitted with screens at front and back. These were supplied

by the Union Ironworks of San Francisco, through their agent here, Mr. Bruce Lloyd. A No. 5 Krupp ball mill has been received from England, and will shortly be erected on the machine site, an addition which will considerably increase the crushing capacity of the reduction works. Power for the operation of the mill is developed by means of two Victor turbines (supplied by Messrs. John Chambers and Son, of Auckland, as also was the electric plant). These turbines are capable of generating over 120 horsepower, water being led to these motors through a wrought-iron pipe four feet in diameter, constructed by Seager Bros., Auckland. Power for the operation of the centrifugal and vacuum pumps of the cyanide plant on the special sites, is electrically transmitted from the machine site, and the works on both sides, as well as the mine offices, are lighted by electricity. The contract for the buildings was carried out by Mr. J. Payne.

Already a trial spin has been made of the rotary ore dryer and the Victor turbine wheels, and these were found to work very satisfactorily...

Operations at the New Zealand Crown mines continues to be of a productive nature, especially those being conducted in the underhand stope below No. 6 level. Here a depth of about 50 feet has been attained, the reef showing no signs of diminishing in size; whilst it continues to maintain its value of about £5 per ton for a width of about 15 feet. This consistency gives great expectations as regards the opening up of the lower blocks, and an encouragement to the management to prosecute with all diligence the erection of the machinery necessary to allow these low level explorations to be continued. In fact the company's manager (Mr. Daw) is pushing ahead the works as fast as possible, the chambers being completed, and now the winze is being lined, and various other preparatory works are in hand, these being necessary before stripping the winze to form the incline shaft could be undertaken.

A large proportion of the new plant has arrived at Karangahake, and has been taken up the gorge as far as the No. 6 level, so that it will be seen no time is being wasted in carrying out the big scheme of operations resolved upon some time ago...

Excellent progress is being made with the Waitawheta water-race, and also the additions to the mill. Mr. Daw estimates that in about four or five weeks time he will have 15 head of stampers working under wet crushing. Mr. Daw informed me that the experiments being made with the process are highly successful, the consumption of chemicals being about the same as the dry method, whilst the bullion extraction is somewhat higher. Another great difficulty has also been removed in connection with the treatment of slimes, the new process adopted enabling the battery authorities to deal with the ore no matter how slimy it is. This, he says, will allow the Crown Company to treat the ore from the underground workings at one-half the cost incurred by the dry system. Something like 1000 tons of ore have now been treated with the five head of stamps, and I understand no difficulty has been experienced from the commencement. During the month bullion valued at £3567 was secured from 1300 tons.⁷⁵⁰

⁷⁵⁰ <https://paperspast.natlib.govt.nz/newspapers/NZH18970611.2.62.3>

New Zealand Herald, Volume XXXIV, Issue 10466, 11 June 1897, Page 1 (Supplement)

17 June

Paeroa, June 16. A most important function took place at Karangahake to-day, when the new ten [20] stamper battery erected for Talisman Gold Mining Company was formally opened in the presence of Messrs Mercer and Curtis, (representing Bewick, Moreing, and Co.), Goldsworthy (mine manager), H. Taylor (battery manager), John Chambers (of Chambers and Son), Bruce and Lloyd (of the San Francisco ironworks), J. Burns (of Burns and Co), G. Seager, J. Payne (contractor for the battery), J. McCombie (manager of the Woodstock), Daw (manager of the Crown), J. Phillips and Roche (mining engineers), F. Fenne (electrical engineer), and many others.

The battery commenced running at 12 o'clock when the electric light was also turned on, and everything was found to work splendidly. Great public interest was taken in the rotary ore dryer, which takes the place of kilns.

After inspecting the battery, the company adjourned to Bunyard's Tramway Hotel, where a most sumptuous repast had been provided. A number of toasts were proposed, and enthusiastically responded to by the Company.

During the afternoon the plant was open to inspection, and all who inspected it were unanimously of opinion that it is a splendid one of its kind, and reflects great credit on the contractors, also on the battery superintendent (Mr Taylor).⁷⁵¹

Talisman new 20 stamper underway 16 June, Howe Truss bridge connects to special site (vat house)

17 June

NEW ZEALAND TALISMAN. CRUSHING COMMENCED. Paeroa, Wednesday.

It is now a little over twelve months since the London and New Zealand Exploration Company commenced operations in New Zealand, the first property acquired being the New Zealand Talisman. This consists of 68 acres, situated in the heart of the Karangahake auriferous belt of country. The property was by no means an unknown one, for a test of about 300 tons of ore had been made some time previously at the New Zealand Crown Mines Reduction Works, the result of this crushing being something equal to £8 per ton. A crushing from the ten-stamper mill was completed soon after Bewick, Moreing, and Co. assumed control, the return being, like its predecessor, a most successful one, bullion valued at £1521 having been extracted from 283 tons of ore.

Six levels are now in operation, and such a quantity of stone has been opened up that the company felt quite justified in going in for a larger mill and a more complete cyanide plant. A description of the plant, etc., has already been published. One great feature of the ore-dryer is that it occupies but a small amount of space, and is economical in consumption of fuel, and requires but little power for its operation. The innovation is considered to be a decided improvement on the kiln system. It will therefore be seen that the Talisman Company have made it a point to keep pace with the various improvements

⁷⁵¹ <https://paperspast.natlib.govt.nz/newspapers/THA18970617.2.33>

Thames Advertiser, Volume XXIX, Issue 8763, 17 June 1897, Page 3

that have been made in order to obtain a more successful and economical treatment of ore. Altogether the battery is a fine one of its class. To-day the plant commenced permanent crushing operations, and the event was commemorated in presence of a number of visitors...[as above]⁷⁵²

18 June

Ohinemuri County Council.

It was decided that the Council does not object to the Warden granting the Crown Mines Company permission to erect a bridge over the Ohinemuri river...

The Woodstock Gold Mining Company wrote that they could not give £100 subsidy to the proposed Karangahake bridge, as it was too narrow for their use.⁷⁵³

The Crown bridge is which one? The “proposed Karangahake bridge” is the new traffic bridge erected in 1898?

The Crown workers’ bridge was swept away 22 October 1892. Then re-built?

19 June

OPENING OF THE TALISMAN BATTERY.

A most important function took place at Karangahake on Wednesday last, when the new twenty stamper battery erected for Talisman Gold Mining Company was formally opened...

The plant on the company's machine site consists of an ore breaker of reciprocating jaw type; a revolving ore drier, capable of treating from 40 to 50 tons per day, which is a great improvement on the kiln system of drying; 10 heads of 850lb stamps with single discharge mortars (these stamps forming part of the mill as originally erected); 10 heads of 1000lb stamps with double discharge mortars supplied by the Union Iron Works of San Francisco, per their Auckland representative, Mr Bruce Lloyd, who also supplied the ore drier; 2 wooden cyanide vats each 16 feet in diameter (part of the old plant), and 4 new cyanide vats each 22 feet in diameter, into which the pulverised ore is fed by means of a revolving ore conveyor, which obviates the necessity for the use of trucks and greatly reduces the amount of dust in the atmosphere of the building. The tailings, after treatment by the cyanide process, pass over amalgamated copper plates for the extraction of the coarser gold, and blanketings are subsequently treated in Berdan pans, of which there are three, 3 feet in diameter, on the machine site.

Water for the driving of the mill is conducted from the dam on the Waitawheta River, first through a short tunnel about 90 feet in length, then through an open cutting 20 feet in length, passing finally into a wrought iron pipe, 4 feet in diameter and 925 feet in length, delivering the water into a concrete-walled turbine pit, 28 feet in depth. The motive power is generated by two Victor vertical turbines, 20 inches and 12 inches in diameter respectively, the latter

⁷⁵² <https://paperspast.natlib.govt.nz/newspapers/NZH18970617.2.73>

New Zealand Herald, Volume XXXIV, Issue 10471, 17 June 1897, Page 6

⁷⁵³ <https://paperspast.natlib.govt.nz/newspapers/THA18970618.2.20>

Thames Advertiser, Volume XXIX, Issue 8764, 18 June 1897, Page 2

being used for the operation of a dynamo generating electric light for the works on the machine and special sites, offices, etc., and for transmitting power for various purposes to the special site. Such pulverised ore as cannot be dealt with by the cyaniding plant on the machine site will be conveyed by covered tram across the Howe truss bridge erected over the Waitawheta River to the entirely new cyanide works on the company's special site, an area which had to be utilised owing to the limited size of the machine site.

The cyanide plant on the special site consists of 6 wooden vats each 22 feet in diameter, with the usual accessories, including amalgamated copper plates and three 4-foot Berdans. The sumps are substantially built of concrete. The centrifugal and vacuum pipes on this site are driven by an electric motor operated by the dynamo on the machine site. Water for vat sluicing, etc, is brought to the special site from the Hauraki Creek by means of a pipe 3 inches in diameter. The turbines, dynamo, motor and electric light fittings were supplied by Messrs John Chambers and Son, Auckland, represented by Messrs Ernest Fenn and Frank Roach, who also constructed the substantial turbine pit. The water race was constructed by Messrs Seagar Bros., of Auckland. The remainder of the work was executed by Mr J. J. Payne, of Auckland.

It is expected that the mill will be able to treat a minimum of 25 tons a day, and it is hoped that the stamps will prove equal to as much as 30 tons per day. A No. 5 Krupp Ball mill has been received from England and will be erected at the first opportunity, and will largely increase the output of the works.

In addition to the buildings, machinery and plant, bridge, etc., above referred to, suitable office premises and residences for the mine manager (Mr W. Goldsworthy) and the battery manager (Mr C. H. Taylor) have been erected since the property was taken over by the new company. The Consulting Engineers and General Managers of the property are Messrs Bewick, Moreing, and Co., of London, represented here by Messrs W. A. Mercer and A. H. Curtis, who are the attorneys of the company in New Zealand.⁷⁵⁴

3 July

OHINEMURI COUNTY COUNCIL.

KARANGAHAKE BRIDGE. Cr Mitchell moved his notice of motion as follows: — 'That all resolutions re erection of bridge at Karangahake be rescinded, and the subject be reconsidered'—The Chairman seconded, and it was carried.

The Chairman moved that tenders be called for the erection of a bridge at Karangahake. —Cr Mitchell seconded, and it was carried.⁷⁵⁵

8 July

THE BATTERY STARTED.

The Talisman battery commenced running at 12 o'clock noon on June 16...

⁷⁵⁴ <https://paperspast.natlib.govt.nz/newspapers/OG18970619.2.18>

Ohinemuri Gazette, Volume VII, Issue 400, 19 June 1897, Page 5

⁷⁵⁵ <https://paperspast.natlib.govt.nz/newspapers/OG18970703.2.17>

Ohinemuri Gazette, Volume VII, Issue 403, 3 July 1897, Page 5

Everything worked most smoothly. After the ceremony the photos of the battery, the spectators, and the dam site were taken by a photographer present...

A final meeting of shareholders in the Talisman G.M. Company was held on June 38th, when the report of the liquidator was read showing that everything had been properly wound up, there having been sufficient funds in hand to do this. The report was approved, and the old Talisman Company was declared finally wound up. The property is now held and worked by the New Zealand Talisman Goldmining Company.

Very satisfactory progress is being made with the development of the different levels in this mine, the lowest one, No. 6, being only about 140 ft or 150 ft above the higher level in the Woodstock mine, so that before very long this No. 1 Woodstock level will probably be utilised for opening up the Talisman lode...

Considerable improvement is being effected in the mode of transporting the ore from the mine to the mill and when the present works are completed a great saving in labour will be effected. A short ground tramway from No. 6 level will convey the ore from this and No. 5 level to a hopper, whence it will be carried by a short incline tram to another hopper, and thence by aerial tram to the battery. The ore from No. 4 level will be conveyed as at present. The hoppers are being enlarged, as the old ones were much too small. When these necessary improvements are effected it is the manager's intention to develop other parts of the Talisman property...⁷⁵⁶

9 July

The New Zealand Crown Mines Limited during the past four weeks crushed and treated 1200 tons of ore for a bullion return of an estimated value of £3300. The 20 head of stamps battery is now being run continuously for wet crushing.⁷⁵⁷

One of the main features associated with driving at Karangahake during the past month has been the opening of the New Zealand Talisman Gold Mining Company's reduction works, and the commencement of permanent crushing operations. The plant consists of 20 head of stamps, and connected with which are admirably-equipped cyanide works. The battery is of the ordinary kind, but an innovation has been made, which other companies would do well to copy, namely, the introduction of a rotary ore dryer instead of the roasting kilns...

The new section of tramway from the No. 5 level to the Hauraki level is completed and is working well. The same applies to the aerial tramlines, and a contract has been let to Hilton and party for the conveyance of ore, firewood, etc., to the mill...

Operations at the Woodstock Gold Mining Company's mine are proceeding satisfactorily, and there is no doubt now as to the permanence and downward continuation of the rich ore shoots...

⁷⁵⁶ <https://paperspast.natlib.govt.nz/newspapers/AS18970708.2.33.2>

Auckland Star, Volume XXVIII, Issue 157, 8 July 1897, Page 6

⁷⁵⁷ <https://paperspast.natlib.govt.nz/newspapers/NZH18970709.2.51>

New Zealand Herald, Volume XXXIV, Issue 10490, 9 July 1897, Page 6

The reduction works are grinding away as usual, and all the machinery is working in a highly satisfactory manner, I notice that the company are adding to the battery department, in the shape, of a Gates crusher, with a screen and elevator attached. The stone will, when crushed then pass through a five-eighth mesh, but the quartz not broken up so fine will be automatically elevated back again for a second treatment. This will ensure more regular stamping on the part of the stamps, and will, it is contended, add 15 per cent to the crushing capacity of the mill. It will, therefore, be seen that by supplementing the battery power with this improved crusher, the company are making an important alteration.⁷⁵⁸

10 July

Mr R. Armstrong, Ohinemuri County Engineer, is now busily engaged completing the plans and specifications for the traffic bridge at Karangahake. The bridge will be capable of carrying a weight of 15 tons, it will be erected 40ft lower down the stream than the wire bridge, and will be built of material to be had in the colony most of it in the district. The Government subsidises the County to the extent of pound for pound.⁷⁵⁹

Traffic Bridge to be erected

16 July

The quarterly meeting of the Upper Thames Wesleyan circuit was held the other night in the Te Aroha Wesleyan Church, the circuit minister (the Rev. S. Griffith) occupying the chair...

The question of Sunday labour at the mines was fully discussed, and the following resolution, moved by Mr. W. Shepherd Allen, was unanimously adopted, "That this meeting expresses its deep regret at the amount of wholly unnecessary work which is done on Sundays at Karangahake, Waihi, and Waitekauri, and enters its strong protest against all Sunday labour except that which is absolutely necessary."⁷⁶⁰

2 August

THE KARANGAHAKE DISTRICT. VISIT TO THE LEADING MINES.

THE NEW ZEALAND CROWN MINE. Considerable attention is being paid to the New Zealand Crown Mine at the present time, as most important works both at the mine and battery are in progress. The Crown, like many other colonial properties, has had its vicissitudes, but having now entered the ranks of the dividend payers, and with every prospect of gradually improving its position until it takes a leading place among New Zealand mines, those who have for years persistently maintained that the property was a valuable one can with safety congratulate themselves on forming an accurate opinion as to the

⁷⁵⁸ <https://paperspast.natlib.govt.nz/newspapers/NZH18970709.2.60.5>

New Zealand Herald, Volume XXXIV, Issue 10490, 9 July 1897, Page 1 (Supplement)

⁷⁵⁹ <https://paperspast.natlib.govt.nz/newspapers/THA18970710.2.10>

Thames Advertiser, Volume XXIX, Issue 8783, 10 July 1897, Page 2

⁷⁶⁰ <https://paperspast.natlib.govt.nz/newspapers/NZH18970716.2.12>

New Zealand Herald, Volume XXXIV, Issue 10496, 16 July 1897, Page 3

future of the mine. Taking a retrospective glance at the history of the property it will perhaps be remembered that the first practical work of any consequence done on the property was that carried out by Mr. Will Davis, who discovered the reef now known as No. 1. Then Mr. George McGruer, the present mine superintendent, prospected the ground on behalf of an Auckland company, and discovered the Welcome reef. The company was then floated in Glasgow by Mr. Thomas Melville about six years ago, Captain Coward being sent out to superintend the work at the mine, which was mainly confined to operations at the top. With the assistance of the Cassel Company two Lamberton mills, capable of crushing about 50 tons per month, were erected, but after a lapse of twelve months disagreements arose, and Captain Coward reported that the mine had not come up to expectations, and could not be made to pay. Mr. Geo. McGruer, who had confidence in the property, and was sure that with the assistance of the necessary capital the mine could be made to pay, and during the following twelve months, the company having temporarily withdrawn, he carried out systematic prospecting work, he and his men conveying five tons of ore over the hill to the battery, each man shouldering his bagful of stone. This crushing gave very satisfactory results, and, the company having decided to prosecute work vigorously, Mr. John McConnell, the present battery superintendent, was appointed mine manager. Twenty head of stampers were erected, a road cut out round the gorge through which the Waitawheta River runs, and work went slowly but steadily ahead. Changes took place in the management, Mr. Richard Spratt being appointed inspector and attorney, and Mr. McGruer mine manager. Some eighteen months ago Mr. Spratt died and Mr. Daw was appointed general superintendent. Immediately upon his arrival Mr. Daw gave orders for the erection of another 20 head of stampers, bringing the number of head to 40. At first the ore was all dry crushed, but as a result of experiments conducted it has been decided to crush wet. At the time of our representative's visit the stampers were crushing dry and wet; but very shortly the whole battery will be converted into a wet crushing plant.

Visitors to the property cannot but be impressed with the nature of the work which is proceeding on all parts of the company's property. Immediately opposite the mouth of No. 6 tunnel, on the other side of the Waitawheta, a large chamber, 52 feet by 45 feet, has been excavated and timbered for the air-compressing machinery which will drive the pumps and winding gear in the shaft in No. 6 tunnel, about 200 feet distant south, and will also drive the rock drills. The compressor will occupy a space 42 feet by 24 feet. It will be a two-stage compressor, the low-pressure cylinder being 25 inches in diameter and the high-pressure 16 inches. The stroke is 42 inches and the compressor will deliver 1680 cubic feet of air per minute and give a pressure of 75lb per square inch. The heavy flywheel is 18 feet in diameter and weighs 14 tons. The compressed air passes from the low-pressure cylinder into the cooler, and from there to the high pressure cylinder, where it is compressed to 75lb per square inch. From the high pressure the air passes to cylinders 15 feet long by 5 feet, and is conveyed across to the pneumatic engines (made by Messrs. Fraser and Chalmers) on the opposite side of the gorge, where one will work the direct acting pump, while the other will be used as a winding engine in connection with the underhand stope below No. 6 level. The engine will be capable of hauling a ton of ore from a depth of 600 feet at the rate of 300 feet per minute, so that the engine can lift a ton to the No. 6 level every two minutes from a

depth of 600 feet. The trucks will be capable of holding a ton of ore, and these are believed to be the largest in the colony used for a similar purpose, while an additional advantage is that the trucks will be conveyed directly from the level to the large hopper where the stone-breaker is at work. The power will be derived from a Pelton wheel, which will be attached direct to the main driving-shaft of the compressor, and this has been specially designed so as to revolve at a speed of 65 revolutions per minute. It will thus be noted that the compressor works without any belting or with gearing of any kind. The governors of the wheel will be worked by a mechanical arrangement and by an electric replogle machine⁷⁶¹. The Pelton wheel will be 10 feet in diameter, and worked by three nozzles of 5½ and 4½ inches diameter, working under a pressure of 32lb per square inch, and having a supply of 30 sluice heads, or 1800 cubic feet per minute.

The angle of the incline shaft is 48 degrees 35 minutes. In staging the ladders will be fixed in the footway every 12 feet, and each ladder rests on what miners term a solar. These ladders alternate to the bottom of the shaft, so that should a man lose his hold he cannot fall further than 12 feet. The shaft is divided into three compartments—pumping, footway, and winding—practically three shafts in one.

Proceeding to the mouth of No. 6 level, and looking up the gorge it will be at once noticed that good progress has been made with the water-race, which will be one mile and a-half long, and for which nearly £2300 will be expended in timber alone. Entering and passing along the No. 6 drive south, the incline shaft is the first work of importance to notice. The pump will come up sets of timber 12 feet by 12 feet at the angle mentioned above, the sets close to the level being put in four feet from centre to centre. The pumping department will be seven feet by six feet, the man way three feet 11 inches by six feet, the winding department 14 feet 11 inches by six feet, and the trucks will have a double incline road below to the surface of No. 6 level. In making the shaft incline towards the river, the company are sinking on the reef as well, and it is estimated that the ore mined will more than pay for the cost of sinking, while the work can, it is held, be carried on more expeditiously, and as economically as would be the case were the shaft vertical...

In No. 5 tunnel two large chambers have been excavated, one 42 feet by 22 feet, for the pumping engine, and the other 29 feet by 15 feet, for the winding plant. The chambers have been well cut out, and form two roomy compartments. Apropos, Mr. Daw, the general superintendent, expects to have everything placed in position, and ready for working early next year, so that seeing the large amount of work to be done and its important nature, no time is to be lost, and every possible means taken to push on operations...

A visit to the mine will convince anyone that the amount of ore available is enormous; in fact, Mr. Daw estimates that already there is in sight something over a million tons of ore. At the present time the ore is being crushed at the rate of something near 1500 tons per month, and it is expected that after August (when the result of the experiments conducted will be given practical effect to, and when the wet crushing will supersede the dry) over 2000 tons

⁷⁶¹ A Water-wheel governor, invented by FS Replogle. This will efficiently control the speed of the wheel under differing loads. See: <https://patents.google.com/patent/US781966>

will be put through every month. Since Mr. Daw's arrival many improvements have been effected in the mine, and wherever it is possible to facilitate work and lighten the labours of those engaged the company have taken advantage of the opportunity. Instead of having an ordinary windlass to bring the ore from the stope below No. 6 level, Mr. Daw had a chamber cut out and two double-cylinder air engines erected in different parts of the mine. It is intended in time to light the whole mine by electricity, drive the battery by electricity generated at the river, widen No. 6 level so that horses may convey the trucks from the passes to the hopper, and to effect many other improvements as soon as the present important work is completed. As mentioned before, both wet and dry crushing is being proceeded with at the battery. It is intended to erect another 20 head of stampers, which will make a total of 60 head. The ore-breaker is putting through about 50 tons per day, but when the additional stampers are working it is thought that about 80 tons per day, or about 1000 tons per month more than is being crushed now, could be put through under present conditions. In August, however, it is expected 60 stampers will be working, all wet, and the quantity of ore which will be crushed is estimated to be about 120 tons per day - two tons per stamper per day. At present four hoppers feed to the wet and a similar number to the dry. At the time of our representative's visit the furnaces, etc., were of course in use, but these will all be taken down shortly, and as it requires about one ton of firewood for every eight tons of ore crushed, a considerable saving in this direction will be effected. Forty mesh sieves are used in crushing, and the estimated saving is 50 per cent. Eighteen cyanide vats are at present erected, and it is intended to increase the number to 54—30 round and 24 square vats—but of course only the necessary number will be used.

Questioned as to the nature of the experiments conducted and their results, Mr. Daw declined to give any information, as the matter was still in the hands of his directors, and until they had expressed their wishes on the subject particulars could not be afforded. In Karangahake, however, it is reported that the experiments have proved highly successful, and that much better returns may be looked for in future months. One new feature is that in the stamper boxes there is a solution of cyanide, but as to the other alterations effected it is rather premature to deal with them at this stage. If, therefore, 120 tons per day will be crushed with 60 stampers and the improved process of treatment proves successful, the Crown's returns should be nearly double what they were two months ago or 50 per- cent. more than they are at present, and as last month 1200 tons yielded bullion (which is supposed to run about £1 10s per oz) valued at £3300, the result of operations at this mine will be watched with a good deal of interest.

The WOODSTOCK MINE. The above mine, which has entered the ranks of the bullion producers, and so far has had very satisfactory results, adjoins the Crown, lying to the west of that property, and is bounded on the south-east side by the Talisman and Talisman Extended, and west by the Waverley, Stanley, the Stirling again lying to the west of the properties mentioned. The Woodstock was at one time known as the old Hauraki, and was owned in 1884 by Messrs. McCombie (the present mine superintendent), Shepherd, Liddel, Davidson, Lemon, and Colonel Fraser. The reef which had been discovered on the ground was opened up at two levels, and a quantity of ore taken out. It was put through the ordinary battery treatment, but this proved an utter failure, the

results being very disappointing, about 30 per cent. of the assay value of the ore being saved. Smelting was then given a trial, a waterjacket smelter (the Lamont process) being procured, but this was also a failure on account of the heavy expense involved. The fluxes were costly; the galena had to be imported from South Australia; the iron ore from Whangarei, and the shells from the Thames. Next pan amalgamation was tried, and fairly satisfactory results obtained, about 40 per cent, of the assay value being saved. In 1889 [can't read] Mr. John McConnell, the present superintendent of the Woodstock battery, arrived in New Zealand, and at that time was representing the McArthur-Forrest Company. He conducted experiments, and subsequently the first bulk lot of ore in the world outside Glasgow treated by the cyanide process was dealt with in Karangahake, the ore coming from the Maria reef, which is at present being worked on in the Woodstock mine. Then followed a more general use of cyanide. The Crown Company established the process in their battery, and the Woodstock very shortly afterwards followed suit. Before this, however, the property was owned by an Auckland company, who put up a battery of 10 stampers with cyanide plant, and succeeded in extracting about 80 per cent. of gold and 50 per cent. of silver. When this plant had been running for about six months the property was visited by Messrs. H. R. Byles, of London, Rothwell, and Welstead, who had been instructed to inspect and report on the prospects. An offer was made to the Auckland company and accepted, and the gentlemen named returned to London, and floated the company privately, without any difficulty, and without asking the public to subscribe. The capital of the company was £150,000, the vendors receiving 81,000 shares, and the working capital £42,000. The company was floated in 1895, and it was decided to at once proceed to develop the property. This work was proceeded with with all possible speed, the old battery dismantled, 40 head of stampers erected in its place, and complete preparations made for the treatment of the quartz by cyanide. Mr. John McCombie was appointed mine superintendent, and Mr. John McGonnell battery manager, and in these gentlemen the company possess thoroughly practical and capable officers. Since the company commenced crushing the returns have been steady and in every way satisfactory. On an average about 1050 tons are put through every month and the bullion from this ranges in value from £3500 to £3700, the ore averaging £3 10s per ton. The value of the bullion is about 15s per ounce, the ore containing a large quantity of silver, but as the reef is said to be improving as it goes down, it is anticipated that at a depth the silver will give place to more gold. If anticipations in this direction are realised, and the ore improve in grade, the return should, so far as proportions of bullion to quartz is concerned, occupy a very prominent position...

The ore is conveyed by aerial trams to the hopper, from there discharged into trucks, and conveyed by tram to the mill site, when it is elevated by means of a water-balance truck system to the top of the kilns, and from thence to the mill. Here 40 head of stampers (dry crushing) are at work, the number of cyanide vats being 12. From February 28 of the present year to July 10, when the last clean up was made, the quantity of ore stamped and treated was 4450 tons, the assay value of the ore being £4 5s 1d. The estimated total value of the bullion was £19,056, and the total value of bullion recovered was £15,589, equal to a saving of £3 9s 7d per ton, thus being equivalent to a saving of 88 per cent, of gold, and 50 per cent, of silver. From the battery manager our representative

learned that though the average saving was as given above, the last percentage obtained was equal to 92 of gold and 60 per cent. silver, the average value of the bullion being 15s per oz. Mr. McDonnell is not apparently greatly enamoured with the present system of kiln drying. In conversation with our special reporter, the subjects of wet versus dry crushing and kiln-drying and drying by means of a rotary furnace were mentioned, the gentleman named said his principal objection to the kilns was that this process induced the formation of soluble sulphates in certain classes of ore which had a tendency to considerably increase the consumption of cyanide, which could only be neutralised by the addition of an alkali prior to treatment by the cyanide either in solution or in direct contact with the ore. If the ore were dried in a rotary drier and not exposed to a great heat, these sulphates would not be formed to the same extent.⁷⁶²

The above report was very hard to read, errors may be present.

Crown compressor flywheel is 18 feet in diameter and weighs 14 tons

3 August

VISIT TO LEADING MINES. (BY OUR SPECIAL REPORTER.)

THE TALISMAN. The history of the above mine, the latest addition to the bullion producers of the Auckland province, is somewhat similar to that of the other mines mentioned yesterday in that it for a time had disadvantages and difficulties to contend with, but compared with the Crown and Woodstock it was brought to the fore more expeditiously, due to several favourable circumstances which were accelerated by the very satisfactory condition of the market when the property was practically in its infancy. The Talisman was pegged out only three years ago, and to-day it has every chance of ranking amongst the leading mines of the province. Mr. H.M. Shepherd and others were, we believe, the first to undertake any work which was likely to have a practical result, and after working the property for some time 300 tons of ore were secured and crushed at the Crown battery, the result being a return of about £8 per ton. The value of the ore being thus proved, little difficulty was experienced in floating a company in Auckland, who, after careful consideration, thought it advisable in the interests of those concerned to arrange for the erection of a crushing plant by allowing the syndicate undertaking this necessary work a quid pro quo in the shape of shares. A ten-stamper battery was erected, an aerial tramway placed in position, and a second crushing of 300 tons undertaken, the result being a return equal to about £5 2s 6d. But it was subsequently ascertained that under the circumstances the battery was too small, and the cyanide vats insufficient. The property was then taken up under a flotation option by Mr. Byles for six months, but as he failed to carry the matter to a successful issue, Messrs. Bewick and Moreing, by their representatives, Messrs. Curtis and Mercer, of Auckland, interested themselves in the property, and floated a company in June of last year, the capital of the company being £150,000, and the working capital £25,000.

⁷⁶² <https://paperspast.natlib.govt.nz/newspapers/NZH18970802.2.8>

New Zealand Herald, Volume XXXIV, Issue 10510, 2 August 1897, Page 3

They at once set to work, opening up the mine in a systematic manner, confining their attention principally to Nos. 5 and 6 levels, sinking winzes, erecting an additional ten stampers, and increasing the cyanide plant from two to 12 large vats. A rotary drier was also placed in position, and substantial additions made to the aerial tramways, which are now 2400 feet long, the longest stage from hopper to hopper being 1250 feet. Particulars of the plant have already appeared in the columns of the Herald, so that any further details on this head would be superfluous. Suffice to say that the plant is admitted to be one of the most complete yet erected in the colony, and one cannot help noting the expeditious manner in which the ore is handled from the time it commences its descent from the hoppers on the hill to the crushers, and from thence to the cyanide vats...

At the battery there are two turbines, one driving the stamps and machinery, and the other the dynamo, the wheels giving about 86 per cent. of efficiency. The absence of dust in the battery is marked, and the ingenious contrivances applied are most successful in their operation. It is to be regretted that the battery site was not of sufficient area to allow of the erection of the complete plant (stampers and cyanide), but the difficulty has been overcome, the major portion of the quartz crushed going through the cyanide vats on the special site on the opposite side of the river, the connection being by means of a tram across the bridge, which by night is lit with electric light. Both buildings are lit with electric light, the power being generated at the battery by means of a turbine and conveyed by cables to the reduction building on the special site, where the receiving dynamo drives the air pump and berdans. All the tailings are being run over copper plates after cyaniding, and the opinion is that it will more than pay for the additional outlay. The revolving ore-drier, it is held, is a great advantage.

The battery manager of the Talisman (Mr. Taylor) agrees with Mr. McConnell, of the Woodstock, that kiln drying has the effect of fusing the bullion, thus making the assays irregular and not so reliable as when treated by the other process mentioned. In the rotary drier the ore takes about half-an-hour to dry, and 30 tons of ore are dried with the consumption of about four tons of wood.

Regarding wet versus dry crushing, Mr. Taylor, who was questioned on the point, agrees with Mr. McConnell that wet crushing is a great improvement. "That is" to quote Mr. Taylor's words, "if the nature of the ore allows of it being carried out. The vital point is regarding the nature of the ore and the quality of the bullion. If high class bullion is obtained then I believe it should be treated by wet crushing and cyanide, but with ores like the Woodstock (the bullion from which is worth about 15s per oz) and the Talisman (the bullion of which is worth about 20s), where, say, 8oz or 9oz of silver are obtained to 1oz of gold, it is an entirely different matter, because silver ore has a greater tendency to slime than gold-bearing ores. The Crown has been held up as an example of the merits of wet as against dry crushing, but the fact that the Crown bullion averages about 30s per oz, and thus in a degree does away with the objection mentioned, appears to have been overlooked. First of all, the quality of the bullion must be considered; but with quartz where gold predominates as against silver, I believe wet crushing to be preferable for the

reasons stated. But where the conditions as regards the quantity of silver in the ore are as I have mentioned, then dry crushing is preferable to wet."⁷⁶³

6 August

Ohinemuri County Council.

Tenders.—Tenders were opened for a suspension bridge at Karangahake, the Engineer's estimate for which was £1030. Eleven separate tenders were received, ranging from £990 to £1913 5s 7d. The lowest, that of Messrs Graham and Moore for £990, was accepted.

Shops on Line of Road.—Cr Barry stated that there were two shops at Karangahake built on the road leading to the above proposed bridge, and he moved that the Council should have these shops removed even if they had to take the matter to the Supreme Court.—Cr Moore said he thought the Warden had a right to refuse to grant residence sites on the public road.—Cr Nash said the Council should compensate the people, as it would be cheaper than going to Court.—Cr Cock said he agreed with Cr Nash that the people should be asked to remove their buildings. The Warden, he said, granted residence sites anywhere, and it was the duty of those who applied for them to know where they were situated, and if they encroach on the road it was through their own negligence.—Cr McGruer said he never admitted that people had the right to build on the middle of the road, but when times were hard and the goldfields struggling on for an existence these people had settled and helped the place on, and now it was discovered they were on the road. If the Warden granted the residence sites, he did not see why the people should be jumped on without being fairly dealt with. Cr Barry said the men had been warned, but had continued to build right on the road. This was a central position, and no doubt money had been made out of it. After considerable argument Councillor Nash moved as an amendment to Cr Barry's motion, "that a committee be appointed to consult the people with a view to coming to some arrangement."—On being put this was lost, and the original motion carried.

Waihi Tramway.—Cr Barry said in regard to the Waihi tramway that he had been asked by those who applied for the concessions to postpone the matter until it was seen if the Government intended to proceed with the Paeroa-Waihi railway...

New Bridge—A petition from 75 residents of Karangahake was received for a bridge between Dogherty's and the Crown battery.—After considerable discussion it was decided that a bridge, at a cost not exceeding £100 be built on an approved site near Mr Napier's residence, plans to be prepared at once.⁷⁶⁴

7 August

OHINEMURI COUNTY COUNCIL.

Engineer's report,

⁷⁶³ <https://paperspast.natlib.govt.nz/newspapers/NZH18970803.2.64>

New Zealand Herald, Volume XXXIV, Issue 10511, 3 August 1897, Page 6

⁷⁶⁴ <https://paperspast.natlib.govt.nz/newspapers/THS18970806.2.26>

Thames Star, Volume XXIX, Issue 8731, 6 August 1897, Page 3

In compliance with instructions, I wrote to the survey office for a tracing of Karangahake township with the view of ascertaining how matters stood in regard to the site occupied by the building put up by Mr Law. I beg to hand in herewith the tracing in question, which clearly shows that the store is standing on the County Road. On July 8, I wrote to Mr Law, calling his attention to this fact, at the same time requesting him to have the building removed within 14 days, but up to the present he has paid no attention to my letter. The site is wanted to improve the approach to the new bridge, and until the building is removed the alterations necessary cannot be arranged. As Mr Law has so far failed to remove the store, some steps will have to be taken to try and settle the matter.

New bridge, Karangahake

The fence round the Talisman office is not on its proper boundary and will interfere with the approach to the new bridge. At the same time the ground available for road purpose here is somewhat cramped. I would suggest that a small piece of ground, from the end of the Talisman office to their boundary, be acquired in order to afford greater facilities for getting on to the bridge. The area to be taken would be only 50 links x 30, while the new buildings lately erected, adjoining the office, encroach to an equal extent on County property.

A petition was read from about 70 residents of Karangahake asking for a traffic bridge at Dougherty's Point. — It was decided that plans for a foot bridge opposite Mr Napier's residence not exceeding £100 be prepared and tenders called for at once.

It was also resolved on the motion of Cr McGruer, seconded by Cr Bowler, that a footpath be made from the Rohotu [Raratu] township to the Crown battery.⁷⁶⁵

Raratu is the name given to the "township" laid out inland of River Road, up to and beyond County Road.⁷⁶⁶ We might now call this area Crown Hill?

20 August

Cyanide Process Gold Extraction Act

1 September

THREE KARANGAHAKE MINES.

We take the following extracts from a letter published in a recent issue of the Sketch from its New Zealand correspondent:—

It is a firmly established opinion among New Zealand mining experts that the further south one travels the wider grow the reefs. I am not inclined to argue the point with any expert, much less the "cocksure" New Zealander—we will admit the fact—and leaving the Thames, where so much English money is being sunk in an experiment, we drive along one of those picturesque roads so rare in Australia, so common in New Zealand, and reach Karangahake. This little town should be the rendezvous of the Cook's tourist for its scenery, its

⁷⁶⁵ <https://paperspast.natlib.govt.nz/newspapers/OG18970807.2.11>

Ohinemuri Gazette, Volume VII, Issue 413, 7 August 1897, Page 4

⁷⁶⁶ <https://paperspast.natlib.govt.nz/newspapers/OG18961003.2.17.1>

Ohinemuri Gazette, Volume VII, Issue 277, 3 October 1896, Page 5

gorges, its woodlands, and its streams are beautiful even to the guide-book standard. No Cook's tourist, however, drives to Karangahake; its gorges never see a suit of knickerbockers, and its tiny inns rest content with the shillings of the miners when they might wallow in the pounds of the millionaire. The place is a mining camp pure and simple. Its reefs have been worked on and off for years —seldom until to-day with any success.

The history of the Crown Mines is one of steady fight against bad luck. Many a time have the owners been upon the point of abandoning them, but always some spark of good fortune has come to put fresh hope into the hearts of the adventurers. They have been reconstructed, re-organised, and amalgamated. Today the Crown Mines of New Zealand, Limited, makes a profit, and looks like turning out one of the best mines in the colony. Its splendid battery runs night and day, and as the mine is deepened its chances improve. I spent a long time in the various workings with energetic MacGruer, the mining-captain, who in good days and evil has always believed in the future of the Crown, and I satisfied myself that the reef was not only of immense size, but also of fair average value. The crushings show that each ton of ore is worth about three pounds, a price which yields a decent profit. The whole of the work is done upon contract, stoping included, and the strictest economy is practised. Daw, the general manager, has ideas of his own upon crushing, and has been for a long time past experimenting with wet crushing by means of a cyanide solution. The mill now runs dry, and the ore is only dried, not roasted. This dry-crushing is tedious and expensive, but New Zealanders swear by it, and the Waihi made it pay. I believe myself that it suits some ores well enough, but I am inclined to think that Daw will solve the problem of saving the fine gold by wet crushing with cyanide, in which case the Crown should double its output. The rate of extraction would not be much increased —they now save about 89 per cent.—but the tedious drying would be done away with. I do not want to bore you with technicalities. It is enough to remind you that at present the new system is merely an experiment.

Of course, the Woodstock is the next best-talked-about mine at Karangahake, and many are the discussions as to its future. Its richest ores have in past times yielded wonderful results when sent to the smelter, and to-day it boasts of a series of reefs which in actual value of bullion are richer than any others in New Zealand. But the "nigger on the fence" at the Woodstock is the extraordinary proportion of silver in thereof. The mine is actually a silver-mine, and did New Zealand possess some smelting works at which smelting could be carried on at a profit, the Woodstock would soon make a name for itself. But there are no fluxes in New Zealand, and smelting in that island is almost impossible upon any paying basis. So the Woodstock has been compelled to erect a dry-crushing battery, and rely upon saving all its gold and some of its silver by means of cyanide. I shall watch the future of the new plant with interest. I hope for the sake of McCombie, one of the best mine-managers in New Zealand, that it will be a success. The Woodstock has been splendidly opened up —indeed, I do not think I have ever seen any mine better managed. The battery arrangements are perfect, the system of assaying is most complete, and the Woodstock is up-to-date in every point. McCombie not only knows what to do, but he does it with an energy and enthusiasm that almost amounts to genius. When I was at the mine last they had come upon some rich ore, rich not in silver, but in gold, and, of course, if the proportion of gold to

silver is increased and the increase kept up, then the Woodstock has a long period of prosperity before it.

The Talisman, which owns a block upon the summit of the hill over Karangahake, will soon be showing us whether it also can grapple with that complex ore problem which, more than anything else, has kept New Zealand mines unpopular. The battery is now complete and the water-race finished, and possibly before these lines are in print we shall have news of the first Talisman crushing. The Talisman is being handled by Messrs Bewick, Moreing, and Co., and they are confident of the future. If they can win enough ore of £3 a ton value to keep the mill running, then the company can pay a dividend; but the reef is not a big one; at the same time the shareholders may always hope that as their reef goes down, it will increase in value, just as the Crown Reef has done.⁷⁶⁷

2 September

THE TALISMAN RETURN. SATISFACTORY CRUSHING.
1008 TONS YIELD £3915.

Up to 21st August last, 1008 tons of ore were crushed by the New Zealand Talisman Co. for a yield of 4405oz 15dwts of bullion, of the value of £3915 4s, or equivalent to £3 17s 9d per ton. A No. 5 Krupp mill [a type of ball mill] will be erected as soon as the additional rock-breaker and other accessories are received from England, and it is expected that the output of the reduction works will be nearly doubled as soon as the Krupp mill is in operation.⁷⁶⁸

3 September

The New Zealand Crown Mines has come forward with a splendid return, and now that the whole plant is running on the wet system—which appears to be so applicable to the Crown Company's ores—it is confidently anticipated that the last yield will be a harbinger of many more of a similar nature.⁷⁶⁹

Crown battery wholly running wet

4 September

OHINEMURI COUNTY COUNCIL. Engineer's Report
FOOT-BRIDGE, KARANGAHAKE

In compliance with instructions I have prepared plans for this bridge, which are handed in herewith. The span is 110 feet, and the bridge is designed to stand about 18 inches higher than the highest known flood, and will cost £20 more than the sum named by the Council. If it be agreed to proceed with this work, I would recommend the Council to supply the ropes.

Turner's hill deviation.

⁷⁶⁷ <https://paperspast.natlib.govt.nz/newspapers/OG18970901.2.8>

Ohinemuri Gazette, Volume VII, Issue 420, 1 September 1897, Page 2

⁷⁶⁸ <https://paperspast.natlib.govt.nz/newspapers/NZH18970902.2.53>

New Zealand Herald, Volume XXXIV, Issue 10537, 2 September 1897, Page 6

⁷⁶⁹ <https://paperspast.natlib.govt.nz/newspapers/NZH18970903.2.60.4>

New Zealand Herald, Volume XXXIV, Issue 10538, 3 September 1897, Page 1 (Supplement)

I have finished the longitudinal section of this work, and find that an easy grade can be got, a considerable portion of which is level. Owing to the wet weather I have not been able to get the cross sections and until these are got I cannot give an estimate of the cost.⁷⁷⁰

27 September

The Karangahake bridge is now lit up by electricity. The cost of the lamps was provided by the County Council and the light by the Talisman Goldmining Company.

There is a notice stuck up outside the Woodstock battery to the effect that visitors may inspect the battery on payment of 2s 6d, the money to be given to some hospital; the mine may be inspected on the same terms.⁷⁷¹

According to a statement made by Mr. John McCombie, manager of the Woodstock mine, nothing short of a practical test would determine whether the wet process would prove suitable for the Woodstock ore, and that such a test would be made shortly.⁷⁷²

1 October

Woodstock Gold Mining Company... are producing good ore, but owing to the quantity of cobalt contained in the ore in some parts great difficulty is at present being experienced in getting a good extraction. The gold in the stone won from the lower levels is also much coarser than it has hitherto been; in fact, some of the quartz is heavily charged with the precious metal, and if this state of affairs continues it may be that there will have to be a change in the treatment of the ore, for it is a well-known fact that coarse gold is not soluble in cyanide...

With regard to the battery a run of five weeks was made this time, and during the crushing period 1170 tons of ore were crushed and treated for a yield of bullion valued at £3060, the average being £2 12s 3d.

At the New Zealand Talisman the Nos. 3,4,5, 6, and 7 levels are employing good forces of men, and some valuable blocks of ground are being opened up, In fact the general prospects of the mine have improved considerably of late, and this state of affairs, I think, augurs well for the future bullion output of the property... Repairs to the foundations of the battery have been effected, and it has been decided to crush another 1000 tons before cleaning up.⁷⁷³

28 October

New Zealand Talisman

⁷⁷⁰ <https://paperspast.natlib.govt.nz/newspapers/OG18970904.2.16>

Ohinemuri Gazette, Volume VII, Issue 421, 4 September 1897, Page 4

⁷⁷¹ <https://paperspast.natlib.govt.nz/newspapers/THA18970927.2.14>

Thames Advertiser, Volume XXIX, Issue 8850, 27 September 1897, Page 2

⁷⁷² <https://paperspast.natlib.govt.nz/newspapers/NZH18970927.2.57>

New Zealand Herald, Volume XXXIV, Issue 10558, 27 September 1897, Page 6

⁷⁷³ <https://paperspast.natlib.govt.nz/newspapers/NZH18971001.2.65.4>

New Zealand Herald, Volume XXXIV, Issue 10562, 1 October 1897, Page 1 (Supplement)

... A considerable amount of outside work has been done, and a large hopper is being erected at the back of the battery for additional storage of quartz. The hopper at the end of the tramway from No.6 level is completed, and also a short incline tramway from this hopper to another hopper below. A most ingenious self-acting tipper for the trucks has been constructed at this last hopper at the foot of the tramway, after a plan devised by the manager's brother, Mr John Goldsworthy, of Kuaotunu. This arrangement consists in the last couple of feet of the rails being bent into a semicircle and doubled sharply back at the ends, the result being that the truck runs down this depression, stands up on end, and in doing so the catch holding the door strikes against a block of wood placed in position, thus opening the door and discharging the truck. The wire rope is made the right length allowing the truck to rise the proper distance. The whole arrangement is very simple, cheap and neat, and also most successful in its application, being undoubtedly a vast improvement on the usual method of discharging.⁷⁷⁴

29 October

NEW ZEALAND CROWN. EXTENSIVE DEVELOPMENTS

Paeroa, Thursday. An inspection of the works now in progress shows that there has been imported into the operations of the company such an amount of life and energy, that the old mine has unquestionably been converted into a new one. The preparations being made for the development of the deeper levels are of course one of the main causes for the change, and opposite the entrance to the No. 6. level there is now being put together as fine an air compressing plant for crushing and winding purposes as any mechanic would wish to see. Of course, being situated in a gorge, with hills towering up on either side, it was difficult to place a machine site, but this obstacle was obviated by the cutting out of a huge chamber in the hill opposite the mouth of No. 6. The dimensions of this chamber are 53 feet by 40 feet. It has been timbered with 16 by 12 pieces, and nine by three decking. At the time of my visit the engineers were busily engaged in the erection of the plant. This consists of two stage compressors of 256 theoretical power or 180 effective, and being near to the levels there will be very little, if any, loss of power or mechanical friction in the conveyance of the air to the workings. One feature of the plant is the large flywheel, which is 18 feet in diameter, and weighs 14 tons. The machinery chamber will be lit up by a small dynamo of about six horse-power, whilst the workings on the other side of the river will also be lit up with electric light. The whole of the machinery is being united as quickly as possible, and it is anticipated that it will all be working before the end of the year.

No time will then be lost in prosecuting the low level explorations in order to expedite which the incline shaft from No. 6 level down to No. 7 has been made ready for operations. This shaft has been sunk at an angle of 68 degrees 30 minutes, and is divided into three compartments. One will be utilised for winding and will be about fourteen feet long by six feet wide; the other will be used as a travelling way for men, and will be four feet by six feet; whilst the

⁷⁷⁴ <https://paperspast.natlib.govt.nz/newspapers/AS18971028.2.18.7>

Auckland Star, Volume XXVIII, Issue 259, 28 October 1897, Page 3

third compartment will be seven feet wide by six feet, and will contain the plunger and draw lifts. It is anticipated that the shaft will do good service, one of the advantages claimed for it being that the developments in sinking will be on reef, thus avoiding the expense of driving long crosscuts, which would be rendered necessary if a vertical shaft were sunk instead. When these works are complete, it is estimated that the expenditure will exceed £12,000 in connection therewith.

Then there are additions to the battery to be considered also, namely, twenty head more stamps, so that altogether it is considered that from £16,000 to £20,000 will have been spent in new works during the past year. All the development and prospecting works are being steadily advanced, the Nos. 4 and 6 levels having been opened up now for 2007 feet and 1028 feet respectively...

Since the wet crushing was commenced I understand that there has been a saving in fuel at the rate of about £2400 per annum.⁷⁷⁵

Woodstock...a nice seam of ore is being operated upon at the back of No. 5 level, and one ton of stone, as already stated, gave the handsome yield of £126 worth of bullion. This is an exceptionally good return, and according to the statement of an old identity on these fields it has only one rival, namely the old Silverton at Waihi, one ton from which gave £420. Phenomenally rich returns, however, are not looked for now-a-days, and if a mine can turn out a quantity of £3 per ton dirt monthly, it is classed, and rightly so, among the good things of mining. At all events the Woodstock's return from the one ton exceeded the expectations of the most sanguine. The seam of rich ore seems to be running between two breaks, and is about six inches wide. The extent of the chute can only be determined by future development work, but in the meantime the stone in which gold is so freely seen is being bagged and saved for the future, no doubt with special treatment...

At the battery preparations are being made for the running of five head of stampers on wet crushing with a view to testing the adaptability of this method to the successful treatment of the Woodstock ores.⁷⁷⁶

Woodstock to test wet crushing

16 November

WOODSTOCK G.M. CO. TWO TONS YIELD £325. The result of the treatment of two tons of quartz from the rich vein recently discovered in the Woodstock mine at Karangahake shows that the ore is very rich in gold, while it is not anticipated that any great difficulty will be experienced in treating the ore. The two tons referred to were treated by pan amalgamation at Messrs. Fraser and Sons', and gave a return of £162 10s per ton, or bullion of the total value of £325.

NEW ZEALAND CROWN MINES. The work of preparing the foundations for the additional 40 head of stampers which it is intended to erect at the above

⁷⁷⁵ <https://paperspast.natlib.govt.nz/newspapers/NZH18971029.2.70>

New Zealand Herald, Volume XXXIV, Issue 10586, 29 October 1897, Page 6

⁷⁷⁶ <https://paperspast.natlib.govt.nz/newspapers/NZH18971029.2.77.5>

New Zealand Herald, Volume XXXIV, Issue 10586, 29 October 1897, Page 1 (Supplement)

company's battery at Karangahake, is progressing apace. It is expected that by the time this work is completed all the necessary machinery for the first 20 head will have arrived, and the erection of the battery will be proceeded with at once.⁷⁷⁷

17 November

Mr A. Bunyard, of the Tramway Hotel, Karangahake, is erecting a Lyceum Hall, close to the hotel. Messrs Guthrie Bros, are the contractors, and the size of the building is 85ft by 35ft, depth of stage 20ft by 35ft, having three dressing rooms, and at the other end an orderly room for the use of the Volunteers. The Hall will be opened on the 10th December proxo., with a military Ball.⁷⁷⁸

25 November

We notice with great pleasure that on Sunday last Mr John Kelly, of the Karangahake Hotel, brought his little girl back from the Thames Hospital, where she has been lying for the last three months, under the care of Dr, Williams, who has charge of the Hospital. She had, about four months ago, a severe attack of inflammation of the lungs...

The little girl was ten years old last birthday, having been the first child born in Karangahake township, and it can be imagined what a blow it would have been had they lost her. Mr and Mrs Kelly will be only too pleased if other members of the press would copy this, and thus render to Dr. Williams a small idea of their gratitude to him.—Karangahake Advocate.⁷⁷⁹

Karangahake School to be enlarged

22 December

Board of Education.

Auckland, December 21. At a meeting of the Board of Education this afternoon it was decided that a new school building be erected at Owharoa for 100 pupils and that the Karangahake school be enlarged to accommodate 60 extra scholars.⁷⁸⁰

23 December

One important feature of the year has been the success attending experiments of wet crushing instead of dry. The New Zealand Crown Mines have already doubled their output through adopting the process; the Woodstock Co.'s experiments on a large scale show it can be used in connection with the Woodstock ores, and a high percentage of extraction secured. Doubtless other

⁷⁷⁷ <https://paperspast.natlib.govt.nz/newspapers/NZH18971116.2.77>

New Zealand Herald, Volume XXXIV, Issue 10601, 16 November 1897, Page 6

⁷⁷⁸ <https://paperspast.natlib.govt.nz/newspapers/OG18971117.2.3>

Ohinemuri Gazette, Volume VII, Issue 443, 17 November 1897, Page 2

⁷⁷⁹ <https://paperspast.natlib.govt.nz/newspapers/THA18971125.2.10>

Thames Advertiser, Volume XXIX, Issue 8900, 25 November 1897, Page 2

⁷⁸⁰ <https://paperspast.natlib.govt.nz/newspapers/THS18971222.2.2>

Thames Star, Volume XXIX, Issue 8949, 22 December 1897, Page 1

companies will follow suit, and as it is claimed the output will be largely increased and expenses diminished wet crushing is looked upon as probably a big factor in the future of the Auckland goldfields...

The work in the Woodstock mine during the past month has been pushed ahead expeditiously, and two weeks ago the mine was visited by Mr. Gorrie (chairman), Mr. W. S. Wilson, and Mr. J. L. Wilson (members of the local directorate), and Mr. C. Rhodes, secretary. Leaving Auckland on December 14, Wednesday was spent in going over the whole of the property, and inspecting the mill and plant, the party being highly satisfied with everything they saw. Various matters were discussed with Messrs. McCombie and McConnell, the question of wet crushing being gone into, and it was decided, should further experiments not warrant the contrary, to convert from the dry to the wet process as speedily as possible. The experiments as to the adaptability of wet crushing for saving a high percentage of bullion have so far proved satisfactory, the latest experiments proving a recovery of 89.5 per cent. by the cyanide process, and the tailings have still to be run over the amalgamating plates, which hitherto have averaged 5 per cent.

The directors intend to make a trial of two Frue vanners (concentrators), which have been lent for the purpose, in order to concentrate the mineral which has put in an appearance during the last two or three months, in the low levels of the mine.

At the time of the visit of the directors to the mine, there were some 600 or 700 tons of ore in the kilns, which will be dealt with by the old process, after which there will be no avoidable delay in obtaining sufficient vat space to allow of wet crushing with the entire 40 head of stamps. When this is done, there is no reason why the Woodstock should not, as in other cases, double its crushing capacity. The mine itself never looked better.

Early in June, the Talisman Gold Mining Company's battery commenced crushing, the plant consisting of 20 head of stamps, with an admirably equipped cyanide plant. Since then, the battery has been continuously employed, under the management of Mr. Taylor, whilst the mine itself is under the superintendence of Mr. W. Goldsworthy. One of the notable features of the underground explorations was the intersection of a fine body of ore at No. 6 level. This took place in February, and from that time until now the exploitation of the reef has been steadily prosecuted...

The New Zealand Crown Mines Company has also gone in for a few alterations during the year, one of the changes being a difference in the method of treating the ore, wet crushing having been found to be more applicable than dry. Before the change was made, most exhaustive experiments were made by Mr. Daw, the company's superintendent, and after he had satisfied himself and his directors as to the superiority of the wet process over dry as regards extraction and economic method of treatment, the whole plant was converted from dry to wet crushing. Additions were at once made to the battery in the shape of 13 new steel percolation tanks and five large steel sump tanks, at a cost of £2000. Now, with a view to still further increasing the battery power, foundations are being laid for another 40 head of stampers, thus making 80 head in all. At the mine the erection of the powerful air-compressing plant has been pushed ahead, and it is nearing completion, so that in the early part of next year the development of the lower blocks can

once more be undertaken, the shaft and other preparations having been got in readiness for the same...

At present a large amount of ore is coming to hand from the Nos. 6, 4, intermediate, and Coward's workings, but lately a considerable quantity of low grade ore has been put through the mill—ore which, I understand, would not pay for treatment by the dry process. It is now, however, made to pay; and, during the past month, 3034 tons were treated for bullion valued at £4443 10s, the average being £2 3s 8d per ton...⁷⁸¹

Crown low grade ore made to pay by wet process

23 December

Woodstock mine since April, when the new battery started, already totals £30,805.⁷⁸²

AJHR 1898

Published 1898, but largely reporting on 1897.

THE GOLDFIELDS OF NEW ZEALAND: REPORT ON ROADS, WATER-RACES, MINING MACHINERY, AND OTHER WORKS IN CONNECTION WITH MINING.

APPENDIX TO THE JOURNALS OF THE HOUSE OF REPRESENTATIVES, 1898 SESSION I, C-03⁷⁸³

Mr. George Wilson, Inspecting Engineer,

to the Hon. A. J. Cadman, Minister of Mines. Sir, — Mines Department, Wellington, 12th May, 1898. I have the honour to submit my annual report, for the year ending the 31st March last, on the progress of the mining industry, and on different works in connection with the same having a tendency to promote a further development of the mineral wealth of the colony.

Page 67

Woodstock Mine (Area, 72 acres 1 rood 18 perches).—Since last annual report 1,974 fathoms of stoping have been done on the Maria lode, and the development work carried out may be summarised as follows: Driving on the lode, 2,379 ft.; rising on the lode, 601 ft.; sinking on the lode, 190 ft. The mine is opened up by six different levels, and the total lengths of same are as follows : No. 1 level, 693 ft.; intermediate level, 798 ft.; No. 2 level, 826 ft.; No. 3 level, 1,036 ft.; No. 4 level, 989 ft.; No. 5 level, 831 ft. These levels have all been connected one with the other, partly by rising and partly by sinking, and the whole of the mine-workings are now splendidly ventilated. The No. 5 is the lowest level obtainable, bar sinking, and the backs available range from 80 ft. on the left-hand bank of the Waitawheta River to 900 ft. at

⁷⁸¹ <https://paperspast.natlib.govt.nz/newspapers/NZH18971223.2.68.3>

New Zealand Herald, Volume XXXIV, Issue 10633, 23 December 1897, Page 1 (Supplement)

⁷⁸² <https://paperspast.natlib.govt.nz/newspapers/AS18971223.2.47.1>

Auckland Star, Volume XXVIII, Issue 298, 23 December 1897, Page 7

⁷⁸³ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1898-I.2.1.4.3>

THE GOLDFIELDS OF NEW ZEALAND: REPORT ON ROADS, WATER-RACES, MINING MACHINERY, AND OTHER WORKS IN CONNECTION WITH MINING., Appendix to the Journals of the House of Representatives, 1898 Session I, C-03

the southern boundary, which is the highest point in the property. A cross-cut 500 ft. in length has been driven west of No. 5 level, and several gold- and silver-bearing lodes have been intersected during its progress. Within the next 20 ft. of driving the Woodstock lode should be met with, and upon this the cross-cut will afford 360 ft. of backs beneath the old workings. The total amount of cross-cutting accomplished throughout the mine is 1,860 ft., and this work has revealed numerous veins and lodes, varying in size and value, and running west of and parallel with the Maria lode. The total quantity of ore treated from all parts of the workings on the Maria lode during the year ending the 31st March, 1898, was 10,923 tons, for a bullion return of 50,400-27 oz.; value, £35,955 1s. Of this, the bullion recovered by the cyanide process amounted to £32,899 11s. 9d., and the value redeemed by amalgamation was £3,055 9s. 3d. Owing to its refractory character, considerable difficulty has always been experienced in the treatment of Woodstock ore, and many processes have been tried with varying success. Dry-crushing with subsequent cyanide treatment, followed up by concentration and amalgamation, gave the best results, but even then the extraction was comparatively low, and the consumption of cyanide made milling operations costly. Early in the present year a start was made to crush wet with a dilute solution of cyanide in the mortar-boxes, as an experiment, and the bullion results were so highly satisfactory that it was decided to adopt wet-crushing. Dry-crushing was then stopped, and wet-crushing started, with twenty head of stampers. For some unaccountable reason the high bullion extraction obtained from the experimental wet-crushing was not borne out by subsequent results with the same treatment on a large scale, and experiments are now being made with a view to ascertaining the cause. Mr. H. H. Adams, who has successfully established a new departure in the treatment of ore by wet-crushing at the Komata Reefs mill, is now trying the same process in the Woodstock mill, and, so far as operations have gone, it looks as if his expectations would be realised. An average of 174 men were employed.

Crown Mine (Area, 135 acres 1 rood 31 perches; owners, the New Zealand Crown Mines Company, Limited). —This mine is situated on the Waitawheta River, distant about a mile from the battery and works, which are built on the left bank of the Ohinemuri River, a short distance below the Township of Karangahake. The workings are very extensive, the levels reaching from the Waitawheta River to a point past the trig. station, which is about 1,600 ft. above the level of the adit. The average height of the available backs would thus be about 800 ft., and the reefs will produce great quantities of ore from the portion of the mine opened from the adit, irrespective of the downward extension of the reefs, which, so far as already prospected, are of a highly valuable character. The general manager, Mr. R. H. Daw, has furnished the following account of the operations during the year ended 31st March last; — "Mining has been confined exclusively, for the year above-mentioned, to the Crown Mines section of the property, and the Welcome Reef south of the Waitawheta River has produced all the quartz milled during that period. The supplies have been drawn principally from the stopes over Nos. 3, 4, and 6 adit levels (the latter being the main level through which the quartz is delivered in the Waitawheta Gorge, its mouth being about 10 ft. above the normal level of the river), the balance of ore having come from the underhand stope in the floor of this level, and in comparatively small quantities from

other workings under river-level. Little, however, has been done to develop the resources below river-level pending the further sinking of the main incline shaft, now being pushed down with all possible speed, in order to attack systematically the excellent quartz proved to exist in this section of the property."

The main features in the development for the year consist in the extension southwards on the course of the Welcome Reef of Nos. 4 and 6 adit levels, in the putting up of two main rises from No. 4 level to Coward's No. 3 level (old workings), and in the setting-off, stripping, and timbering the main incline shaft now being sunk on the underlie of the reef 100 ft. in from the mouth of No. 6 level. Since my last report, No. 4 level has been extended 630 ft., making its total length 2,300 ft., and No. 6 level has been driven a further distance of 540 ft., to a total length from its mouth of 2,200 ft. During the year the reef has, generally speaking, maintained its average thickness and value, the whole of the quartz mined from the main levels having been sent to the mill. The two main rises previously mentioned have been completed to Coward's No. 3 level, a total height of about 480 ft., opening up in their course immense blocks of low-grade ore for stoping, besides proving thoroughly efficient in ventilating the main workings below. With the completion of the Upper Waitawheta Water-race, the erection of the air-compressor, and winding-engines, we have been enabled to continue the sinking of the main incline shaft. This shaft measures 29 ft. by 6 ft., inside timbers, and has now reached the No. 7 level, a depth of 60 ft. on the underlie of the reef. When a further depth of 60 ft. has been reached, No. 8 level will be put out from the shaft north and south, and stoping actively commenced. The winding-gear is now complete with double line of rails, incline, cages, &c. For the year, 17,960 tons of ore were mined and sent to the mill.

Milling has been carried on continuously during the year with forty heads of stamps. From April to August last these were gradually converted from dry to wet crushing, with a gratifying increase in the quantities milled and in bullion produced. The following are the quantities of ore milled and value of bullion recovered :—[table]

The wet-crushing adopted is a system of crushing with a full-strength solution of cyanide of potassium supplied to the mortar-boxes. The details of the process have not yet been made public. The fall in quantity of ore crushed since January is due to the closing of the mills on Sundays.

New Mill: Foundations and mortar-blocks have been laid down for another forty heads of stamps, twenty of which are in course of erection, and are expected to be at work in July, the necessary cyanide plant in conjunction with same having been completed. The stamps are 1,000lb. each, single discharge boxes, and were supplied by Messrs. Fraser and Chalmers, Limited, London. The average number of men employed up to December was 240, and for this year 188."

Talisman Extended Mine (Area, 72 acres 2 roods 15 perches). —The chief work carried on during the year was driving on the low level to intersect the Talisman reef. This drive is in a distance of 780 ft. Surface prospecting has also been done, but as yet nothing payable has been discovered. Four men were employed.

Imperial Mine (Area, 60 acres). —At Nos. 1 and 2 levels a large amount of work has been done, and the low level has recently been started to cut the reef. Five men are employed.

Woodstock Main Reefs. —No. 6 level has been driven a distance of 628 ft. The reef varies from 3 ft. to 14 ft. in width, the quartz there being of a low grade. The No. 3 Ivanhoe has been driven 600 ft., but nothing payable has been discovered, and the company have ceased operations.

In the Stanley, Stirling, Waverley, Golden Fleece, St. Patrick, and Crown Imperial Mines extensive prospecting has been carried out, but, in consequence of the failure to discover payable stone, most of them have been recently under protection.

Page 68 +

New Zealand Talisman Mine (New Zealand Talisman Gold-mining Company, Limited, owners). —The land occupied consists of a special claim of 60 acres, a machine-site on which the crushing plant is erected, and a special site on which a building has been erected containing a number of the vats used for the cyanide process. The reef, which hitherto has yielded the chief gold-producing quartz, has been well developed; six different levels have been driven, and communication effected by winzes and uprisings, which open up the various blocks of reef between No. 6 level and No. 1 level, and a fresh adit is being driven 120 ft. below No. 6. The situation of the claim is most favourable for economical working, the precipitous character of the country affording the opportunity of working from the surface by a succession of adit levels. The No. 7 level, which is the deepest, is 120 ft. below No. 6, the height of the others being—from No. 6 to No. 5, 115 ft.; No. 5 to No. 4, 104 ft.; No. 4 to No. 3, 80 ft.; No. 3 to No. 2, 290 ft.; No. 2 to No. 1, 70 ft.; and the average depth of the No. 1 level is 215 ft. from the surface. The height of No. 7 level above the level of Waitawheta Stream is about 600 ft., and there is therefore a total height of nearly 1,400 ft. from datum to the surface above No. 1 level. The reef, which averages 3 ft. 6 in. in width, consists of quartz having a wavy appearance, flinty and crystalline in character, and of a hard nature. Considerable difficulty was at first experienced in obtaining a satisfactory extraction of the gold contained. There is every indication of the reef extending downwards, and this will shortly be proved as far as No. 7 level is concerned. The entrance to No. 7 is in the Woodstock Company's ground, and 750 ft. must be driven before the boundary of the Talisman is reached; this, it is anticipated, will take 200 ft. further driving to complete. The quartz is conveyed from the mine to the battery by a wire tramway across the Waitawheta Gorge. At the mill a new revolving ore drying furnace, capable of drying 40 tons per day, has been erected, and is now used in place of the kilns. The crushing plant consists of two stone-breakers, twenty head of stamps, and a No. 5 Krupp ball-mill, and six berdans and amalgamating-tables. The cyanide plant includes fourteen vats, twelve 22 ft. and two 18 ft. in diameter, with vacuum pumps, zinc filters, &c. The motive power for the machinery is furnished by two Victor turbines of the respective diameters of 21 in. and 12 in., the latter being used for driving a dynamo for lighting and power purposes. The water is conveyed from the Waitawheta Stream through a tunnel 95 ft. in length, connecting with a wrought-iron pipe 4 ft. in diameter and 925 ft. in length, and delivered into the concrete-walled turbine-pit, 28 ft. in depth. In

the building on the special site water necessary for sluicing out the vats is conveyed in a 3 in. pipe from the Hauraki Creek, and the power for the pumps is transmitted to the electric motor from the dynamo at the machine-site, which also produces electric light for both plants. During the year 4,194 tons of quartz was crushed and treated for a yield of gold valued at £13,681 7s. 3d. Seventy-five men were employed in the mine and at the mill. To face page 68, C-3.

REPORTS OF WARDENS AND OTHER OFFICERS ON GOLDFIELDS.

APPENDIX TO THE JOURNALS OF THE HOUSE OF REPRESENTATIVES, 1898 SESSION I, C-03A⁷⁸⁴

No. 2. Mr. Warden Bush

to the Under-Secretary for Mines, Wellington. Warden's Office, Thames, 1st June, 1898.

Page 5 C—3a

Ohinemuri County. Whilst the past year has not been so prolific in applications for special claims and licensed holdings as the two previous years, I am of opinion that more advancement and solid progress has been achieved than in any previous year. The gold returns from each mine for the year show a marked advance, a true sign of progress. New mills have started crushing, notably the Waikino battery (100 heads), Komata Reefs, Talisman, and Woodstock, and, as I predicted previously, this district has a future before it second to none in the colony. The evil effects of the boom of 1895-96 are gradually becoming effaced. Ground taken up during that period for purely speculative purposes has been surrendered and forfeited, and only those claims which are able to show something of value in them are being held for the purpose of being worked.

The district will now have a chance of proving its value, which must of necessity take time, as, although a great amount of genuine development is being done, the reefs continue principally low grade and need great care in treatment to prove payable.

Everything tends to show that the reefs are of greater value the more they are sunk on, this being proved most conclusively by the Crown and Woodstock Mines at Karangahake and the Waihi Mine at Waihi.

The wet-crushing process alluded to by me in last year's report as being in the experimental stages has been turned into a great success by Mr. Daw, the general manager of the Crown Mine, who has completely converted his battery into a wet-crushing one, which has enabled him to treat a greater tonnage than he otherwise could have done, reducing the cost of treating considerably, besides many other advantages. This success induced the Woodstock and Komata Reefs Companies to speedily follow suit. The Waihi also tried wet crushing with twenty heads for some time, but without much success. I hear, however, that they intend to give it another trial.

⁷⁸⁴ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1898-I.2.1.4.4>

REPORTS OF WARDENS AND OTHER OFFICERS ON GOLDFIELDS., Appendix to the Journals of the House of Representatives, 1898 Session I, C-03a

Lack of water to keep the big mills going at top speed during the exceptionally dry season just experienced, has caused a considerable amount of annoyance and inconvenience. The Ohinemuri River has never previously been so low at Karangahake, and the same remark applies to the Waitawheta Stream. Many batteries had to hang up half their stamps. There is not the slightest doubt that these companies will have to provide auxiliary steam-power if they wish to keep up their returns during the dry season.

The question of the future supply of timber at the present rate of consumption is also a difficulty that will have to be faced. It was lately given in evidence before me that the Waihi Company cut about 5 acres every second day. This, of course, is chiefly consumed in the roasting of ore. When it is pointed out that at the Waikino battery alone there are six large kilns in constant use, each holding 25 tons, it may be imagined that a considerable quantity of timber is required to thoroughly roast it.

The various mining townships are steadily growing. Each Court-day a large batch of residence-sites are granted. The Town of Waihi has assumed large dimensions, owing principally to the new 100-head battery starting work. To keep this going it was necessary to nearly double the number of men in the mine.

At Karangahake the business-sites have been so sought after that several quarter-acre sites in the main street, the rent for which is merely the annual business license-fee—namely, £3 per annum—have changed hands at prices between £700 and £1,000 each.

Roads throughout the county are in a very good condition, being well metalled to all the chief centres of population. Means of transit are therefore much easier than in former times.

Notwithstanding that a severe "slump" has existed all the year, being the natural reaction of the boom, the revenue derived from this part of the field has been greater than in any previous year, amounting to the sum of £12,000 odd. I may perhaps add that the County receive the major portion of this sum.

In the Karangahake district the leading mine is the Crown, which is under the able management of Mr. Daw. Great progress has been made during the year, and several large works undertaken. Twenty head of stamps have been added to the battery, whilst twenty more men are to be engaged shortly. The mine itself has been most systematically opened up, and a new level of 70 ft. below the level of the river has been started. The new underlay-shaft with its chamber is a splendid piece of engineering work, besides being the first of its kind in the peninsula. The big air-compressor, the largest in the colony, is working smoothly, and doing its work well. The water-race which drives the Pelton, which, by the way, is also the largest in the peninsula, carries thirty heads of water, is a mile and a half long, and has been entirely constructed during the year. I consider this mine has a splendid future before it, as it is being most economically worked.

The Woodstock Mine has hardly turned out as satisfactorily as was expected from its prosperous start. It has encountered a lot of hard luck. The ore, although assaying highly, is so refractory that it cannot at present be successfully treated. Mr. Harry Adams, of the Komata Reefs Mine, is at present trying his system for treating the ore, and five heads in the battery are under his control. He anticipates a successful issue and that he will be as

successful as he has been with the Komata ore. Once this company manages to find a successful treatment certain prosperity awaits them, as there is any amount of ore in sight, some of it being almost as rich as specimen stone. The company, in common with its neighbours, the Crown and Talisman, have suffered severely through the dry season, and for a long time have been compelled to hang up half its stamps.

The Talisman Company has been very successful since it started to crush. The ore has maintained a uniform high value, and good returns have come to hand every month. The mine itself is being very well opened up. The battery, which is crushing "dry," obtains a good extraction, but it would appear that an auxiliary steam-engine is necessary during the summer months if good returns are to be maintained. Owing to this the Krupp mill, which is said to equal fifteen head of stamps, has only worked on rare occasions. I understand the company have in contemplation the conversion of their battery to "wet" crushing if the experiments now being conducted in the Woodstock are a success.

The Talisman Extended are driving for a lode which is supposed to exist close to their eastern boundary. A good deal of prospecting work has been done in this mine.

The Victor Waihou Company, of which great things were expected, as it is supposed to carry the Talisman, Woodstock, and Crown reefs, has been closed down pending reconstruction.

The Woodstock Main Reefs Company has also closed down, having met with no success, after having done a lot of driving and prospecting work. The Stanley, Sterling, Waverley, Ivanhoe, and Excelsior Mines are all more or less protected, and have done but little work.

Page 35

No. 15. Mr. James Coutts

Inspector of Mines, to the Under-Secretary for Mines, Wellington. Sir, — Inspector of Mines' Office, Thames, 18th April, 1898. I have the honour to forward herewith the annual statistical returns and my report on the mining industry for the Auckland District for the year ending the 31st March, 1898.

The gold-mining industry in this district has not turned out as well as was anticipated in the early part of the year. This, I consider, is due to the large areas of ground taken up where neither gold-bearing lodes or rock favourable for the precious metal existed, and consequently the prospecting operations in a number of cases have resulted very unsatisfactorily. There were also a number of men sent out to prospect who had no knowledge of the nature of the country in which gold-bearing lodes were to be found, and with no experience of the work; therefore a number of the claims were abandoned. There has also been a large amount of money spent recklessly in the erection of crushing plants where there was no payable ore in sight to warrant the outlay. However, it is pleasing to state a number of the companies have gone in for systematic mining and erected first-class machinery in the shape of pumping- and winding-engines; also batteries with the most modern appliances for saving gold and silver, some of which have already proved that the expenditure was warranted; and this has, in my opinion, been the means of putting the mining

industry on a more satisfactory basis on this goldfield. There is also every prospect of the gold returns being greatly increased in the coming year, as several batteries that were in course of construction have now been completed.

Page 48

Karangahake District.

Woodstock Gold-mining Company. —This company has done a large amount of work during the year, and it is to be regretted that owing to the long drought the mill has only been worked intermittently, thereby causing considerable loss to the company. Experiments in wet crushing at the battery have given satisfactory results, and in consequence the forty head of stamps will be converted to wet crushing during the next few months. In the No. 1 level, Marie lode, the reef has been driven on for a distance of 550 ft., and is said to contain gold and silver in payable quantities. At the intermediate level the reef has been driven on south of the cross-cut for a distance of 350 ft., and is connected by rises with No. 1 level, the vertical height of the block being 120 ft. between the two levels; the lode is 4 ft. in width, and is of a payable nature throughout. The Marie reef at No. 2 level has been driven on for a distance of 810 ft.; here the lode varies from 4 ft. to 5 ft. in thickness, but the bulk of it is of good quality, and it is all sent to the mill for treatment. The cross-cut west at this level has been driven a distance of 700 ft., and five distinct reefs have been cut through, carrying more or less gold and silver. The principal lode is known as Shepherd's, and is about 12 ft. in thickness. A considerable tonnage of quartz has been crushed from here, giving good payable results. The Marie reef has been driven on at No. 3 level for a distance of 950 ft., and has varied from 3 ft. to 15 ft. in thickness, carrying a high percentage of the precious metal. At No. 4 level the Marie lode has been driven on for a distance of 684 ft., from which good crushing-ore is being obtained. The cross-cut west at this level has been driven a distance of 400 ft.; this drive is being put in for the purpose of intersecting the Woodstock lode which runs parallel with the Marie lode, and at the point where the lode is cut at this level there will be 380 ft. of backs. 11,355 tons of quartz was put through the mill during the year, for 52,454 oz. of bullion, to the value of £35,172 7s. Two hundred and one men were employed.

New Zealand Crown Mines. —This company have done a very large amount of work during the year on what is considered outside work. A water-race has been constructed a distance of $1\frac{1}{4}$ miles to convey the water from the Waitawheta Stream to drive the air-compressing machinery for working the rock-borers in the mine and the pumping and winding plant, which are all erected in large chambers cut out in the rock at the mouth of the low level. The company are also erecting another forty head of stampers, which will be completed in the course of a few months, when they will be in a position to treat double the quantity of ore that they are doing at present, with very little extra expense. The different works in the mine are being pushed ahead. No. 4 level is in a distance of 1,960 ft., and is still being extended in a southern direction on the reef, and stoping operations are also proceeding over this level. In No. 6 level the reef has been driven on for a distance of 1,860 ft.; the reef is, on an average, about 8 ft. in thickness, and is all being broken out and sent to the mill for treatment. Fifty-two men have been employed in driving

and stoping over this level. At one place in the level underhand stoping has been carried along the bottom of the level a distance of 80 ft. and to a depth of 50 ft. The reef is 14 ft. wide in lower workings, and is stated to be worth £5 per ton. Two hundred and ten men are employed. 16,989 tons was treated during the year, for 20,792 oz. 10dwt. of gold, valued at £41,120 2s. 2d.

New Zealand Talisman Mine. —This company has done a very large amount of work during the year. The mine is opened up by seven drives from the side of the hill, the distances between the drives varying from 70 ft. to 123 ft. As the reef has been driven on in some of the levels for over 500 ft., and is from 3 ft. to 5 ft. in thickness, it shows there is abundance of quartz in sight to keep twenty stamps constantly crushing for some considerable time. Driving and stoping on the reef in the upper levels has been the principal work carried on, and, as there was a large amount of quartz stacked at the mouth of the different levels ready for treatment, there was no necessity to employ many men to keep the mill going; and owing to the long drought for the last three months there was not sufficient water in the race to keep the full number of stamps employed, consequently the yield of gold has not been as large as it otherwise would have been if the battery had been fully engaged. The reduction plant consists of two rock-breakers of Blake type, one revolving ore-drier, ten heads of 850lb. stamps, ten heads of 1,000lb. stamps, one No. 5 Krupp ball-mill, two wooden cyanide vats —16 ft. diameter, 4 ft. deep ; amalgamating tables, six berdans, and the usual accessories, the machinery being operated by means of two Victor turbines. The works and offices are electrically lighted. For the last nine months 4,194 tons of quartz has been treated, for 15,225 oz. of bullion, valued at £13,681 7s. 3d. Seventy men are employed.

Talisman Extended Mine. —This mine has been continuously worked during the year, the principal work being driving a low level to intersect the Talisman reef. This drive is in a distance of 780 ft., and it is expected the reef will be met within the next 100 ft. of driving. A considerable amount of surface-prospecting has been done on the ground, and leads cut varying from 1 ft. to 4 ft. in width, but nothing discovered that can be considered payable. Four men are employed No returns.

Imperial Mine. —A considerable amount of work has been done on the reef at Nos. 1 and 2 levels. The reef is about 2 ft. thick, and in places in the levels the prospects met with were exceedingly encouraging, but as the country has been disturbed, and the reef cut out by breaks, it is difficult to follow the reef. A low level has been recently started to cut the reef at a depth. Five men are employed.

Woodstock Main Reefs. —This company has employed twenty men, and in consequence has done a large amount of prospecting. The mine is opened by drives from the side of the hill. The No. 6 level has been driven for a distance of 628 ft, and the reef has varied from 3 ft. to 14 ft. in width, but most of the quartz is low grade, and not of a payable character. The No. 3 (Ivanhoe) level has been driven 600 ft., but, owing to no discoveries of a payable nature being made, the company has decided to stop operations.

The Stanley, Sterling, Waverley, Golden Fleece, St. Patrick, and Crown Imperial have done a good deal of prospecting, but, as no rich discoveries have been made, most of the claims have been protected.

Ohinemuri Regional History Journal 44, September 2000:-

In 1885 a suspension bridge was built across the river at Karangahake (site of the present pipeline bridge). This bridge was intended for use by men on foot. However, men started driving sledges across and so in July 1886 notice was put up by the Ohinemuri County Council prohibiting sledges or four-wheeled vehicles. In 1897 [1898] a traffic bridge was built beside it. In the same year a swing foot bridge was put across the river between River Road and the main road.⁷⁸⁵

⁷⁸⁵ <https://www.ohinemuri.org.nz/journals/journal-44-september-2000/karangahake-roads-and-bridges>
Ohinemuri Regional History Journal 44, September 2000

1898

15 January

COUNTY COUNCIL.

Painting Bridges.—I would recommend that the following bridges be properly painted, viz. new footbridge at Karangahake...

Karangahake Gorge.—As boulders and loose rock are falling on to the road in the gorge from time to time I would suggest that as far as practicable the face of the cliff should be gone over and all loose or dangerous stone removed. The carrying out of this work is somewhat difficult, if not dangerous, and as the party undertaking it would have to be slung from the top, and work down the face, it would be necessary to employ some one who understood this class of work, as it could barely be done by the surfacemen.

The Chairman moved that all money due to Messrs. Moore and Graham on their Karangahake Bridge Contract be paid into Court. —This was carried.

The Chairman moved that Messrs Moore and Graham's application for a refund of their deposit (£49 10s) on the Karangahake Bridge contract be refused.⁷⁸⁶

The new footbridge near Napier's residence must be completed. This is the suspension bridge between River Rd and Main Rd at Irishtown, mentioned in the OHRJ.⁷⁸⁷

Messrs Moore and Graham's contract for the new traffic bridge has come to grief.

18 January

In the Waihi mine during the last few days about 50 men have been dispensed with, and at the Crown, Woodstock, and Talisman mines, Karangahake, about 70 men altogether have been discharged, owing, presumably, to the introduction of the new law making the closing of batteries on Sundays compulsory. This of course reduces the crushing capacity of the mills by one-seventh, and the mines require that much less working to keep the batteries supplied.⁷⁸⁸

21 January

At the Woodstock Company's plant... the shortage of water just before the holidays compelled the hanging of 20-head of stampers for a time. There is now plenty of water available, consequently 35 head of stampers are continually employed crushing, whilst the other five are running intermittently on the wet process. The contractors are pushing ahead with the works

⁷⁸⁶ <https://paperspast.natlib.govt.nz/newspapers/OG18980115.2.9>

Ohinemuri Gazette, Volume VIII, Issue 459, 15 January 1898, Page 3

⁷⁸⁷ <https://www.ohinemuri.org.nz/journals/journal-44-september-2000/karangahake-roads-and-bridges>

Ohinemuri Regional History Journal 44, September 2000

⁷⁸⁸ <https://paperspast.natlib.govt.nz/newspapers/AS18980118.2.4.3>

Auckland Star, Volume XXIX, Issue 14, 18 January 1898, Page 2

necessary to convert the mill from dry to wet-crushing, and last week Mr. Brown placed the elevator wheel in position...

The New Zealand Crown Mines Company are still pushing ahead with the erection of the large air compressing plant, etc., and no doubt in another month or two the development of the low levels will once more be undertaken. The additions to the battery are also well under way, and generally speaking the various departments are doing good work.

Work at the New Zealand Talisman Gold Mining Company's property is progressing satisfactorily, and during last week a trial spin was made of the new Krupp ball mill. Messrs. Curtis and Mercer (Bewick, Moreing and Co,) were present, and expressed themselves as being thoroughly satisfied with the test made. The nominal capacity of the Krupp mill is about 36 tons per day; but though it is not anticipated that this quantity of quartz will be milled, it is confidently expected that the mill will put through as much ore as two head of stampers [two mortar boxes? i.e. ten stamps?]⁷⁸⁹—that is, about 25 tons per day—so that with the working of the Krupp the capacity of the mill will be doubled, so that when the complete plant is working it is expected that at least 1100 tons of quartz should be treated every four weeks. At the present the scarcity of water is being felt, and prevents the permanent use of the Krupp mill, but this difficulty will shortly be overcome. Crushing at the plant is proceeding in a satisfactory manner, but owing to the interruption caused by the Christmas holidays, and the shortness of water in the Waitewheta River, only 232 tons of quartz were crushed and treated since the last return—just before Christmas.⁷⁸⁹

24 January

Mr E. M. Corbett, the well-known mine manager, was thrown from his buggy near Karangahake on Thursday last and picked up with his collar-bone broken. He was taken to the Karangahake Hotel, where he expired shortly afterwards. It is thought that the immediate cause of death was heart disease. Mr Corbett was well known to many local residents, who are much shocked at his untimely demise.⁷⁹⁰

25 January

Mr W. S. Montgomery, of Owharoa, has bought out Mr John Kelly's interest in the Karangahake Hotel. The price given is said to be £2,500.⁷⁹¹

4 February

OHINEMURI COUNTY COUNCIL

Three tenders were received for supplying six lengths of wire rope, 4½ inches thick and 275 feet long each, for the Karangahake Bridge, but as they were not satisfactory the Council decided to invite fresh tenders.⁷⁹²

⁷⁸⁹ <https://paperspast.natlib.govt.nz/newspapers/NZH18980121.2.58.3>

New Zealand Herald, Volume XXXV, Issue 10656, 21 January 1898, Page 1 (Supplement)

⁷⁹⁰ <https://paperspast.natlib.govt.nz/newspapers/BOPT18980124.2.3>

Bay of Plenty Times, Volume 24, Issue 3651, 24 January 1898, Page 2

⁷⁹¹ <https://paperspast.natlib.govt.nz/newspapers/TAN18980125.2.7>

Te Aroha News, Volume XIV, Issue 2070, 25 January 1898, Page 2

The photograph of this bridge shows three ropes on either side.

18 February

The wet crushing process appears to be winning its way back to the favour of mining companies. At Karangahake the New Zealand Crown battery has been converted from dry to wet crushing with cyanide, and the results so far obtained are considered highly satisfactory, the quantity of ore milled being considerably increased, while the percentage of extraction has not been materially altered. The Woodstock Company's battery, also at Karangahake, is now undergoing a similar change, and it is more than probable that before the end of the month the battery will be crushing wet, after which increased returns may confidently be looked forward to.

The Minister of Mines (the Hon. A. J. Cadman) paid a visit to the mining districts during the month, and discussed several matters of importance to the mining industry with deputations that waited on him...

And dealing with the question of preventing the Sunday working of batteries, which reduces the quantity of ore crushed by one-seventh, the effect has been felt more severely by the men than by the companies, for the latter are thus compelled to reduce the working staff one-seventh, and consequently a large number of men have been thrown out of employment. This particular aspect of the question was to have been pointed out to the Minister of Mines and a compromise suggested (the compromise being that the batteries should cease work for twelve instead of 24 hours on Sunday), but the hasty departure of the Hon. Mr. Cadman prevented this being done...

Considerable interest was manifested by those interested in mining as to under what regulations and conditions the Government would allow the use of cyanide of potassium, the patent rights of which were purchased from the Cassel Company for £10,000. The regulations under the Cyanide Process Gold Extraction Act of last year have been gazetted, and have given general satisfaction. The royalty is on a graduated scale according to the value of all gold and silver produced from each ton of quartz. Thus for every ton of quartz the charge shall be 1½ per cent, when such value does not exceed £3 per ton; 2 per cent, where the value ranges from £3 to £4 per ton ; and 2½ per cent, when such value exceeds £4 per ton. By an arrangement made with the Cassel Company the Waihi, Waihi-Union, Waitekauri, and New Zealand Crown Companies, who paid a lump sum to the Cassel Company for the right to use the patent, are exempt from the above regulations and any charges levied by the Government. By legislation passed last session, permission is given to the Cassel Company to charge a royalty of 5 per cent. for the use of the patent up to the date (August 20, 1897) of the purchase of the rights by the Government, and, therefore, those companies who have neglected or declined to recognise the patent rights of the Cassel Company will have to pay arrears at the rate mentioned.

KARANGAHAKE.

The Woodstock mine continues to provide a good supply of crushing material, but the return for the past month is much smaller than usual, 716 tons being

⁷⁹² <https://paperspast.natlib.govt.nz/newspapers/AS18980204.2.6>

Auckland Star, Volume XXIX, Issue 29, 4 February 1898, Page 2

crushed, the value of the bullion being something like £1552. The battery has now been stopped during the conversion of the plant from dry to wet crushing, and it is expected that the mill will be in operation and crushing wet in about another week's time. The kilns are now filled with raw ore, so as to keep a constant supply for wet crushing, and all the dried ore has been milled...

At the New Zealand Talisman...

Recently a Krupp mill was erected for the purpose of supplementing the crushing power, but the shortage of water rendered it impossible for the mill to be utilised. It is, therefore more than possible that steam power will yet have to be obtained as an auxiliary for use when the Waitawheta is low. During the past month 393 tons of ore were treated for a yield of bullion valued at £1079, the average per ton being £2 16s.

As already stated, the New Zealand Crown Company's manager (Mr. Daw) succeeded in starting the new air compressing plant.

The additions to the battery are-being steadily advanced and before long another 20-head of stamps will be added to the crushing capacity of the mill. During the past three weeks 1480 tons of ore were-crushed and treated for a yield of bullion valued at £3041.⁷⁹³

Crown air compressor started

23 February

NEW ZEALAND CROWN MINES

An official visit to the New Zealand Crown Mines, at Karangahake, has just been paid by Mr R. R. Hunt, the attorney for the company. Mr Hunt states that the work is proceeding satisfactorily, and everything is in good order. The foundations for the additional 40 head of stampers have been almost completed, and will be finished in ample time for the first 20 head, which are expected to arrive by the Ruahine, which should be in Auckland on the 22nd inst. The new Pelton wheel arrived by the last boat, and with the extra power mentioned it is expected that the Crown will be particularly well placed in that respect. The 20 head of stampers, the lap-welded steel pipes, and the Pelton wheel have been supplied by Messrs Fraser and Chalmer, Ltd. When the extra crushing power is available, it is intended to crush both low and high grade ore mixed.⁷⁹⁴

At the meeting of the Board of Education yesterday, the following tenders were submitted...

For additions to Karangahake school the following tenders were submitted, and the lowest accepted: C. W. Coldham £222 10s, Avery Brothers £307, Guthrie Brothers £355, E. Wrigley £385. The Board agreed to secure a site for a school at Golden Cross, Waitekauri. The site is about three chains west of Gillonm's boarding-house.⁷⁹⁵

⁷⁹³ <https://paperspast.natlib.govt.nz/newspapers/NZH18980218.2.67.4>

New Zealand Herald, Volume XXXV, Issue 10680, 18 February 1898, Page 1 (Supplement)

⁷⁹⁴ <https://paperspast.natlib.govt.nz/newspapers/OG18980223.2.10>

Ohinemuri Gazette, Volume VIII, Issue 470, 23 February 1898, Page 3

⁷⁹⁵ <https://paperspast.natlib.govt.nz/newspapers/THS18980223.2.8>

28 February

Mr A. Bunyard of the Tramway Hotel Karangahake, is leaving that hotel. Mr W. E. Ryan, licensee of the Newmarket Hotel, Auckland, is shortly to take it over. Mr Bunyard contemplates taking a trip to the Old Country.⁷⁹⁶

18 March**Woodstock Company wet crushing**

The Woodstock Company have changed their plant from dry to wet crushing, and the next return from this Karangahake mine will be from quartz treated by the wet crushing process...

Several improvements to the battery are well under way, especially the extension of vat accommodation, which was found necessary in order to provide for the increased output of ore.

At the New Zealand Crown Mines, great activity is being displayed, both at the mine and battery, and a very extensive scheme of operations has been entered upon. The development of the lower blocks is, of course, one of the main features, and in order to carry this into effect an excellent air-compressor plant has been erected, and is now at work in a large chamber cut out in the underground workings north of the Waitawheta river. I recently inspected the plant, and saw that it was working exceedingly well, and without a single jar in any of the moveable parts. Altogether the company have a splendid plant, and Mr. Daw, the energetic superintendent, deserves the highest praise for the manner in which the works at the property have progressed. Preparations have been made for the erection of the new 20 head of stamps at the mill, and as machinery has arrived from Home by the Ruahine, no time will be lost in getting the stamps erected. The stampers are heavy, weighing 1050lb each; the mortars are exceptionally strong, each weighing 3 tons 5cwt.; and the ore crusher, which also arrived, is a heavy and strong one...

The Talisman Company have felt the need of water very much in their crushing operations, but it is expected that when once there is sufficient water in the river to drive the twenty stampers and Krupp mill, there will be no further delays. Before the next dry season sets in auxiliary steam power will be supplied, so as to prevent a repetition of the stoppages that have taken place this year.⁷⁹⁷

15 April**More dry weather**

The Woodstock battery has been able to keep 20-head of stamps going until yesterday, when another row of five were hung up. The other mills are also

Thames Star, Volume XXX, Issue 9000, 23 February 1898, Page 2

⁷⁹⁶ <https://paperspast.natlib.govt.nz/newspapers/THS18980228.2.28>

Thames Star, Volume XXX, Issue 9004, 28 February 1898, Page 2

⁷⁹⁷ <https://paperspast.natlib.govt.nz/newspapers/NZH18980318.2.69.3>

New Zealand Herald, Volume XXXV, Issue 10704, 18 March 1898, Page 1 (Supplement)

suffering in a, similar way, but it is hoped that heavy rain will ere long fill the river with its proper supply...

The Talisman Gold Mining Company are still developing the Talisman reef... Crushing operations are being continued as usual, but, as already indicated, the limited supply of water is seriously retarding the work in the battery, besides keeping back from the shareholders recompense for outlay in the shape of bullion returns. However, so as to enable the above battery and Krupp mill to be kept working uninterruptedly during the next dry season, Messrs, Bewick, Moreing, and Co. are obtaining estimates of the cost of the necessary auxiliary steam power, and it is anticipated that the boilers and engines will be erected in ample time to be utilised when the next spell of dry weather arrives.⁷⁹⁸

13 May

KARANGAHAKE. Paeroa, Thursday.

One of the most important items of news from the Karangahake district is the fact that the New Zealand Crown Mines Company's new winding plant was commenced working last week. The superintendent (Mr. Daw) pushed ahead the work of erection, with the result as above stated, and now six men have been put on to strip the shaft from the No. 7, level down to the No. 8. This work, it is expected, will be completed in four or five months' time, when practically a new mine will be opened up below the No. 6, or river level. A new era of prosperity should certainly be opened up for the Crown Company when the low level explorations are well underway, for there has been ample evidence of the increasing richness of the ore deposits as the downward continuation of the lode has been followed. With regard to actual development work during the past month, there falls to be recorded the intersection of a rich ore chute, both at the Nos. 4 and 6 levels.

The reef is about 4ft wide, and according to the manager the ore is of such good quality that the new development will unquestionably enhance the value of the property southwards, or underneath the trigometrical station. All the other points of operations are being proceeded with as usual, whilst at the reduction works the erection of the new 20 head of stampers is in a forward state, and the authorities state that the battery will be ready for work some time during July. The foundations for another 20-head have also been laid, and the stamps will be erected in due course [no they won't].

The development of the New Zealand Talisman Gold Mining Company's property is proceeding as usual...

Crushing operations, however, continue to be seriously hampered owing to the scarcity of water caused by the long drought, and during the past month only 491 tons of ore were treated, the yield of bullion being valued at £1160.

The Woodstock Gold Mining Company's property has experienced a change of management, Mr. J. McCombie, who has managed the concern since the present company acquired the Woodstock mine and for many years previous, having given place to Mr. Rich. The new manager has certainly come upon the scene under the most favourable circumstances, for in the first place a new and

⁷⁹⁸ <https://paperspast.natlib.govt.nz/newspapers/NZH18980415.2.79.5>

New Zealand Herald, Volume XXXV, Issue 10728, 15 April 1898, Page 1 (Supplement)

important development has taken place at No. 5 level, namely, the intersection of the main branch of the Maria, and secondly a new system of wet crushing is being inaugurated, which it is claimed will be the means of securing a much larger extraction than has been the case hitherto. It is to be sincerely hoped that anticipations in this respect will be realised, for there is no doubt that the complex nature of the ore and the difficulty in winning the precious metal from the stone has been the chief factor in preventing the Woodstock from rising to that eminence in bullion production it was, by competent authorities, considered capable of. First of all dry crushing was tried, and then wet, but in neither case could a good percentage of the ore value, as per assays, be obtained—that is when treated in bulk. However, a couple of weeks ago, the directors decided to give a trial to a new method of wet crushing instituted by Mr. H. H. Adams, at the Komata Reefs Gold Mining Company's reduction works, and which it is claimed is very successful in its operation. Mr. Adams has now commenced work with five head of stamps, and the ore is, I understand, to be crushed in the stamper-box with water, instead of cyanide solution. The ore-pulp is passed over an amalgamated plate, with the object of catching any coarse gold, and is subsequently discharged into a vat. The water is then run off, and cyanide solution added and allowed to percolate in the ordinary way. By this method of treatment it is hoped that an increased output and a higher extraction will be obtained. The experiment will be watched with great interest. With respect to the operations at the mine, driving has, for some considerable time past, been carried on a lode which was supposed to be the main branch of the Maria. Mr. McCombie had great doubts upon the matter, but he was confident that by keeping the drive straight ahead, the main branch would re-assert itself at a certain point. This point was met last week, with the result, as Mr. McCombie had anticipated, that the main branch made its appearance on the hanging wall side of the level, and effected a junction with the body of stone which has lately been followed. The new development is of considerable importance to the company, and as a result a higher grade class of ore should be won from these workings...

Indeed, never in the history of Ohinemuri has the river been so low as at present, and the want of rain is being most severely felt all over the district...⁷⁹⁹

4 June

KARANGAHAKE BRIDGE.

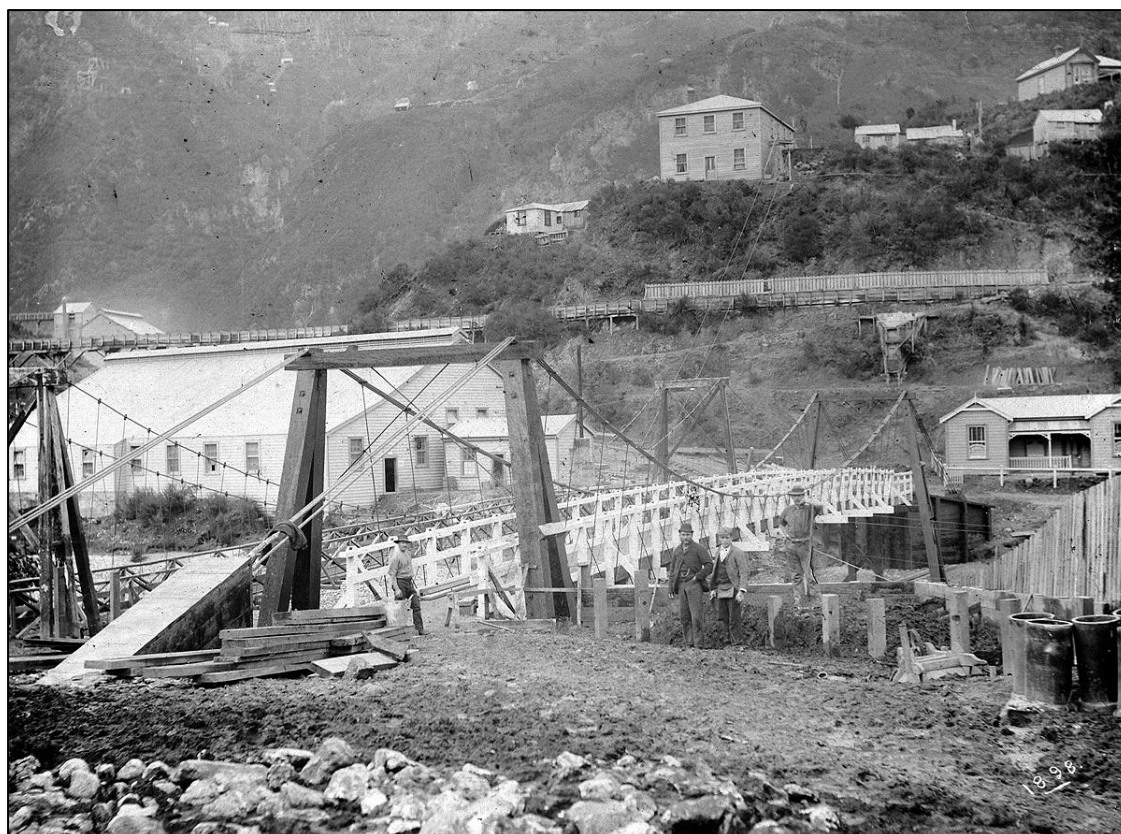
Wonderful progress is being made by the contractors, Messrs Coulson and Newson, on the Karangahake Suspension Bridge. At the present rate of progress, the bridge will very soon be available for use.⁸⁰⁰

⁷⁹⁹ <https://paperspast.natlib.govt.nz/newspapers/NZH18980513.2.67.4>

New Zealand Herald, Volume XXXV, Issue 10752, 13 May 1898, Page 1 (Supplement)

⁸⁰⁰ <https://paperspast.natlib.govt.nz/newspapers/OG18980604.2.18.6>

Ohinemuri Gazette, Volume VIII, Issue 499, 4 June 1898, Page 1 (Supplement)



Karangahake Suspension (Traffic) Bridge under construction, 1898 (June?). Paeroa Historical Society, Staples Collection. Martin Coulson contractor on right (hardhat). Photographer unknown (MM White?). Photograph taken from the position of the present visitor shelter.

This more substantial bridge has been built a little downstream from the first bridge (1885). The substantial concrete footing for the opposite pylon is visible in the river today (below the new 21st century suspension bridge). Three cables each side.

Seen through the bridge is the recently constructed Talisman Vat House, behind that, the top of the battery. The building middle right hand edge of image is the Talisman General Office building. Above this is an ore hopper on Scotchman's Gully road, allowing ore to be loaded on to the now Crown tramway. Above this again is the Crown water race flume, with a paling fence on the up-hill side to prevent debris entering it.

Top left of the image are blurry glimpses of ore hoppers/cableways, and the Talisman incline? It appears that the two storey building (a boarding house?) has its own cableway for the transport of supplies.

Farewell to Mr McCombie

Mr McCombie, who has been connected with mining in this district for many years, but is now leaving, was farewelled at Ryan's Hall, Karangahake, on Tuesday night. There was a large number present, the gathering being representative of the whole district. Mr Moss occupied the Chair, in the unavoidable absence of Mr Barry.

The Chairman proposed the toast of "The Queen," which was duly honoured. Mr Burgess then sang "The Young Brigade." The Chairman proposed the health of Mr and Mrs McCombie and family. He referred to the length of time Mr McCombie had been in the district, and the good he had done to the mining industry and the district generally. He also read a eugolistic letter from Mr J. W. Shaw, who regretted his inability to attend. The toast was drunk with

musical honors, and was followed by a song specially adapted for the purpose, "Old Friend John," by Mr Knight.

Mr McCombie, in responding, stated that he regretted leaving Karangahake, and that though he might be miles away from New Zealand, he would always have a warm corner in his heart for Ohinemuri.

Mr Knight proposed the toast of the "Mining Industry," coupled with the name of Mr H. W. Moore, who suitably responded.

Mr Jackson sang "Still you'll Remember Me," and Mr R. W. Hay-Chapman "A Warrior Bold."

Mr F. Stone then proposed the "Local Bodies."

Mr McAndrew remarked that had it not been for the mining industry, the funds of the County Council would have been very small. Mr McCombie would be a very great loss to the community.

Messrs Stackpole and McGruer also responded.

Mr R. D. Jones sang the "Romany Lass."

The Chairman proposed the toast of the "Stars and Stripes," and Mr Dalston sang the "Coster's Courtship," which was encored.

Mr Bryers also gave a violin solo.

The next toast proposed was that of "The Press," coupled with the name of Messrs Poland (Star), Ellis. (Advocate) and Plaw (GAZETTE), each of whom responded.

The Chairman then presented Mr McCombie with a gold watch and chain on behalf of the Woodstock employees, and also with a dressing bag on behalf of his friends.

Mr McCombie replied in a very neat speech...⁸⁰¹

10 June

Woodstock still can't decide: wet or dry

The Woodstock Company are not employing more men in the mine than possible, as the new manager (Mr. French [Rich], who takes Mr. J. McCombie's place) is in the meantime endeavouring to solve the problem as to which is the best method of treating the Woodstock ores. The company have arranged with Mr. H. N. [H.] Adams to give his process of wet crushing a trial. Mr Adams has commenced, and is busily engaged testing with five head, whilst Mr. Reid is also experimenting, his idea of securing a good extraction being by means of amalgamation, concentration, and cyaniding. A thorough trial will be given to each process, and whichever is the best will be adopted for treating the ore in bulk. During the past month 533 tons of ore were treated for a yield of bullion valued at £1415.⁸⁰²

⁸⁰¹ <https://paperspast.natlib.govt.nz/newspapers/OG18980604.2.18.2>

Ohinemuri Gazette, Volume VIII, Issue 499, 4 June 1898, Page 1 (Supplement)

⁸⁰² <https://paperspast.natlib.govt.nz/newspapers/NZH18980610.2.83.5>

New Zealand Herald, Volume XXXV, Issue 10776, 10 June 1898, Page 1 (Supplement)

25 June**THE GALE AND FLOODS.**

Now that the gale which visited the city and surrounding districts on Wednesday evening has passed over, those who have suffered are beginning to reckon up their losses...

The one fatality reported occurred at Karangahake. A man named Alfred Thomas was, it appears, asleep in his whare in Scotchman's Gully, when a landslip occurred, which completely buried his habitation. The landslip was noticed early on Thursday morning, and a squad of 12 miners worked till two o'clock in the afternoon before they found the body of the unfortunate victim.

In the matter of property the reports show that considerable damage has been done to the plant at several of the gold mines, and it will be some time before they can all get into full working order again...

The New Zealand Crown Mines property suffered most, and though the damage is not quite as much as was at first anticipated, operations will be at a standstill for a short time. The water-races have been damaged, and as a consequence crushing operations at the battery have been temporarily suspended. Mr. Daw at once set a large staff of men on to work, and it is anticipated that the repairs will be so far effected as to enable the battery to resume on Sunday night. Work at the mine has also been stopped, and it is possible that underground work at the No. 6 tunnel and lower workings will be started again by Wednesday next. Some of the connections associated with the air compressor have been damaged, whilst the tramway has been considerably injured between the mine and the Woodstock. This damage was caused by slips and the wash of the river, the ground in some parts being completely swept away. At the battery, two solution tanks were carried away by a large slip, but as already indicated, Mr. Daw is doing his utmost to have repairs effected as speedily as possible, and work at the mine and battery resumed.

THE WOODSTOCK MINE. The Woodstock plant also suffered, but to a much lesser degree. The swollen state of the river on Wednesday completely flooded the battery, there being about 18in or 2ft of water in the assay room. The whole of the blanket department was covered with water, and quite a large quantity of concentrates were swept away by the current. The large fresh undoubtedly proved the solidity of the mill, and the manner in which it stood against the raging flood and immense force of water which struck it all the afternoon, showed that it had been erected on a good foundation. Some of the earthwork at the walls, however, gave way under the strain, whilst the head gates at the water-race were knocked about. Mr. Rich estimates that £500 will cover the loss.

NEW ZEALAND TALISMAN. The Talisman aerial tram line suffered slightly, but nothing to speak of.

KARANGAHAKE CATHOLIC CHURCH. With regard to the damage to the Karangahake township, the Catholic Church was injured most. It is surprising to see the manner in which the building was twisted completely out of shape by the gale. This morning the Rev. Father Hackett inspected the church, and this afternoon he let a contract at £30 for effecting repairs.⁸⁰³

⁸⁰³ <https://paperspast.natlib.govt.nz/newspapers/NZH18980625.2.11>

25 June

The Crown Company at Karangahake have suffered severely, part of their water-race is washed away, but the most serious damage is to the tramway from the mine, which has been swept away for a considerable distance. The air compressor connections with the mine are also gone, and two large vats at the battery have been carried off by a slip. The battery will probably resume work on Monday, and the mine on Wednesday. The Woodstock and Talisman Companies escaped with very slight damage.⁸⁰⁴

9 July

OHINEMURI COUNTY COUNCIL.

Before consideration of the Engineer's Report Cr McClelland said he thought they should ask the Government for a grant of £2,000 in view of the amount of damage done by the flood. He accordingly moved this, Cr McGruer seconding.— Cr Barry said he would be inclined to ask for £ for £ up to £1,000. He would accordingly move this as an amendment. Cr Bowler seconded the amendment. —Cr Cock said they would not get a grant, but they might get a subsidy.— The amendment was then put and carried.

The Engineer's Report was read as follows :—

I regret to report that great damage has been done on all the roads in the County during the late flood, heavy slips being general, while fords, bridges and culverts in many cases have been entirely destroyed, and many partially so. Some very heavy slips have occurred on the main road between Paeroa and Waikino, stopping wheel traffic for four days. The fords on this road at Taririki Creek and Doherty's Creek were completely destroyed. Part of the iron fence opposite the Crown battery has been carried away, and the bridge half way down Turner's Hill washed out, but this has been rebuilt, while several culverts along the line had to be replaced. The small bridge at Waikino has been so much damaged that a new one will have to be put up; in the meantime this has been made safe for traffic. On the Waihi section of the road a large culvert has been washed out, but this also has been repaired...

The temporary water supply at Karangahake [a temporary supply was established from Hauraki Stream at end 1896] has been very much damaged from the intake down. It had only just been repaired a few days before the flood, and if to be reinstated some other plan must be adopted than by laying the pipes in the bottom of the river...

Owing to the efforts of Councillor Cock a great portion of the bridge timber floated down the river has been secured. This material will be used in reconstructing many of the footbridges and culverts washed away. Several works for which tenders should have been in to-day had to be held over in consequence of the extra work entailed by the flood.⁸⁰⁵

New Zealand Herald, Volume XXXV, Issue 10789, 25 June 1898, Page 3

⁸⁰⁴ <https://paperspast.natlib.govt.nz/newspapers/AS18980625.2.10>

Auckland Star, Volume XXIX, Issue 148, 25 June 1898, Page 2

⁸⁰⁵ <https://paperspast.natlib.govt.nz/newspapers/OG18980709.2.11>

Ohinemuri Gazette, Volume VIII, Issue 509, 9 July 1898, Page 3

5 August

The Woodstock Company have let a couple of contracts, and generally speaking matters are a little more active in connection with the working of this property. At the battery it has been definitely decided, after a series of experiments, to adopt amalgamation and concentration and cyanide the residue as the mode of treatment. With this object in view, preparations are being made for the installation of a vanner concentration plant, six 6ft vanners having been ordered from the Union Ironworks of San Francisco. These are to arrive by the end of the current month, and will be placed in position immediately after arrival.

During the past four week's 464 tons of ore were crushed and treated for a return of bullion valued at £781. The battery, during the term in which experiments have been conducted by the present management, has been running at about an average of 20 out of the 40 heads. Practically no ore has been mined, and the quartz with which the mill has been supplied was second-class ore which the present management found stored in the mine. The average value of the ore is about £2 2s per ton, and it is this quartz, of which some 1100 tons has now been used, which has been put into the mill during the conducting of experiments.

The New Zealand Crown Mines Company has considerably augmented its mining staff, whilst the company made another decided advance during the past month by starting another 20 head of stamps, thus making 60 head in all. Very satisfactory progress is being made at the various points of operation underground, and a good class of ore is being won from the lode at Nos. 4 and 6 levels. Splendid headway is being made with the underlay shaft, and it is anticipated that it will be carried down to the No. 8 level some time during the month, when the exploration of the lode both north and south will be commenced. As already stated, the staff of miners has been increased, and there is no doubt a vigorous policy has been adopted for the systematic development of the upper as well as the lower levels.

The reputation that the New Zealand Talisman has gained as a steady bullion producer has now been firmly established, and the mine is opening up in such a way that payable returns should be regular and consistent for many years to come...⁸⁰⁶

Woodstock to install six Union vanners**Crown battery start extra 20 head stamps, now 60****20 August****OPENING OF KARANGAHAKE TRAFFIC BRIDGE.**

An event of great importance occurred at Karangahake yesterday morning, when the new traffic bridge at that place was formally opened. At the invitation of the contractor Mr M. Coulson, Cr McAndrew and Messrs Armstrong (County Engineer), Palmer (Water-works Engineer), Clayton (Assistant Engineer), and Press representatives, drove out to Karangahake in

⁸⁰⁶ <https://paperspast.natlib.govt.nz/newspapers/NZH18980805.2.73.4>

New Zealand Herald, Volume XXXV, Issue 10824, 5 August 1898, Page 1 (Supplement)

one of Mr Short's brakes, drawn by four horses, and driven by Mr Harry White. On arrival at Karangahake the party was increased by Cr Stackpole and others, and the barricade being removed the coach drove across the bridge, and was thus the first public vehicle to drive across the Ohinemuri river at Karangahake.

Cr Stackpole, in a neat speech, declared the bridge open. He said that although the bridge was a strong one, and reflected great credit on the contractor and engineer, yet he was confident from personal knowledge that the mining industry would last longer than the bridge.

At the request of Mr Coulson, the party adjourned to Mr Ryan's hotel, where a most recherche repast was partaken of...⁸⁰⁷

Traffic bridge opened

27 August

The manual engine for the Karangahake Fire Brigade obtained from the . Napier Brigade arrived in Paeroa on Thursday last, and was tested last evening by the Paeroa firemen.⁸⁰⁸

3 September

Attention is drawn to a sale of building material, galvanised iron, door sashes, etc, to be held in Karangahake on Monday, September 5th, by Messrs Mackay and Pratt, auctioneers. This timber embraces two shops near Post Office, and is for absolute sale to suit purchasers.

The immediate notice of the public is requested to the fact that the sale of Mr Whelan's furniture at Karangahake has been postponed until Monday, September 5th. There is a first-class assortment of furniture and household utensils, and the sale should be a good one.⁸⁰⁹

Are these the poor souls whose buildings were on road reserve, and forced to remove them because of the new bridge?

12 October

MONTGOMERY'S NEW HALL.

The new hall at Karangahake is now completed, the only work to be finished being the two shops underneath. It is a grand building, being eighty by forty feet, and having a floor space of sixty by forty feet, and a stage twenty feet deep. The building is built with rimu timber, and the floor is of kauri. The arrangements are most complete, there being three rooms underneath the stage for dressing purposes, and another one at the front entrance. Mr Thornton has been painting a splendid lot of scenery, which will meet the requirements of any theatrical company, and reflects great credit on his handiwork. The contractors were Messrs Guthrie Bros, and they have completed their work in

⁸⁰⁷ <https://paperspast.natlib.govt.nz/newspapers/OG18980820.2.15>

Ohinemuri Gazette, Volume VIII, Issue 520, 20 August 1898, Page 3

⁸⁰⁸ <https://paperspast.natlib.govt.nz/newspapers/OG18980827.2.4>

Ohinemuri Gazette, Volume VIII, Issue 522, 27 August 1898, Page 2

⁸⁰⁹ <https://paperspast.natlib.govt.nz/newspapers/OG18980903.2.5>

Ohinemuri Gazette, Volume VIII, Issue 524, 3 September 1898, Page 2

a masterly manner and most expeditiously. This is the largest hall in the Ohinemuri Goldfields, and will be opened to-night with a grand concert and dance, the proceeds to go to the Karangahake Fire Brigade.⁸¹⁰

The Lyceum Hall, beside the Tramway Hotel, was completed end 1897⁸¹¹. A bit of rivalry between the two hotels?

29 October

Fire at Karangahake, nine buildings destroyed

A fire at Karangahake destroyed twelve buildings: Adams (draper), James (baker), Price (general store), Roberts (boarding-house), Dudson (butcher), McWatter (general store), and Retallick (boarding-house). Most of the places were insured. The insurances on the Karangahake fire are Price and Coy's in the United £435; Dudson £70 in the Standard; Retallicks £150 in the North Queensland; McWatters £100 in the North Queensland and £300 in the National; Adams £600 in the National; James £150 in the National.⁸¹²

NINE BUILDINGS DESTROYED.

INSURANCES £1,805

Paeroa, October 29. The most disastrous fire ever known in Karangahake broke out at 12.30 last night, when nine buildings were destroyed. It is surmised that the fire started in James' bakehouse, and rapidly spread to the adjoining buildings. The alarm was at once given, and the Karangahake Fire Brigade were quickly on the scene. The fire bell in Paeroa also rang out the alarm, and the members of the Paeroa Fire Brigade, under Lieutenant Moore, proceeded to the scene of the fire in a buggy, rendering valuable and timely aid. Three cheers were given for the Paeroa Fire Brigade on their arrival in Karangahake. The following were the buildings destroyed:—

Adams' Drapery Establishment, James' Bakehouse, Price's General Store, Roberts' Boarding House, Dudson's Butchery, McWatters' General Store, Rettallick's Boarding House, And two others. The buildings were insured, together with the stock. The origin of the fire is unknown.⁸¹³

N.Z. TALISMAN. Future prospects of this mine are most encouraging, as the company evidently possess a splendid reef right through the Bonanza section, this being proved on the surface for a distance of 1200 feet, without taking into account Dubbo's reef lying to the eastward and in the same belt of brown sandstone country; and also another large lode to the westward both still awaiting development. These latter carry payable gold on the surface, and will be tapped by crosscuts from the Talisman levels at a future date...

⁸¹⁰ <https://paperspast.natlib.govt.nz/newspapers/OG18981012.2.10>

Ohinemuri Gazette, Volume VIII, Issue 535, 12 October 1898, Page 3

⁸¹¹ <https://paperspast.natlib.govt.nz/newspapers/OG18971117.2.3>

Ohinemuri Gazette, Volume VII, Issue 443, 17 November 1897, Page 2

⁸¹² <https://paperspast.natlib.govt.nz/newspapers/SCANT18981029.2.23>

South Canterbury Times, Issue 9192, 29 October 1898, Page 3

⁸¹³ <https://paperspast.natlib.govt.nz/newspapers/THS18981029.2.15.1>

Thames Star, Volume XXX, Issue 9212, 29 October 1898, Page 2

At No. 7 level the crosscut has intersected the lode, and driving south on its course has commenced, the lode being at present 2 feet wide. This is the company's lowest level, and from this to the top of the ridge in the Bonanza section is 900 feet, whilst downwards to the river level is 600 feet.⁸¹⁴

No No. 8 Level yet (1900). The ore is coming from the No. 7, 6, 5, 4 and 3? Level to the aerial cableway?

5 November

DISGRACEFUL SCENES AT A FIRE. A correspondent of the Auckland "Star" states that during the recent fire at Karangahake, when several shops were burned, disgraceful scenes of thefts of rescued stock occurred, men taking off old coats and putting on new, fitting on boots in the middle of the road, carrying off suits of clothes, bags of sugar, &c. The police did everything possible, but could not prevent these thefts. It is stated that one tradesman found a man endeavouring to open the till in his shop, and stopped him.⁸¹⁵

9 November

AUCKLAND EXHIBITION.

EXHIBITS FROM OHINEMURI

The advice tendered to the Ohinemuri County Council by Mr. J. A. Miller, solicitor, that any money expended at the mining exhibition would be illegal, naturally had a rather depressing influence upon the good intentions of the Council to have a general exhibit representing the resources of the Ohinemuri district. Nothing, therefore, has since been done, and the most important goldfield and largest bullion contributor of the Colony will be practically unrepresented, as far as a district effort is concerned. It is understood, however, that several of the mining companies will have separate exhibits of stone, etc. A couple of private exhibits of industry are also to be made, namely, a large dock case, by Mr. W. H. Mahoney, and a model of the Karangahake suspension bridge, by Mr. E. O. Clayton...

The model of the Karangahake suspension traffic bridge is also supplied by a Paeroa resident, Mr. Clayton being assistant to the engineer of the Ohinemuri County Council. The model is fully 5ft long, and is built to scale. All the details of the carpentering, ironwork, etc., have been faithfully executed.⁸¹⁶

22 November

N.Z. TALISMAN

At No. 2 level the hopper is being built and a self-acting ground tramway is being laid to connect it with hopper at No. 4 level, which is the top point of the

⁸¹⁴ <https://paperspast.natlib.govt.nz/periodicals/NZGRAP18981029.2.20>

New Zealand Graphic, Volume XXI, Issue XVIII, 29 October 1898, Page 561

⁸¹⁵ <https://paperspast.natlib.govt.nz/newspapers/CHP18981105.2.28.9>

Press, Volume LV, Issue 10185, 5 November 1898, Page 7

⁸¹⁶ <https://paperspast.natlib.govt.nz/newspapers/NZH18981109.2.5>

New Zealand Herald, Volume XXXV, Issue 10905, 9 November 1898, Page 3

aerial tramway. When this work is completed the ore from all points of the mine will be delivered at the battery at a minimum of cost.⁸¹⁷

NZ Herald

The main work at No. 2 level is the continuance of the crosscut in the Bonanza, and as the locality of the lode has been reached, it should now be met at any time. Altogether, the underground works are progressing very satisfactorily. Outside a self-acting ground tramway is being laid, and when completed it will connect the No. 2 level with the No. 4, which is the top point of the present aerial tramway. This will give greater facilities for getting away the ore from the No. 2 level.⁸¹⁸

25 November

The prospects of the Talisman Gold Mining Company appear to be getting brighter each month...

With a view to connecting this [No.5, though this appears to be an error. No. 2] level with the No. 4 level, and expediting the transference of ore to the mill, a self-acting ground tramway is being constructed. This tram will connect with the No. 4 level, the top point of the present aerial tramway...⁸¹⁹

Talisman battery install 80 horse-power engine and boiler

It has been proposed that the crushing capacity of the Talisman Company's mill should be increased by the erection of a separate battery to crush quartz by the wet process. It is thought that with a 40 or 60stamper battery crushing wet ore of much lower grade than that now treated could be put through at a profit, while the dry crushing mill could continue to deal with the richer ore. It is stated that the extraction at present being obtained is decidedly satisfactory, the percentage ranging from 91 to 93 per cent. of the bullion value. This certainly reflects the highest possible credit upon the battery superintendent, who is unquestionably making the most of the splendidly-equipped plant under his care. It will be remembered that after the experience of last year the company decided to erect an auxiliary steam plant, so that the battery would not be hung up during the summer months on account of scarcity of water. An 80 horse-power engine and boiler have now been placed in position, and will enable the company to continue regular crushings. This will prevent the recurrence of any of the irritating delays that occurred during the last dry season.

New Zealand Crown Company -

...The introduction of the wet crushing process, however, brought in a new era for the Crown, inasmuch as that the greater portion of the ore now being sent to the mill for treatment was previously classed as unremunerative. It is now turned to good account, and treated at a profit. The number of tons put through the mill last month was 2700 tons for a yield of bullion valued at £5194.

⁸¹⁷ <https://paperspast.natlib.govt.nz/newspapers/AS18981122.2.4.2>

Auckland Star, Volume XXIX, Issue 276, 22 November 1898, Page 2

⁸¹⁸ <https://paperspast.natlib.govt.nz/newspapers/NZH18981122.2.88>

New Zealand Herald, Volume XXXV, Issue 10916, 22 November 1898, Page 6

⁸¹⁹ <https://paperspast.natlib.govt.nz/newspapers/NZH18981125.2.83>

New Zealand Herald, Volume XXXV, Issue 10919, 25 November 1898, Page 1 (Supplement)

The Woodstock Gold Mining Company had a much better return last month, 1000 tons of ore having been treated for a yield of bullion valued at £2367...

Changes are still being made in the battery, and the manager is desirous of having the working expenses of the mill reduced to a minimum. With this object in view a very large ore bin is being erected, and this, when finished, will do away with the hoisting of the ore to the kilns, and thence trucked to the mill, so that the charge will result in the ore being delivered direct into the mill. This will necessarily mean a great saving of labour in handling, etc. Good progress is also being made with the erection of the hydraulic sizers, which are being put in as concentration adjuncts to the vanners...

The prospects of the Talisman Gold Mining Company appear to be getting brighter each month...

With a view to connecting this [No.5] level with the No. 4 level, and expediting the transference of ore to the mill, a self-acting ground tramway is being constructed. This tram will connect with the No. 4 level, the top point of the present aerial tramway...⁸²⁰

The Talisman battery's new boiler is fuelled by wood? Coal is a possibility, but getting to the battery via Paeroa would make it expensive. Is the new, expanded battery going to crush wet?

Woodstock to retire water-balance

25 November

Totals of bullion produced to date given here:-

<https://paperspast.natlib.govt.nz/newspapers/NZH18981125.2.86>

New Zealand Herald, Volume XXXV, Issue 10919, 25 November 1898, Page 2 (Supplement)

1 December

A large, rambling discussion about the mining boom and goldmining on the Coromandel peninsula, including Karangahake, gives good background and discussion. Too big to include here in totality, but the section on Karangahake is presented below. See whole article at:

<https://paperspast.natlib.govt.nz/newspapers/AS18981201.2.58.57>

Auckland Star, Volume XXIX, Issue 284, 1 December 1898, Page 28 (Supplement)

KARANGAHAKE - ITS HISTORY AND PROSPECTS

Karangahake is about ten miles from Waihi and six miles from Paeroa by roads, which may, without fear of contradiction, be called bad. The country forms a great contrast to the desolate-looking Waihi district. The spurs—ranges, in fact—rising almost perpendicular out of the Ohinemuri and Waitawheta streams, bared in places of their arborescent growth by the devastating fire fiend, and covered elsewhere by a dense bush, look singularly rugged and bold, whilst the tracks winding over the spurs and drives, in some places into an almost perpendicular face, proclaim the advance of the miner. The scene is altogether picturesque and inspiring, and the road through the

⁸²⁰ <https://paperspast.natlib.govt.nz/newspapers/NZH18981125.2.83>

New Zealand Herald, Volume XXXV, Issue 10919, 25 November 1898, Page 1 (Supplement)

gorge is grand in the extreme, although to local residents, by constant association, probably not possessing the same interest. The town lies really around the confluence of the above streams, and has a population of about 1000. It is certainly the most irregularly built place, on the fields. The main highway is the only road, and nature, not having been generous in the matter of flat ground, that on either side of the road has had to be excavated from the side of the hill. In spite of the permanent nature of the place, the houses generally wear a very temporary appearance, and are dotted about in a most promiscuous fashion — in veritable camp style. About one and a-half miles below a fine township site has been surveyed, but it is unlikely that it will be occupied in the near future, anyway, being too far from the base of operations. Most of the mines are situated up the Waitawheta stream, and the main road keeping to the Ohinemuri it has been found necessary to span the river with a suspension bridge...

The Crown and Woodstock Mines, the two principal mines in the district passed into the hands of English syndicates at the commencement of the late boom. For some reason Karangahake, with Waitekauri, shared what may perhaps be deemed an unenviable distinction in being a scene of even more than the average activity of the mining promoter during the recent boom. Any piece of ground was good enough to peg out, with the object in view of selling a promoter's share at a good figure, or, better still, of floating a small local company on the Auckland market. That the chance of bringing even a promising venture to a successful issue in such broken and hard country as that of Karangahake was small one only requires to visit the field to understand, even if possessed of not a grain of mining knowledge; but this was not the worst of it. The men placed on the ground were generally as incapable of carrying out prospecting works, not to speak of mining, as of refusing their month's wages. The following will show how most of the wild cats were worked: One of the mine managers had occasion to visit a certain newly floated claim in the district. He found the man in charge, and was shown the drive going straight into the hill. 'You are driving south?' he enquired. 'Yes,' said the man in charge, 'going straight for the reef!' Mentally laying the odds as to his chance of cutting the said reef, the system being a north and south one, he inquired where the outcrop was. The man in charge took him some distance up the spur to where some quartz boulders were lying on the surface. 'Here it is,' he mildly ejaculated, pointing at the same time to the bleached and hungry boulders, 'we shall cut it in, etc., etc'. In most cases no attempt whatever was made to locate an outcrop, so long as a drive was started, the property was constituted a mine. This is the way the public's capital was expended. So much for many of the small local companies, a large percentage of which really never had a proper run for their money. The fact remains that Karangahake is a rising field, and the success attending the development of those mines which in the face of considerable difficulties are being thoroughly opened up [unreadable word] for the general value of the ore bodies.

THE MINES

The Crown holds something the same position to Karangahake that the Waihi does to the district from which it takes its name. The main work in the Crown mine consists of driving on an 8 foot reef, the whole of which is put through the battery. At present the principal operations on this body of stone are at

levels 4 and 6, something like 50 men having been recently employed on the latter. In lower workings the reef is 14 feet wide, and is said to be worth £5 a ton. The battery now consists of 60 stamps, 20 of which were only competed a few months ago, while another 20 shortly come into operation, ensuring the output being, roughly speaking, doubled. An immense water race, 1¼ miles long, has recently been constructed to convey the waters of the Waitawheta stream to drive the air compressing machinery for working the rock-borers in the mine, and the pumping and winding plant, etc. The monthly output for the first eight returns of the present year averaged about 1,600 tons of quartz, yielding bullion worth approximately £3,500, while, the total output of the New Zealand Crown Mines from July, 1895 to and including a return on October, 1898, was bullion worth £80,000.

The Woodstock, the mine ranking second in importance in the Karangahake district, employs about 200 men. The bulk of the ore crushed has come from the Woodstock and Marie reefs, on the latter of which recently very extensive work has been done at Nos. 1, an intermediate, and 2, 3, and 4 levels, the reef varying from 3 to 15 feet of payable quartz. At No. 2 level a crosscut driven west intersected no less than five distinct ore bodies and from the largest, christened Shepherd's reef (12 feet in thickness), a large amount of good, payable quartz has already been crushed. A difficulty has arisen in the treatment of the ore from the lower levels of the mine, owing to its impregnation with sulphides, and little was done at the battery during the first eight or nine months of this year. Wet crushing has been adopted at the 40 stamp mill as an alleviation of the difficulty. The output of this mine since March, 1896, to, and including the return of November 5, 1898, was £46,000. The NZ Talisman Mine, which entered the ranks as a steady bullion producer in 1897, is opened up by seven drives from the side of the hill, the distances-between the drives varying from 70 to 123 feet. At some of these levels the reef has been driven on for upwards of 600 feet and at all has been proved as a body of stone varying from 3 to 5 feet in thickness, so there is abundance of material to keep the 20 stamp mill and No. 5 Krupp ball-mill going for a very considerable period. In the early part of the present year crushing was almost at a standstill, owing to scarcity of water, but since May an average of over £2,500 worth of bullion from between 650 and 750 tons of quartz has been maintained; and that mine is steadily improving is evidenced by the last return (that for October of the present year), which was bullion valued at £3,700 from 874 tons of quartz.⁸²¹

3 December

KITCHENER (LATE STERLING), KARANGAHAKE.

This claim, which is being floated, is in the hands of Mr. R. McDonald Scott. During the late boom the important discovery of a 40ft reef, gold-bearing, and said to be payable, parallel to the Crown, Woodstock, and Talisman lodes, was made. It is thought that this lode shed the gold found at the start of the Karangahake field, in the prospectors claim, on the outcrop. The first work to be undertaken is to clean out the Sterling drive, in which the lode was

⁸²¹ <https://paperspast.natlib.govt.nz/newspapers/AS18981201.2.58.57>

Auckland Star, Volume XXIX, Issue 284, 1 December 1898, Page 28 (Supplement)

discovered, and to drive right and left on the lode to prove its value. The low level drive put in by the Sterling Company will afterwards claim attention. Mr. W. Tregoweth, who is in charge, commences work at once.⁸²²

17 December

Talisman

In all of these six levels it will thus be seen that the mine is steadily advancing, and it will continue to do so, I believe. A splendid self-acting incline tramway has been formed from No. 2 level to No. 4 level for the haulage of quartz, and the work, which is just completed, reflects great credit on the contractor, Mr. John Law. The Company have also had a fine blacksmith's shop erected at No. 4 level, and an office for the manager will shortly follow.⁸²³

23 December

Woodstock Gold Mining Company has witnessed a few changes during the year, and though, for about the first six months, the operations were not crowned with that amount of success so many had anticipated, the last few months has seen a decided improvement, and it is hoped that the property has seen its darkest days. The trouble was in the extraction, for though the battery had been converted from the dry to wet crushing the returns of bullion remained very poor. Every effort was made to redeem the past, but it was apparent to all that some different method of treatment would have to be adopted. Eventually, upon the installation of Mr. F. A. Rich as manager, a series of experiments were made as to efficiency of amalgamation concentration. Mr. Rich being of the opinion that the Woodstock ore was not a cyaniding ore. These experiments were carried on for some time. After an exhaustive trial, the directors entered into the scheme recommended by Mr. Rich, and once more sanctioned the alteration of the mill. Six 6ft vanners—in fact, a complete concentration plant was installed, and under the new regime the returns have since shown an improvement. The yields gave evidence of a great falling off in March, when only £782 was won from 585 tons of ore. But not much of an improvement manifested itself until the last three months of the year, when the value of the bullion won again sprung into four figures...

In view of the apparent success of the new treatment continued alterations are being made in the battery by Mr. Rich, who has the greatest of faith in the concentration system. It is probable that two more 6ft vanners will be added to the present plant, thus making eight 6ft. vanners, one Woodbury, and two Frue's in operation. Highly satisfactory results, I understand, are now being obtained from the concentrates, the result, the manager informs me, being about 95 per cent. of the bullion value. This is as much as the company would get from smelters, whilst the cost of treatment has been reduced to a minimum. This state of affairs reflects credit upon Mr. Rich, who also informs me that by certain adjustments of the crushing plant the crushing capacity has been increased by 30 per cent.

⁸²² <https://paperspast.natlib.govt.nz/newspapers/NZH18981203.2.5>

New Zealand Herald, Volume XXXV, Issue 10926, 3 December 1898, Page 3

⁸²³ <https://paperspast.natlib.govt.nz/newspapers/AS18981217.2.43>

Auckland Star, Volume XXIX, Issue 298, 17 December 1898, Page 6

As to the treatment. First, the free gold is saved by amalgamation as the gold that cannot be economically treated by cyanide. After the operation, the valuable sulphides are extracted by concentration, and separately treated, thus avoiding another loss by cyanide, and finally admitting a treatment with a weaker solution. The effect of this, it is claimed, is that all classes of ore from the mine can be treated with a certainty. For instance, if the ore treated contains most of its values in coarse free gold, the amalgamation plates prove their efficiency; whereas if, on the other hand, the ore contains valuable sulphides in the main, these values are retained in the concentrates. Then, again, the exceedingly fine material that passes the amalgamation and concentration plant is recovered by the treatment of the tailings by cyanide, so that it will be seen the bullion has not much chance to escape. The future operations will, doubtless, be waited with the greatest of interest. It is to be hoped that the Woodstock Company has entered upon a career of great usefulness. Operations at the mine are proceeding much about the same as usual, all the workings being confined to the development of the main lode at the No. 1, intermediate, Nos. 2, 3, 4, and 5 levels.

The New Zealand Crown Mines Company have during the year expended a very large sum of money in the erection of machinery, both at the mine and battery, and the mill, which was formerly a dry crushing plant, is now crushing wet. To Mr. Daw must be given the credit for introducing wet crushing combined with cyanide treatment in the Ohinemuri district; and when it became apparent that a large quantity of low grade ore could be treated remuneratively other companies were prepared to follow suit, and give the wet crushing a good trial. The change in the Crown battery has been attended with success, inasmuch as that there were large quantities of ore reserves in the mine that would not previously pay to handle owing to the small values contained in the stone. But when the crushing capacity of the mill was doubled, and the cost of treatment reduced by the wet crushing, those low grade ore reserves were attacked, and for several months past large quantities have been regularly put through the battery with payable results. Of course, as far as the Crown mines are concerned, the greatest hopes are centred in the deep mining operations. Previous to Mr. Daw taking charge the underground operations were confined principally to the development of No. 6 level and the blocks overhead; but when he assumed the management, and became acquainted with the amount of resources available down to the No. 6 level, Mr. Daw came to the conclusion that though there was good ore overhead there was better underneath. An important scheme was then initiated for the development of the lower blocks, and upon his recommendation the directors entered upon a heavy expenditure in the erection of a powerful air-crossing [air compressing?] plant for pumping and winding, and also the sinking of an underlay shaft on the reef. These works have all been successfully carried out during the year, and the company to-day are possessed of a magnificent plant, which is working with the greatest success in the gorge at Karangahake. It was confidently anticipated that the lower blocks would develop well, and the explorations so far carried on go to prove that this theory was a correct one. The ore from these workings is of good quality and it is believed that according to present prospects, the Crown Company will develop some rich chutes of ore in the blocks from the No. 6 level downward. The works underground are being vigorously pushed forward, whilst at the battery

everything is proceeding satisfactorily. During the past month 2875 tons of ore were treated for a yield of £5632. which is an improvement of the previous month's output. Altogether, during the eleven months of the current year ending November, the bullion output has reached £47,848 5s 1d, as against £43,595 18s 1d for the whole of 1897. When the December return of this year is added the yield will be over £50,000—a return which, it must be admitted, has materially helped the district along.

The New Zealand Talisman Gold Mining Company has nothing but success to record, as will be seen by the returns published in another column. They show an excellent record for the year, no less a sum than £24,508 13s 5d having been won as against £11,238 6s 10d the previous year. These figures are conclusive proof of the bullion-productiveness of the mine, and, as at the great marriage feast, it was stated that the best wine had been left for the last, so the last return from the Talisman has been the best, thus constituting a record, £4041 17s 9d worth of bullion having been extracted from 882 tons of ore. This exceeds the previous month's output by £303, and there is no doubt that the outlook for the future is an exceedingly bright one. As already known, the Talisman Company has within its boundary a large area known as the Boranga [Bonanza], and there is no doubt that in acquiring this piece of ground the company became possessed of a very valuable asset. In the early part of the year the development work was principally concentrated in the Talisman section with successful result, but Mr. Goldsworthy, manager of the company, became impressed with the idea that some good chutes of ore should lie in the direction of the Boranga, and this impression took practical form of prospecting. That Mr. Goldsworthy was encouraged leaves no room to doubt, for the company at once adopted his recommendations and a start made to explore the Boranga section. These explorations have been crowned with success, for in the levels which intersected the lode driven for a fine ore body has been revealed. The reef has just lately been cut at the No. 2 level, and at the close of last week a splendid body of stone three feet wide was being operated upon in the face. So far a distance of 35ft has been driven upon here, and exploration has proved that the company is working on the same chute of good ore that was met in the No. 3 level beneath. With regard to the other works in hand stoping is being continued at the back of No. 3 level, whilst a rise has been carried up a height of 55ft in order to meet the No. 2 level. Another 25ft should see this desired connection effected. Driving south in the lode has also been resumed, and a good class of stone is being raised, the ore body being incased in a splendid channel of country. At No. 4 level driving work is in progress, besides which four stopes are being beaten along for a length of about 150 ft. From both these sources a good supply of crushing dirt continues to be broken out, the lode in the face of the drive being about 3ft wide. It is expected that the reef in the Boranga section at No. 5 level will be encountered now at any time, and it is expected that in a few days important developments will be chronicled as having taken place in this section of the mine. Stopping on a large reef is in active progress at No. 6 level, the reef being opened up for a width varying from four to ten feet. These stopes, I might mention, are 300 ft or 400 ft north of the Nos. 3 and 4 levels in the Boranga section, so that as there is good ore in the face of the latter workings it is safe to assume that the chute of good ore here will extend between these two points and further. Indeed the Talisman Company have a very bright future looming

ahead, especially when it is considered that they have such extensive blocks of highly auriferous ground to open up...⁸²⁴

Karangahake School was again enlarged in 1898.⁸²⁵

AJHR 1899

Published 1899, but largely reporting on 1898.

THE GOLDFIELDS OF NEW ZEALAND: REPORT ON ROADS, WATER-RACES, MINING MACHINERY, AND OTHER WORKS IN CONNECTION WITH MINING.

APPENDIX TO THE JOURNALS OF THE HOUSE OF REPRESENTATIVES, 1899 SESSION I, C-03⁸²⁶

Mr. George Wilson, Inspecting Engineer

to the Hon. A. J. Cadman, Minister of Mines. Sir,— Mines Department, Wellington, 12th May, 1899. I have the honour to submit my annual report, for the year ending the 31st March last, on the progress of the mining industry, and on different works in connection with the same having a tendency to promote a further development of the mineral wealth of the colony.

Page 66

Karangahake District.

Woodstock Mine (Area, 72 acres; owner, Woodstock Gold-mining Company, Limited; mine manager, Clement Augustus Cornes). —This mine is worked from levels, the longest or lowest adit level being 1,100 ft. in length, and the greatest depth of workings below the surface is 709 ft., six levels being opened, at the following depths: No. 1, 150 ft.; Interim, 270 ft.; No. 2, 418 ft.; No. 3, 553 ft.; No. 4, 629 ft.; and No. 5, 709 ft. There are three reefs—the Maria, Shepherds, and the Woodstock—which are of a hard flinty quartz, with good standing-walls, and the country rock andesite. The development work consisted of the extension of levels, with rises and winzes to connect them. The milling machinery consists of forty stamps, 850lb.; two Blake-Marsden stone-breakers; one Gates crusher; two berdans; fourteen Vanner concentrators; and twelve cyanide percolation vats, 62 tons capacity each. The amount of quartz crushed was 19,850 tons, yielding bullion to the value of £7,671 0s. 10d. by amalgamation, £1,923 14s. by concentration, and £7,202 7s. 5d. by the cyanide treatment, making a total value of £16,797 2s. 3d. The average number of men employed during the year was 161. The general manager (Mr. Frank Rich) gives the following description of the mine and workings for the year : —

"All the levels of the Maria lode, in the Woodstock Mine, are now being worked, and the ore won therefrom is of very varying mineral character and

⁸²⁴ <https://paperspast.natlib.govt.nz/newspapers/NZH18981223.2.79.4>

New Zealand Herald, Volume XXXV, Issue 10943, 23 December 1898, Page 1 (Supplement)

⁸²⁵ <https://www.ohinemuri.org.nz/historic-texts/karangahake-school-70th-jubilee/school-history>

School History. Karangahake School and District 70th Jubilee 1889-1959

⁸²⁶ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1899-I.2.1.4.3>

THE GOLDFIELDS OF NEW ZEALAND: REPORT ON ROADS, WATER-RACES, MINING MACHINERY, AND OTHER WORKS IN CONNECTION WITH MINING., Appendix to the Journals of the House of Representatives, 1899 Session I, C-03

quality, in the upper levels being generally more oxidized, lower in value, and containing less silver-value than the average; it is also more easily mined generally. The tendency in the lower levels is towards more mineral sulphides and higher values; whilst throughout the whole there is considerable variance in the character of the free gold, sometimes being mostly coarse and at others almost microscopically fine, yet in all there is present some of the very fine gold. The ore in the middle and lower levels is, as a rule, hard, and more costly to mine than that of the upper levels. The variable condition of the ore often rendered the results of the treatment by cyanide alone very uncertain, as when the combination of conditions happened to predominate towards coarse gold and valuable sulphides the extraction would necessarily be low, even at the cost of very strong cyanide solutions and lengthened leaching, which would make an almost prohibitive cost under such conditions of treatment. A tolerably regular extraction could be maintained by blending all descriptions of ore; but this would only mean a deceptive improvement, for the coarse gold and valuable sulphides would still escape the cyanide, though in lesser ratio to the quantity of ore treated. Blankets save a large proportion of these values as very bulky and low-grade concentrates, generally too low-grade to admit of any more expensive treatment than berdan pan-grinding, which used to be the practice here. By this means almost all the free gold in these blanket-concentrates is amalgamated, and practically all the sulphide-values escape. Formerly the ore was treated by roasting and dry crushing. This method, though giving a good extraction, was very costly. Then crushing with cyanide solution in the mortars was adopted. This method did not give reliable results, as considerable coarse gold and almost all the sulphide-values escaped the cyanide. Concentration by blankets was used with both these methods, followed by amalgamation treatment of the low-grade blanket concentrates in berdan pans. By this means all the amalgamable gold caught by the blankets was recovered, but coated gold and the valuable sulphides passed the berdans unrecovered; besides, there was much valuable concentrates which escaped the blankets entirely. The process now adopted is a combination process which, after careful and exhaustive investigation, was found to be most suitable and adapted to our ore. It is as follows: The ore, after passing through two Blake crushers, is elevated by a 12 in. belt elevator to the mill ore-bins. It is then fed to the forty stamps, which weigh about 850 lb. each, and strike 104 blows per minute, with a 6 in. drop. After passing through 30-mesh wire screens the pulp flows over amalgam plates, being then delivered to the elevator wheel, 34 ft. in diameter, and thus raised to the top of the mill. It now passes through a hydraulic sizer of the Spitzlutte type. The slimes are here separated from the sands, and treated separately from this on. The pulp now passes over the concentrating plant, and thence by launders is delivered to the rotary distributors in the cyanide-vats, to be treated by leaching with cyanide solution. The coarser amalgamable gold has been extracted by the plates; the concentrates, consisting of the sulphide-values and any coarser non-amalgamable gold, has been extracted by the vanners; and there is only left for the cyanide the finest gold and the most finely comminuted sulphide-values, which latter in this condition are much more amenable to cyanide treatment. The vanner plant consists of fourteen 6 ft. Union vanners and two 4 ft. Frue's. The overflow from the general cyanide-vats, whilst being filled, passes on by launders to the slime-vats, where the contained slime is settled with that

previously separated by Spitzlutte. These slimes are then treated with weak cyanide solution by agitation, and good extraction effected. The concentrates from the vanners are also treated by agitation with extra-strong cyanide solution, and an extraction of over 93 per cent, of the bullion-value is maintained, at a cost of less than £1 per ton of concentrates treated. By actual experiment it is found that 75 per cent. of the values of the concentrates are quite unaffected by ordinary cyanide treatment, and therefore under that treatment would be lost. The principal points of the treatment are—(1) That the amalgamable bullion is at once extracted from the ore by amalgamation, the cheapest method of recovery; (2) that the non-amalgamable bullion and valuable sulphides are removed from the ore by concentration for separate treatment; (3) that the slimes are separated from the ore, and separately and rapidly treated with cyanide by agitation and decantation, effecting a good recovery ; (4) that the remaining sands thus depleted of non-cyanidable values and obstructions to percolation are rapidly and perfectly treated by cyanide ; (5) that the large quantity of water (from stamping, hydraulic-sizing, and concentration) which passes through the ore-pulp almost completely washes out the soluble cyanicides, thus reducing the loss of cyanide by chemical decomposition."

Crown Mine (Area, 135 acres 1 rood 31 perches; owners, New Zealand Crown Mines Company, Limited; general manager, R. H. Daw; mine-manager, G. N. McGruer). —Operations to a very great extent have been carried on during the year. The adit-level and other levels have been extended, and a considerable amount of stoping done. Below the adit the underlay shaft has now reached a depth of 150 ft., and two levels opened out from it—No. 1 at a depth of 70 ft. and No. 2 at a depth of 140 ft. A chamber has been excavated above the adit and over the underlay shaft, and in this the winding machinery, which is driven by compressed air, is erected. Another shaft further in has been sunk from the adit, and has reached a depth of 140 ft. Towards this shaft the levels opened from No. 1 shaft are being driven, and, as the reef varies from 4 ft. to 16 ft. in width, extensive blocks will be opened, from which a very large quantity of quartz will be derived.

The quantity of quartz crushed for the year was 27,860 tons, which yielded 28,234 oz. 18dwt., valued at £55,483 5s. 4d., and 180 men were employed. Developments in this mine have conclusively pointed out that quartz for several years' profitable work is available, and, as the battery consists of sixty stamps, the returns from this mine will help to increase the yield from the Ohinemuri district. The battery, which is now used in crushing with cyanide solution, is capable of putting through a much greater quantity than could possibly be done under the dry-crushing process.

Talisman Mine (Area, 60 acres; owner, New Zealand Talisman Gold-mining Company, Limited). —A large amount of development work has been carried out in this mine during the year. The reef has been driven on a considerable distance in the adit-levels. In consequence of the mine being situated at a considerable elevation on the north-eastern side of the mountain, it can be worked from adit-levels, and sinking and pumping will be unnecessary for some time to come. In the Bonanza section a chute of payable ore was discovered, and when worked on has been the means of adding materially to the returns. The milling machinery consists of two stone-breakers, twenty head

of stamps, one Krupp ball-mill, six berdans, and fourteen vats (of 18 ft. and 22 ft. diameter), and also a revolving drying-furnace, with a capacity of 40 tons a day. The quantity of quartz crushed was 8,696 tons, yielding 44,541 oz. 19dwt. of gold, valued at £32,648 13s. 1d. Ninety-four men were employed.

Imperial Mine (Area, 62 acres and 15 perches; owners, Imperial Gold-mining Company).— This mine has constantly been worked, principally putting in a low-level, and driving on the reef for 143 ft.; but so far the prospects have not been very important. Seven men were employed.

Talisman Extended (Area, 72 acres 2 roods 15 perches; owners, Talisman Extended Goldmining Company, Limited). —The principal work in this mine was the extending of the adit-level, but, as no discovery of importance was made, work was suspended. The owners are trying to arrange an amalgamation with the New Zealand Talisman Company. Four men were employed.

Woodstock Main Reefs. —The company owning this property had twenty men prospecting for some time, but, as no payable quartz was met with, the work was stopped.

Prospecting-works have been carried on at Rotokohu and other parts of the district.

REPORTS OF WARDENS AND OTHER OFFICERS ON GOLDFIELDS.

APPENDIX TO THE JOURNALS OF THE HOUSE OF
REPRESENTATIVES, 1899 SESSION I, C-03A⁸²⁷

No. 1. Mr. Warden Bush

to the Under- Secretary for Mines, Wellington. Warden's Office, Thames, 3rd July, 1899. I have the honour to furnish herewith the usual annual report on the Hauraki Goldfields. It affords me very great pleasure to report a considerable increase in the yield of gold for the year ending December, 1898, and in proof of this I beg you to note the following figures: The Waihi Mine produced gold of the value of £272,688, as against £134,553 in 1897; the Waitekauri, £66,585, as against £50,528 in 1897; the New Zealand Crown Mines, £55,483, as against £41,120 in 1897; while the Talisman came in with £32,648, the Komata Reefs with £17,795, and the Woodstock £15,692. This company has been somewhat unfortunate in the difficulty it has met with in its extractions, which has considerably interfered with their returns for the year. Notwithstanding this difficulty, which I understand has now been overcome, this mine, up to the end of 1898, is stated to have yielded gold to the value of £90,854.

Page 5

Ohinemuri County. Karangahake.

New Zealand Crown Mines. —This company have very considerably increased their output. A lot of very expensive work has been done, and an

⁸²⁷ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1899-I.2.1.4.4>

REPORTS OF WARDENS AND OTHER OFFICERS ON GOLDFIELDS., Appendix to the Journals of the House of Representatives, 1899 Session I, C-03a

additional twenty head of stamps is to be erected. Capable management has made this one of the foremost mines in the district. One hundred and eighty men are employed, and large sums have been spent on water-races and air compressing machinery. The management deserve great credit for the position this mine has attained.

Woodstock. —The Woodstock Company appear, to a great extent, to have overcome the difficulty they had in treating their ore. The vanners introduced seem to have fulfilled expectations, as the returns from this company show a marked improvement, and I have no doubt that in the near future the mine will be made a payable one. The company employ 161 men.

Talisman. —The Talisman Company have exceeded all expectations, whilst their ore has continued to run over £4 per ton. That this mine will prove a highly payable one there is no room for doubt. It is unfortunate that they are so cramped for room on their machine-site, and that there is so little available space for enlarging their mill, which, I believe, they desire to do.

The London and New Zealand Exploration Company have recently acquired the Victor Waihou and Talisman Extended Special Claims. There is every reason to believe that the Talisman and Crown reefs run into these properties. Large and extensive development works are to be inaugurated at once, and a large number of men are being put on. This company has evidently acquired a very valuable property, and, as it is under capable management, it should prove a remunerative investment.

Rotokohu. The Saxon No. 1 and No. 2 Special Claims have been taken over by an Auckland company. A good deal of development work has been accomplished, with considerable success.

Imperial. —Little work of importance has been done. More capital seems needed, and energetic measures taken to fully open the mine, which has every promise of becoming a payable one.

Page 36

No. 14. Mr. James Coutts, Inspector of Mines

to-the Under-Secretary for Mines, Wellington. Sir, — Inspector of Mines' Office, Thames, 29th April, 1899. I have the honour to forward herewith the annual statistical return and report on the mining industry in the Auckland District for the year ending 31st March, 1899.

Page 49

Karangahake.

Woodstock Gold-mining Company's Mine. —The usual works necessary for keeping up a constant supply of ore have been carried on—that is, driving, sinking, and stoping on the reef. The mine is well opened, and there is plenty of ore in sight to keep the battery, which consists of forty heads of stamps, constantly crushing for some time to come. The method of treating the ore from this mine for some time past was not as satisfactory as could be desired, as the ore contained coarse, as well as fine gold, and the cyanide process did not give results anything like equal to tests; consequently experiments have lately been tried in order to save a larger percentage of gold, and an alteration in the form of a concentration-plant has been adopted, which, in conjunction with the cyanide process, is giving better results, and the present mode of

treatment is wet-crushing, amalgamation, concentration and cyaniding. 9,850 tons of ore has been treated, for 17,427 oz. of bullion; value, £15,692 3s. 6d.; and a hundred and sixty-one men have been employed.

New Zealand Talisman Mine.— This company's mine is now well opened up, a large amount of development work having been done during the year. The reef will average 4 ft. in width throughout, and has been driven on for a considerable distance at the different adit levels. This mine is well situated on the north-eastern side of the high range known as "Trig. Hill Station," and no sinking or expensive pumping-machinery should be required for many years to come, therefore the mining expenses cannot be very great, and the ore is delivered at a small cost, being conveyed in buckets down a wire-tramway direct from the mine to the mill. In the Bonanza section a good chute of payable ore has lately been discovered, which has greatly enhanced the value of this property, and in consequence the monthly returns from the month of August have been nearly doubled. The company's reduction-plant is in close proximity to the mine, and consists of two stone-breakers, twenty head of stamps, one Krupp ball-mill, six berdans and amalgamating-tables; and the cyanide plant includes fourteen vats, twelve of them being 22 ft. and the other two 18 ft. in diameter. A revolving drying-furnace is erected, and, if required, is capable of putting through 40 tons a day, and is working very satisfactorily. 8,696 tons of ore was treated, for 44,541 oz. 19 dwt. of gold; value, £32,648 13s. 1d.; and an average of ninety-four men were employed.

The New Zealand Crown Mines (Limited). —Mining operations on this company's property are being vigorously proceeded with, the work being now directed more to opening up the mine at a depth, the chief point of development being the sinking of the main underlie-shaft on the reef near the entrance of the main adit-level. The reason for sinking on the reef is that owing to the surface of the property being of a very precipitous nature, a suitable place could not be selected to sink vertically. This shaft has now attained a depth of 150 ft., and the prospects met with are said to be most encouraging. Two levels have been opened out from this shaft—No. 1 at a depth of 70 ft., and No. 2 at a depth of 140 ft., both drives being pushed ahead with all possible speed. A large chamber has been excavated over the top of this shaft in which is erected a powerful winding-engine driven by compressed air and lighted up by electricity. Some considerable distance in the same adit-level another shaft is also sunk down on the reef to a depth of 140 ft., and over this shaft a winding-engine is fitted up similar to the former and is used for winding purposes, but this is more of a temporary character, and is used at present for the more expeditiously opening-up of the reef and for ventilation. When the levels that are being driven from the No. 1 shaft are connected with the workings in No. 2 shaft, the quartz will be trucked to the No. 1 shaft, and winding the stuff up No. 2 shaft will be discontinued. Stoping on the reef is proceeding over the different levels, and abundance of quartz obtained to keep the sixty heads of stamps constantly, crushing; and as the reef is from 4 ft. to 16 ft. in width, there is enough quartz in sight to keep the battery going for several years. 27,860 tons of quartz was treated, for 28,234 oz. 18 dwt. of gold; value, £55,483 5s. 4d., an increase of £14,363 3s. 2d., compared with the previous year, which must be considered very satisfactory. One hundred and eighty men are employed.

Imperial Mine.— This company has had from five to seven men constantly employed, the work being principally confined to putting in a low level and driving on the course of the reef, which has now been driven on for a distance of 143 ft. The reef is also being operated upon in a drive on the outcrop; but the reef formation is of a broken character, and the prospects met with here are not as good as could be desired; but the manager is sanguine that something of importance will be discovered at the low level.

Talisman Extended Mine. —This company had four men employed for the greater part of the year in extending an adit-level, with the object of intersecting any reefs that might run through the property; but as no important discovery was made the work was stopped, and arrangements are now being made to amalgamate it with the New Zealand Talisman Company's Mine.

Woodstock Main Reef. —For some time this company had twenty men employed prospecting their property, but as no payable quartz could be obtained, and the prospects met with being disappointing, they stopped all work.

Prospecting operations have been carried on in the Stanley, Sterling, and Waverley, but nothing of any importance discovered.

GOLDFIELDS AND MINES COMMITTEE (REPORTS OF). (W.C.F. CARNCROSS, CHAIRMAN.)

APPENDIX TO THE JOURNALS OF THE HOUSE OF REPRESENTATIVES, 1899 SESSION I, I-04⁸²⁸

Page 2

No. 121. —Petition of James Hosie. Petitioner seeks a reward for the discovery of gold, alleged to have been made by him at Karangahake and Puru.

The Goldfields and Mines Committee have the honour to report that they have no recommendation to make. 27th July, 1899.

Page 3

No. 222.—Petition of Alexander Mackay. Petitioner claims to be the discoverer of gold at Waihi and Karangahake, and seeks a reward.

The Goldfields and Mines Committee have the honour to report that they have no recommendation to make. 5th September, 1899.

⁸²⁸ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1899-I.2.4.3.6>

GOLDFIELDS AND MINES COMMITTEE (REPORTS OF). (W.C.F. CARNCROSS, CHAIRMAN.), Appendix to the Journals of the House of Representatives, 1899 Session I, I-04

1899

14 January

Waikino looks very busy about 9 a.m. and 2 p.m. Being the junction of the main Waihi and Waitekauri roads, it is nothing unusual to see as many as 60 horses and 8 coaches, as well as waggons, carts, etc, there at one time...

Up to the present 22 applications for Old Age Pensions in the Ohinemuri district have been sent in to the local Courthouse...⁸²⁹

17 January

Twenty-eight marriages, 52 deaths, and 158 births are the total for Paeroa and Karangahake for the last 12 months.⁸³⁰

20 January

The Talisman Company having decided to increase its area of ground by the taking over of the Talisman Extended Gold Mining Company's property, which consists of a special claim and battery site; the purchase was effected a few days ago, and the conditions are that the shareholders of the Talisman Extended Company are to receive 1 Talisman share for every 56 shares now held in the Extended. The purchase was made by the London and New Zealand Exploration Company, on behalf of the Talisman Company, the reason being that the latter had no reserved shares with which to complete the sale, while the Exploration Company were possessed of reserved shares. The property, Mr. A. H. Curtis informs our mining reporter, will be transferred to the Talisman Company in due course....

At Rotokuhu [Rotokohu], about five miles from Paeroa, several prospectors have been at work for some time past looking for a reef that is supposed to have shed the ore which has been picked up from time to time in the Rotokuhu stream, and in which colours of gold have been seen. Some time ago a "blow" of quartz was discovered, and the ground was consequently pegged out, but as the work then done did not reveal any defined body of ore, the ground was subsequently abandoned. It is now stated, however, that the long-looked-for reef has been discovered, and several special claims have been pegged out and applied for. On one of these claims two or three men are employed getting out quartz for a trial crushing, which they purpose forwarding to the Moanataiari battery at the Thames for treatment, so that more concerning the value of the alleged find should shortly be known.⁸³¹

⁸²⁹ <https://paperspast.natlib.govt.nz/newspapers/OG18990114.2.13>

Ohinemuri Gazette, Volume VIII, Issue 561, 14 January 1899, Page 4

⁸³⁰ <https://paperspast.natlib.govt.nz/newspapers/WAIGUS18990117.2.11>

Waikato Argus, Volume VI, Issue 383, 17 January 1899, Page 2

⁸³¹ <https://paperspast.natlib.govt.nz/newspapers/NZH18990120.2.96.4>

New Zealand Herald, Volume XXXVI, Issue 10965, 20 January 1899, Page 1 (Supplement)

28 January

The following are the totals of the various returns from seven Ohinemuri mines since crushing operations were commenced:-

Waihi	£877,785 0 0
Waitekauri	£149,542 0 0
Crown	£185,952 0 0
Woodstock	£90,584 0 0
Talisman	£37,184 9 6
Waihi-Silverton	£41,358 4 5
Komata Reefs	£19,681 11 11 ⁸³²

17 February

The New Zealand Crown Mines Company are carrying on extensive operations, and a new mine is now practically being opened up by the levels below the No. 6. The manager has altered the names of the levels, in order to save confusion. The No. 6 level in future will be known as the Waitawheta tunnel, and the levels underneath will be known as the No. 1 level, No. 2 level, or No. 3 level underneath, as the case might be. The same style will be adopted for the levels above, the No. 1 level above being the first level above the Waitawheta tunnel. Regarding the workings above the Waitawheta level, the No. 1 level, or old No. 4, has just encountered a break, which has had the effect of throwing the lode out of its course, but it is expected that the body will be shortly recovered again.⁸³³

Crown mine level numbering changed**17 March**

The news that the New Zealand Talisman Company had increased its capital by the issue of 50,000 shares, for the purpose of obtaining further capital with which to erect additional crushing plant, somewhat surprised New Zealand shareholders, who at first expressed dissatisfaction at such an important step having been taken without the knowledge of the shareholders resident in this colony. It has been explained to us that out of 150,000 shares originally in the company, something like 80,000 are held in the colony, and many of the colonial shareholders hold that Boards sitting in London should not have power, as they have at present, to carry out decisions arrived at without consulting the shareholders resident in the colony. As to details in connection with the increase of 50,000 shares, it is generally supposed that these shares are to be handed over to the London and New Zealand Exploration Company for £25,000, the Talisman Company also receiving from the Exploration Company the recently purchased property of the Talisman Extended Company. With the additional capital the Talisman Company intend erecting an additional 40 stampers and accessories. No definite information on this

⁸³² <https://paperspast.natlib.govt.nz/newspapers/MIC18990128.2.34.12>

Mount Ida Chronicle, Volume 29, Issue 1526, 28 January 1899, Page 1 (Supplement)

⁸³³ <https://paperspast.natlib.govt.nz/newspapers/NZH18990217.2.82.3>

New Zealand Herald, Volume XXXVI, Issue 10989, 17 February 1899, Page 1 (Supplement)

head has, however, been received by the local representatives of the company, so that, even at the present time colonial shareholders can obtain no official information as to the future intentions of the company. In the interests of New Zealand shareholders it is to be hoped that the Auckland Chamber of Mines, who have decided to inquire into the general question of the advisability of London Boards consulting New Zealand shareholders before taking any important action, will bring about an improvement in this connection...

Some trouble has arisen over circumstances in connection with the purchase of the Talisman Extended Company's property by the London and New Zealand Exploration Company. It appears that while 5000 paid-up shares in the Talisman Company were paid for the property by the Exploration Company, the shareholders of the Talisman Extended Company received 2500 shares. The gentleman undertaking the sale arranged terms with the Talisman Extended directors, who agreed to dispose of their property for 2500 shares. The point on which the shareholders are sore is that while they, through the directors, disposed of their property for 2500 Talisman shares, the Talisman Company handed over 5000 shares for the property. Some of the shareholders hold that the party negotiating the sale was merely an agent, and therefore, only entitled to agent's commission, while against this it is held that the directors of the Talisman Extended Company definitely agreed to accept 2500 shares, and also stated in writing their willingness to allow all shares over 2500 to be retained as commission. A meeting of shareholders has been held, when the action of those arranging the sale was adversely criticised, and it was decided to ascertain if the balance of the shares could not be secured. In fairness to the representatives of the London and New Zealand Exploration, and the Talisman Companies, it should be said that they had no knowledge of the terms arranged with the Talisman Extended Company, by the gentleman who arranged the sale...

KARANGAHAKE.

The Karangahake district affords employment for a large number of miners, the New Zealand Crown mines giving work to a very large section. Already this property has turned out quite £200,000 worth of bullion, and the splendid record of the past bids fair to be beaten by that of the future. The upper levels—those above the Waitawheta tunnel, or old No. 6 level—carried some very rich chutes of ore, and though the reef, by the erratic course it sometimes takes, has given a good deal of trouble, it has nevertheless been successfully followed for hundreds of feet downwards. Time after time large faults have intercepted its progress, and heaved it out of its usual course, but never yet have the management been baffled in securing its recovery. Just as often as it was heaved so it was picked up again. As already indicated, the major portion of the bullion won from the mine came from the Waitawheta tunnel and works above, but a comparatively new mine is being opened up by the explorations below, and it is anticipated that the Nos. 7 and 8 levels, or Nos. 1 and 2 below the Waitawheta tunnel, will reveal some rich runs of ore. An excellent class of ore, in some of which gold is freely seen, has already been broken out, and if picked out and treated separately, would yield a rich return. Mr. Daw's system of management, however, does not believe in picking the eyes out of a mine, but prefers a general treatment. By this means rich and poor ores are treated simultaneously and though this precludes sensational returns the latter are

nevertheless payable. Thousands of pounds have lately been expended in the erection of powerful pumping and winding machinery in the Waitawheta Gorge, for the purpose of systematically opening up the regions of golden ground below the river level, and the present prospects are such as to confidently anticipate the development of practically a new mine. The Waitawheta tunnel and levels above continue to produce large quantities of milling material, and during the past month 2624 tons of ore were treated for a yield of bullion valued at £4889.

Regarding the New Zealand Talisman Company's property, there is no doubt that extensive mining operations can be carried on for years to come without the necessity for sinking, the position of the property being second to none in the district. The company can command any height of backs, and, as already stated, the No. 7, or lowest level, is somewhere about 600 ft above the river, so that explorations can be carried on from this point and above, and keep the battery employed without the slightest trouble. The opening up of new levels will doubtless be undertaken shortly, especially as the increased plant, which it is intended to erect, will demand a much larger supply of ore. With regard to present operations steady progress has been made during the past month...

The month's return shows that 845 tons of ore were treated, for the payable yield of £3682 worth of bullion.

The Woodstock Company are pushing ahead with the alterations to the battery, so that when the new five 6ft vanners arrive from America, everything will be ready for their installation. These additional vanners will materially assist in the treatment of a larger tonnage of ore, so that the returns of the future should show a corresponding increase. During the past month 1295 tons of ore were treated, for a yield of bullion valued at £1885.

The Imperial Gold Mining Company are pushing ahead with the development of the reef in the low level, and during the past month the prospects have been considerably improved. A short time ago an outcrop of quartz was discovered about half-way between the upper working and the low level, and it is now intended to exploit this reef, and determine its size and quality.⁸³⁴

12 April

In another column will be found, notice of an application by Joseph Dihars for a lease of 100 acres of land at Karangahake for the purpose of raising coal.

The land is at the junction of the Waitawheta and Ohinemuri rivers, and is part of the ground known as Dickey's Flat.⁸³⁵

13 April

TALISMAN G.M. CO... During this month also the No. 7 level has been connected with the large hopper at the head of the aerial tramway by means of a ground tramway, supported on large trestles, some of which stand 26 feet from the ground...⁸³⁶

⁸³⁴ <https://paperspast.natlib.govt.nz/newspapers/NZH18990317.2.94.3>

New Zealand Herald, Volume XXXVI, Issue 11013, 17 March 1899, Page 1 (Supplement)

⁸³⁵ <https://paperspast.natlib.govt.nz/newspapers/OG18990412.2.3>

Ohinemuri Gazette, Volume VIII, Issue 585, 12 April 1899, Page 2

⁸³⁶ <https://paperspast.natlib.govt.nz/newspapers/AS18990413.2.131.3>

14 April

...The New Zealand Talisman Gold Mining Company's mine is looking as well, if not better, than ever, and there is no doubt that the company have in their mine one of the best paying properties in the district... A rather unfortunate occurrence happened last week, namely, the breaking of the aerial tramway. One of the large steel wire ropes snapped just as a truck of quartz was passing down to the hopper, a collapse resulting. The truck fell from a great height and landing on one of the water-race mains smashed right through it. Mr. Taylor (battery superintendent) and Mr. Curtis (general manager), who happened to be at Karangahake at the time on an official visit, were apprised of the occurrence, and steps were taken to repair the damage. Nearly the whole of the water in the mains was, of course, escaping, and thus a temporary stoppage of crushing operations was caused, but steam was got up in the auxiliary plant, and the stamps were that night once more set to work. Mr. Curtis proceeded to the Thames by the evening train to get the plates for the mains, whilst luckily wire rope was ordered from Sydney two weeks ago. This came to hand a couple of days ago, and the repairs are now effected.

In the battery I noticed that a Frue vanner has been set up in connection with a two-stamp battery, and this is now running experimentally. The object of the test is to discover how far concentration and amalgamation will work in the successful treatment of the Talisman ores. If it is found that the method is adapted to saving a high percentage of the precious metal, then, no doubt, the new plant, which it is intended to erect, will be fitted up with vanners...⁸³⁷

15 April

PAEROA JOTTINGS.

[By The Sentinel]

Measles are still very much in evidence... There is still a large amount of sickness prevalent both here and at Karangahake, principally among young children. Five deaths of infants occurred here in eight days...

Last week the Crown, Woodstock and Talisman Companies paid their employees. That means about £5000 in circulation, enough to make things lively for a while...

Another 20 head of stampers is to be erected by the Talisman Company...

Judgment was reserved by the Warden in the case against the Waihi Company for starting their battery to work at 9 p.m. instead of midnight on Sundays.

Twenty-four infants are reported to have been born at Karangahake within 12 hours.⁸³⁸

9 May

WOODSTOCK G.M. CO.

BY TELEGRAPH.—OWN CORRESPONDENT. Paeroa, Monday.

Auckland Star, Volume XXX, Issue 86, 13 April 1899, Page 9

⁸³⁷ <https://paperspast.natlib.govt.nz/newspapers/NZH18990414.2.86.3>

New Zealand Herald, Volume XXXVI, Issue 11037, 14 April 1899, Page 1 (Supplement)

⁸³⁸ <https://paperspast.natlib.govt.nz/newspapers/WAIGUS18990415.2.16>

Waikato Argus, Volume VI, Issue 422, 15 April 1899, Page 2

All the new vanners have now been installed, so that in future the return of bullion should show an increase.⁸³⁹

11 May

Governor Ranfurly at Karangahake.

(From Our Own Correspondent) Paeroa, May 10.

About 10.30 a.m. His Excellency the Governor, accompanied by Capts. Alexander and Ward, Warden Bush, the Chairman and Councillors of the Ohinemuri County Council, and several members of the Reception Committee, left Paeroa for Karangahake. On arrival at that place, the party was met by the band and conducted on to the platform which had been erected for the occasion. On this were assembled Messrs Hogg, Goldsworthy, Regan, Taylor, Clarke, Ryan, and Montgomery. Mr Hogg welcomed the Governor on behalf of the people of Karangahake. Last year, he said, the output of gold from Karangahake was valued at over £10,000 [per month]. This year he thought they would see it greatly increased.

In Karangahake, 100 head of stampers were now working. It was 24 years since prospectors first set foot in Ohinemuri. They had had many trials with different kinds of machinery, and many failures. They know they had valuable minerals in their midst, but they had not the proper method of treatment nor the money to develop it with, and until English capital was introduced miners were in despair. The cyanide process was tried at Karangahake first in the colony, and after years of trials the extensive works, which his Excellency would be shown that afternoon, were established. He then presented Lord Ranfurly with an address of welcome.

His Excellency, in reply, thanked them most heartily for their address. He could not return Home without bearing with him pleasing recollection of the colony, and its warm-hearted people. There had, he thought, been no Sovereign that had reigned over a more progressive people. All the machinery they used had been invented during Her Majesty's reign. He trusted the mines would prove dividend paying ones—not so much for the sake of the shareholders but for the sake of the colony. There was plenty of ground needed exploiting, and to do this required English capital. This capital would be forthcoming if capitalists saw there was a chance of getting some return for their money. The chemist had undoubtedly done a good deal in extracting gold, and he hoped more yet would be done in making the process less expensive than at present. He thanked them most cordially for their hearty welcome.

The school children, who were assembled, sang "God Save the Queen," led by the band. Three cheers were then given for the Governor.

Several little girls then presented His Excellency and suite with bouquets of flowers, which were gracefully acknowledged. The Governor then delighted the little ones by granting them a holiday to-morrow as well as to day.

The party were then shown through the Crown, battery by Mr F. R. W. Daw, superintendent, who carefully explained the methods of treatment used. His

⁸³⁹ <https://paperspast.natlib.govt.nz/newspapers/NZH18990509.2.68>

New Zealand Herald, Volume XXXVI, Issue 11058, 9 May 1899, Page 6

Excellency was then presented with a splendid souvenir of the visit, viz., a rewa rewa case containing little bottles showing the ore in various stages of treatment from the time it leaves the mine until it is fit for the bank.

The Crown mine and the Woodstock and Talisman batteries were also visited.

About 5.30 p.m. Lord Ranfurly left Karangahake, arriving at Paeroa about 6 p.m. He was then entertained at dinner in the Criterion Hotel by the members of the County Council.

During the evening he attended the Masonic ball, which was held in the Criterion Theatre, and tomorrow morning he leaves for Waikino and Waihi, where he will be shown through the Victoria battery and the Waihi mine.

It is estimated that fully 2000 were present at the reception in Paeroa this morning.⁸⁴⁰

THE GOVERNOR'S TOUR.

RECEPTION AT PAEROA AND KARANGAHAKE. AN ENTHUSIASTIC WELCOME. VISIT TO THE MINES AND BATTERIES.

ARRIVAL AT KARANGAHAKE. Subsequently the party took their seats in the carriages provided for them, and proceeded to Karangahake, which was also tastefully and appropriately decorated for the occasion. Quite an array of bunting was in evidence, whilst a large triumphal arch was erected in front of the Karangahake Hotel. Upon arrival at the township the Governor was met by the Brass Band, and escorted from the outskirts of the township to the dais, on which the official reception took place. In addition to the vice-regal party, Mr. R. S. Bush (Warden), and the members of the Ohinemuri County Council, the following members of the local Reception Committee occupied seats upon the platform: -Messrs. A. Hogg, Walters, Clarke, Goldsworthy, Taylor, Regan, Ryan, Montgomery, and W. J. Searle (secretary of the committee). Mr. Alexander Hogg, who, as one of the oldest residents of the Karangahake district, had been deputed to welcome the Governor on behalf of the local residents, addressed His Excellency. He congratulated the Governor upon having made his first visit to the Ohinemuri goldfields, and said that though the township was a small one, they had three valuable mines - the Crown, Woodstock, and Talisman. The gold returns from the district were increasing, and this year it was expected that the district would do better than during the last. The approximate returns from the mines, which had about 150 stampers at work, would be £11,500 for the present month, and he was pleased to note that there was every likelihood of the present crushing power being added to during the coming year, and the returns of bullion considerably increased. It was 24 years since the district had been originally prospected, and a large amount of work had been accomplished to bring it to its present position, they had had many trials. Different machinery had been experimented with, and they had had many failures and many hopes disappointed. They knew that the value in mineral was there, but until the introduction of English capital they had been afforded no adequate means of developing the mines of the district. The introduction of the cyanide process, the first experiments of which were conducted about a few minutes walk from where they stood, had

⁸⁴⁰ <https://paperspast.natlib.govt.nz/newspapers/THA18990511.2.19>

Thames Advertiser, Volume XXIX, Issue 9334, 11 May 1899, Page 3

revolutionised the system of gold extraction, and the extensive cyanide plants erected in the district was sufficient proof of what the introduction of that process had done.

AN ADDRESS PRESENTED. Mr. Hogg then read the following address from the residents of Karangahake: —

"To His Excellency the Right Hon. the Earl of Ranfurly, K.C.M.G., Governor and Commander-in-Chief in and over the colony of New Zealand and its dependencies. May it please Your Excellency. We, the residents of Karangahake, desire you to accept our cordial and loyal greetings on this august occasion, Your Excellency's first visit to our goldfields. We take this opportunity of earnestly assuring you of our high esteem for you, as Governor, and of our devotion and love for our beloved Queen, whom you have the distinguished honour to represent. We desire to express our heartiest wishes that health and happiness may attend Your Excellency, the Countess of Ranfurly, and family, and that your residence in these New Zealand isles may be one of health and prosperity, and when your term of vice-regal office expires, and you return to the Mother Country, we trust that you may carry with you a recollection of a most happy and prosperous sojourn in this fair land of our adoption."

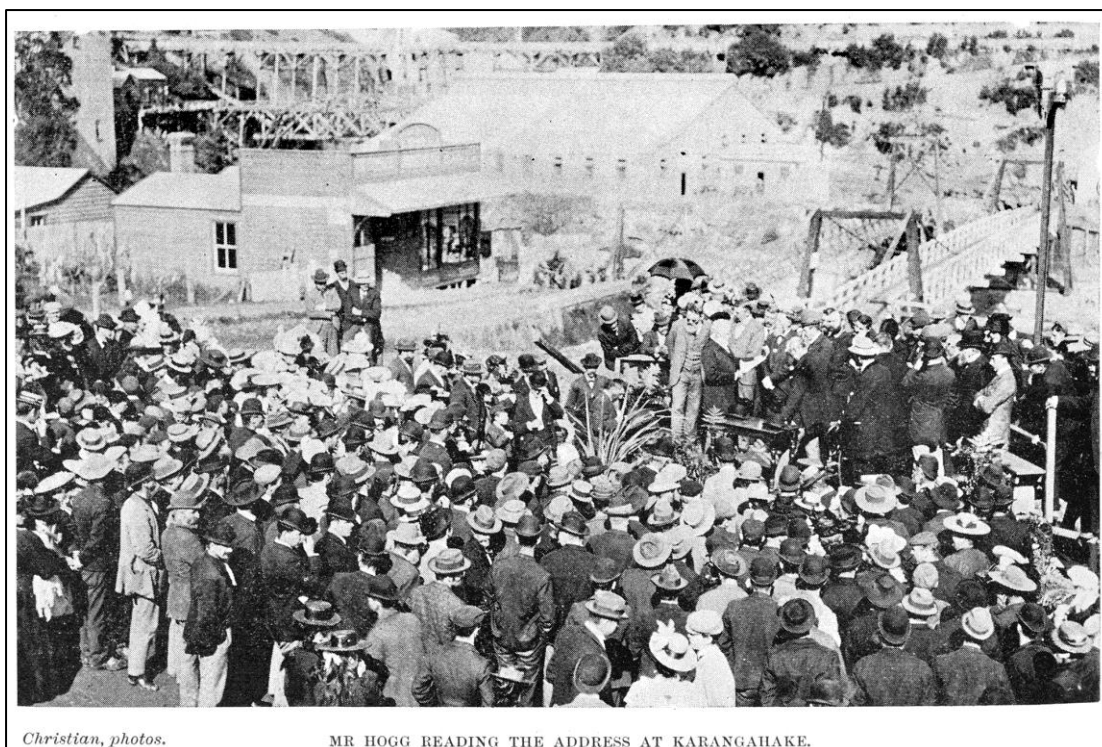
SPEECH BY HIS EXCELLENCY. His Excellency, in reply, thanked the local residents for their cordial reception, and said that it would be impossible for him to return to the Mother Country without retaining a pleasing recollection of the enjoyable and useful years which he had spent in the colony. As Her Majesty's representative, it was meet that he should notice what had occurred during her glorious reign, and there was no doubt that there was no Sovereign ruling over a people who had seen dependencies make such rapid progress in machinery, arts, and Empire—all had equally progressed during the years of her reign, in which time Greater Britain had more than doubled in extent. He trusted that the district would be a dividend-paying one, as much for the sake of the people of New Zealand as for the shareholders. He was satisfied that any amount of capital was required to develop the mineral resources of the colony, and he was equally satisfied that the colony afforded facilities for any amount of mining to be done. But to restore the confidence of the British investors they should do all that was possible to co-operate in proving the mineral wealth of the colony, and to bring their present working mines to be dividend-paying concerns. In the treatment of refractory ores much had been done, and great progress had been made. Chemists had done valuable work, and more work was yet required to be done, so that the processes now in use would be rendered less expensive. (Applause.) He again thanked them for their very cordial welcome. Several of the children attending the school then presented His Excellency and party with tasteful button-holes, after which the Governor announced that he had asked the schoolmaster to grant an extra day's holiday in honour of his visit.

MINING PROPERTIES VISITED. The party was then driven back again to the suspension bridge, at a point opposite the New Zealand Crown Mines' reduction works [Is this the Crown Co. workers' bridge, or the bridge near Mr Napier's residence? Or?], where they were met by Mr. F. R. Daw (general manager) and Mr. R. M. Bird (the representative of the Exploration Company, which is largely interested in the New Zealand Crown Mines). They were then

escorted through the battery and treatment plant, and were shown the various processes used in the extraction of the precious metal. Messrs. Daw and Bird explaining details of the processes in operation. During the tour through the battery and accessories His Excellency was somewhat surprised at the extensive nature of the plant, and judging by the close attention which he paid to the explanations of Messrs. Daw and Bird, and the minute manner in which he inspected the details of the working plant, he showed that he took more than an ordinary amount of interest in the method of extracting bullion. An adjournment was then made to the residence of Mr. Daw, where a champagne luncheon was laid out and partaken of by those present. After the toast of "The Queen" had been proposed and duly honoured, Mr. Daw proposed the toast of "His Excellency the Governor." The speaker expressed his pleasure at being afforded an opportunity of welcoming the Governor and showing him some of the details in connection with the mining industry of the Karangahake district. His Excellency had expressed his pleasure at what he had seen, and the speaker trusted that the Ohinemuri district would progress sufficiently to attract the attention of the capitalists at Home. Personally, he knew nothing of New Zealand when he left England for the colony, and he trusted that the Governor had found that the mining industry was of more importance than might at first be recognised. His Excellency, in replying, expressed his gratification at the progress made by the colony, especially in connection with the gold mining industry. He was sorry to note that England was not ready to send capital to the colony to develop the mineral resources and trusted that in the future this would change, and New Zealand mining shares would be in active demand on the London market. He deprecated over-capitalisation, and expressed the opinion that it was owing to this fault that the mining industry was not receiving that assistance from outside capital that it deserved. The output of gold was showing rapid increase, and he believed that the output for the present year would surpass that of many years that had passed. His Excellency also referred to the rapid advance made in the dredging industry, and said that in connection with the industry the local people were developing valuable properties, and, in reality, keeping the sugarplums at home. In the mining industry they should endeavour to make their mines dividend-paying concerns, and by this means induce the British capitalists to invest money in the mining districts of New Zealand, districts which deserved the expenditure of capital more than any others in the British Empire. After a short stay the party were conducted over the New Zealand Crown Company's mine, and were subsequently met by Messrs. F. Rich (Woodstock Company), and Taylor and Goldsworthy (Talisman), and shown the batteries and accessories of the company's mentioned...⁸⁴¹

⁸⁴¹ <https://paperspast.natlib.govt.nz/newspapers/NZH18990511.2.37>

New Zealand Herald, Volume XXXVI, Issue 11060, 11 May 1899, Page 5



Christian, photos.

MR HOGG READING THE ADDRESS AT KARANGAHAKE.

Mr Hogg reading the address at Karangahake.

Published in the New Zealand Graphic 20 May 1899. Christian.

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12 May

KARANGAHAKE. Owing to a slight delay last month, occasioned by the breakage of the aerial tramway and damage to the water-race, the Talisman return for the March period, was not available in time for publication in our last monthly summary. The return proved to be a very good one, 900 tons of stone having been treated for a yield of bullion, valued at £3609, or at the rate of £4 per ton. The tonnage is the largest yet treated during one month at the company's reduction works, and the return is a highly satisfactory one...

At the Woodstock Gold Mining Company's property the new vanners are now all installed. This company has been put to a considerable expense in altering the battery and mode of treatment, and it is hoped that there will be a corresponding increase in the bullion returns...

The New Zealand Crown Mines works below the Waitawheta tunnel are showing good results, and a payable class of stone is being despatched to the mill. Large quantities of low-grade ore are also being mined in some of the upper workings. This is being treated with the richer class of stone won from the lower workings. The return for the month is a record for the company, 2681 tons of ore having been treated for bullion valued at £6007.⁸⁴²

⁸⁴² <https://paperspast.natlib.govt.nz/newspapers/NZH18990512.2.73.4>

New Zealand Herald, Volume XXXVI, Issue 11061, 12 May 1899, Page 1 (Supplement)

9 June**Royal Mail and Victor Waihou special claims taken up by Messrs. Bewick, Moreing, and Co**

Karangahake is to receive a little more attention from outside capitalists, the Royal Mail and Victor Waihou special claims at Karangahake having been taken up by Messrs. Bewick, Moreing, and Co., on behalf of the London and New Zealand Exploration Company. The firm in question received a cable in the early part of the month to immediately undertake the rapid and systematic development of these mining areas, which adjoin the Talisman on its southern boundary. The Royal Mail claim has already been proved to contain the extension of the well-known Dubbo reef, a valuable gold-bearing ore body, and is in all probability traversed by the extension of the Talisman reef. It is anticipated that the extensive mining operations about to be undertaken will, within a few months, result in the proving of large stretches of payable

Operations have been resumed on the Talisman Extended Company's mine, Mr. H. Goldsworthy having been appointed manager by the London and New Zealand Exploration Company. Since assuming charge Mr. Goldsworthy has been engaged testing the various lodes that are known to traverse the company's property. Several of these ore bodies are composed of promising-looking quartz, and it is considered that several of them will develop well. One of the most promising-looking reefs is a cross lode, which appears to be running west, to the Talisman reef system, so that on the whole the Talisman Extended Company are starting operations under favourable circumstances, there being quite a number of quartz bodies awaiting development within the company's area.

The operations at the Woodstock Gold Mining Company's mine have been limited during the past month, owing to a difficulty in getting men. In the adjoining mine, Mr. Rich, the manager, however, expects that a fresh band of workers will start on a contract in the No. 5 level within a few days. In consequence of this difficulty the full complement of stamps have not been running. During the past month 1440 tons of ore were treated for a yield of bullion valued at £1724.

The New Zealand Crown mines are continuing the systematic development of the lower levels, and with a determination to open up a still lower level than the No. 2 below the Waitewheta tunnel, the sinking of the shaft has been resumed. Each of the other two levels below the Waitewheta tunnel, are run out at 10 fathoms apart, but in connection with the low level now being sunk for, it will be 20 fathoms underneath the No. 2 below, five fathoms of which have already been completed...⁸⁴³

7 July

At Karangahake a large amount of money will probably be expended on the Talisman Extended mine. The Crown Extended has also been purchased by an English syndicate, and active development work on this mine will be carried on. The increase of milling power at the Talisman battery will result in a

⁸⁴³ <https://paperspast.natlib.govt.nz/newspapers/NZH18990609.2.71.4>

New Zealand Herald, Volume XXXVI, Issue 11085, 9 June 1899, Page 1 (Supplement)

corresponding increase in the bullion output. A better extraction at the Woodstock, and extensive development work in the New Zealand Crown Mines low levels, besides the operations of several other local companies, will also add greatly to Karangahake's prosperity as well as of the field in general...

At a representative meeting of New Zealand shareholders of the Talisman Gold Mining Company it was stated that the meeting had been called to consider the advisability of taking immediate steps to secure representation in London of the colonial shareholders. At the meeting it was stated that out of 150,000 shares in the company, about 80,000 were held in New Zealand, and yet the local shareholders had absolutely no voice in the management of the company. It was suggested that a committee should be appointed to deal with the matter, and arrange for some permanent representation at Home of the colonial shareholders, as it would be impossible to forward proxies to England every month, or whenever occasion demanded. What could be done was the appointment of one or more to represent the New Zealand shareholders at Home. A local committee should be formed to devise some scheme to meet the case. It was decided to remit the matter to a committee to arrange that colonial shareholders should be consulted in connection with the company's affairs, and especially with regard to any change in the status of the shareholders...

KARANGAHAKE.

The mining industry of Karangahake district has received an impetus by the commencement of operations by the London and New Zealand Exploration Company (Berwick, Moreing, and Co.), on the Talisman Extended, Crown Extended, and Victor Waihou. The whole of the properties are under the management of Mr T. Goldsworthy, a thoroughly capable and experienced miner, and under his careful supervision the areas in question should develop well. The lodes of Karangahake have now been proved to be continuous for great stretches, whilst going downward the system improves in value, so that the prospects ahead of the mining industry at Karangahake are decidedly encouraging. At all events the mines; now taken up by the Exploration Company are to be thoroughly exploited. So far as the Crown Extended and Victor Waihou claims are concerned, attention during the past month has been paid especially to providing accommodation for the miners, and on both properties several new buildings are being erected. When these have been completed the work of development will be actively carried on. With respect to the Talisman Extended, operations are being actively pushed forward, one of the main points of operation being a drive on a cross lode which is apparently running into the Bonanza section. Already over 30ft has been driven on the lode in a south-easterly direction, and the prospects obtained are of an encouraging nature. With a view to proving the lode at a lower level, a crosscut is being driven to cut the lode about 90ft lower down the hill. This crosscut is the continuation of an old adit, which was picked up and cleaned out, and it is anticipated that the lode will be to hand when a further distance of 40ft has been driven. It is also proposed, I understand, to sink a lower level still, which will give an additional 300 ft of backs.

At the Imperial the low level has been steadily advanced during the past month, but the stone broken out has not given the results desired. Operations

have also been resumed in the United section, where a crosscut is being run out to cut the new reef discovered some time ago, which has since been traced on the property for a distance of over 600 ft. The hope of meeting a good class of ore is strong.

At the Woodstock the difficulty in getting men to work at the contract prices offered has not yet been overcome, and as a consequence the mill has not been running its full power. The last clean up was for a three weeks' running, so that in future the date of cleaning up will be altered to suit the outgoing mail. The last return that came to hand was £1360 worth of bullion, the product of 1000 tons.

The theory held that as the New Zealand Crown mines develop the downward continuation of their reef system, better value than obtained for some time past from the upper workings would manifest themselves is now being borne out, and the Crown has started on a career of record breaking. Since the February yield the output of bullion has steadily increased from £4889 to £6070, this being the return for the May crushing period. For this yield 2900 tons were treated. The sinking of the shaft from the No. 2 level below the Waitawheta is being carried on steadily, and when the next level is opened out the resources from these lower workings should be something considerable.

Those who have followed the reports of the development works at the New Zealand Talisman, which have appeared from time to time in the Herald, will recollect that some time ago an important development occurred at the No. 4 level, the noteworthy event being the discovery of the main lode south of the break. Prior to this, a lode formation was recovered on the south side of the fault, and gave good results for a length of over 100 ft. All of a sudden, however, this lode seemed to disappear in a "pug." The manager, having great confidence in the stability of the Talisman reef system, concluded, in view of the unsatisfactory termination of the reef, that the southern continuation of the main ore body had not, up to that time, been picked up, and that the stranger which had dissolved in a "pug" was only a branch. Mr. Goldsworthy, therefore, ran a crosscut into the western wall, and after 15ft of driving succeeded in unearthing a splendid body of stone. Since then, further exploitation has proved beyond doubt that the Talisman Company have now gained possession of their splendid lode, and although only 60ft have been driven along its southern trend the reef has given every proof of being valuable. The results here obtained were of such a satisfactory nature that they led the manager to still further test the existence of the lode in the same locality at the level above. A crosscut was started and driven westward for about the same distance as at No. 4 level, when the manager was again rewarded by the intersection of a fine body of ore measuring about 2ft or 3ft in width. The block is really a new one, and as the backs overhead and the ground below the Nos. 3 and 4 levels are entirely virgin it is clear that the prospects of the Talisman Company have been considerably enhanced by the new developments at the Nos. 4 and 3 levels. With regard to the No. 4 level works, stoping has been commenced over the back of the level, and at a place where the lode was recently recovered, whilst a crosscut is also being driven at this level further westward to cut the reef north of the footwall branch. All the other works are proceeding much the same as usual, and a payable class of ore is being won from the various sources of supply. The last return came to hand

after the publication of last Summary, the yield being 4100oz 11dwt of bullion valued at £3814 3s 6d—a fraction over £3 12s 9½u per ton; 863 tons of ore having been crushed and treated.⁸⁴⁴

3 August

SCHOOL COMMITTEE ELECTIONS. Delegates from the Paeroa, Waihi, Waitekauri and Karangahake School Committees met at Karangahake on Saturday evening last to discuss the present system of school committees elections. Under the present Act the elections are held at night, and in mining townships one-third of the miners are at work then, and unable to vote, and another third are taking rest. The delegates decided to petition the Government to have the Act amended to allow of the election being held between 12 noon and 8 p.m., nominations of candidates to be in seven days before the day of election.⁸⁴⁵

23 August

Serious Buggy Accident.

Two Ladies Injured

A buggy accident, which was attended with somewhat serious results, occurred in Ohinemuri Gorge, about a mile beyond Karangahake, on Saturday morning. It appears that Mr Hewitson, agent for the Singer sewing machines, was proceeding to Owaharoa in a buggy, and while going through the gorge he met a buggy and pair, being driven from Tauranga, via Waihi, the latter vehicle being occupied by Mrs Tuthill and baby and Mrs Webb. The meeting took place in a very narrow portion of the road, and by one of the drivers apparently losing his or her presence of mind a collision took place. The pair of horses controlled by one of the ladies took fright, and a bolt resulted, the ladies jumping out of the buggy.

The animals careered madly on towards Karangahake, and after negotiating a bend at the entrance to the township, dashed into one of Mr J. Clarkin's large waggons, drawn by a team of six horses, the driver of the waggon being in Mr Ellis' blacksmith's shop. The waggon was stationary at the time of the collision, but the force of the impact caused the buggy to be smashed completely and the pair of buggy horses to be thrown amongst the team of draughts. The latter then took fright and started off, but the now thoroughly frightened buggy horses became so intermixed with the team that on account of their plunging and frantic efforts to escape from the fearful tangle the two waggon - shafters were brought down and dragged along a short distance over a hard metalled road. The result was that both animals were severely cut, whilst one of the buggy horses were so badly injured that it had to be destroyed.

With regard to the women and child, it was seen that though the baby escaped unhurt the mother and friend were badly hurt, Mrs Tuthill being apparently in a serious condition. They were immediately conveyed into Karangahake,

⁸⁴⁴ <https://paperspast.natlib.govt.nz/newspapers/NZH18990707.2.76.3>

New Zealand Herald, Volume XXXVI, Issue 11109, 7 July 1899, Page 1 (Supplement)

⁸⁴⁵ <https://paperspast.natlib.govt.nz/newspapers/AS18990803.2.7>

Auckland Star, Volume XXX, Issue 182, 3 August 1899, Page 2

where Dr Buckby, of Paeroa, who was telegraphed for, was soon in attendance. He found that Mrs Tuthill had fared worst, her body being very much bruised, while she had sustained nasty cuts on the face and head; in fact, Dr Buckby was compelled to put in eight stitches in one gash. Mrs Webb was also badly bruised, in addition to receiving a severe shock. Both patients are now doing as well as can be expected.⁸⁴⁶

1 September

Regarding the Talisman mine, there is very little fresh to report in connection with the past month's operations, the only new work undertaken being the driving of No. 1 level. The reason for starting this work was because the block over No. 2 level and the surface was an exceedingly large one, and would be worked to better advantage by running in another level above. This is now being done...⁸⁴⁷

Was there no No. 1 level before this?

18 October

APPLICATION FOR WATER-RACE. — To the Warden of the Hauraki Mining District, at Paeroa.

Pursuant to "The Mining Act, 1898," the undersigned, The New Zealand Crown Mines Company, Limited, of Karangahake, hereby applies for a license for a Water - race as specified in the Schedule hereto...

Dated this 13th day of October, 1899.

SCHEDULE. Locality of the race, and of its starting and terminal points: Fleming's Creek, Waitawheta; commencing at a point on Fleming's Creek, 2½ chains [50 m] above its junction with the Waitawheta River, and terminating at the air compressor at the No. 6 level of the N.Z. Crown Mines. Proposed term of license: 42 years.

Length and intended course of race: length: about 92½ chains [1861 m, ie for the whole length of the water race]; course: along right bank of Fleming's Creek to headworks of Crown Mines main race held under Licence No. 609, thence down the said race head under No. 609 to the air compressor at the No. 6 level...⁸⁴⁸

Fleming's Creek is now known as Dubbo Stream. It appears they wanted to add this stream water to that of the Waitawheta in their water race. Did they ever do this?

26 October

NEW ZEALAND CROWN MINES. IMPORTANT DEVELOPMENT WORKS. Paeroa, Wednesday.

Splendid results continue to attend the development work at the No. 2 level below the Waitawheta, and since the intersection of the rich chute of ore

⁸⁴⁶ <https://paperspast.natlib.govt.nz/newspapers/OG18990823.2.12>

Ohinemuri Gazette, Volume VIII, Issue 623, 23 August 1899, Page 3

⁸⁴⁷ <https://paperspast.natlib.govt.nz/newspapers/NZH18990901.2.66.3>

New Zealand Herald, Volume XXXVI, Issue 11157, 1 September 1899, Page 1 (Supplement)

⁸⁴⁸ <https://paperspast.natlib.govt.nz/newspapers/OG18991018.2.19.5>

Ohinemuri Gazette, Volume VIII, Issue 639, 18 October 1899, Page 3

mentioned in the Herald last month, fully 100 ft have been opened up along the southern trend of the lode: The reef carries two fine walls, and is a splendid body of stone, measuring on an average about 4ft. At present it is only about 3ft, but variation in size is one of the characteristics of the Crown reef system. In productiveness the lode is proving highly satisfactory. Nice golden stone is frequently being broken out, and if the management were to treat the ore from the lower workings alone, some very rich returns would be secured. But thousands of tons of low-grade ore exist in the upper workings, and the whole of the quartz is put through the mill, and a good average maintained. Last month the quantity treated yielded close upon £3 per ton...⁸⁴⁹

27 October

The Woodstock Company has of late been labouring under difficulties, there not being sufficient capital available to launch out into any new prospecting scheme, or to undertake any development work on an extensive scale. The scheme for reconstruction has, however, been finally agreed to, and with a larger and more substantial working capital, it is hoped that the Woodstock management will be able to overcome all difficulties, and bring the property into the front rank of Ohinemuri bullion-producers.⁸⁵⁰

13 November

KARANGAHAKE SCHOOL OF MINES.

Mr Hogg, who is acting as secretary to this proposed institution informs me (writes our Paeroa correspondent) that he has received the names of 65 who are desirous of joining the school when started. With such a liberal response as this, and with the aid of the £50 given by the County Council, little difficulty should be found in starting the school, as the Government will largely subsidise any money raised locally.⁸⁵¹

22 December

Information of the proposed amalgamation of the Talisman Company with the Talisman Extended, Victor Waihou, Royal Mail, Mararoa, and Crown Extended, reached here early in December, and has been considered at meetings of the shareholders in Auckland and Wellington...

KARANGAHAKE. The New Zealand Crown Mines has made steady progress during the year, and at the present time shareholders can certainly be congratulated upon possessing one of the best equipped mines in the district. Mr. F. R. Daw, the company's superintendent, has instituted many changes since he came out from Home to manage the company's affairs at Karangahake, and it must be admitted that the alterations made have resulted beneficially. One of the matters that first engaged his attention was the mill, which, after a series of experiments and exhaustive trials, was converted into a

⁸⁴⁹ <https://paperspast.natlib.govt.nz/newspapers/NZH18991026.2.8>

New Zealand Herald, Volume XXXVI, Issue 11204, 26 October 1899, Page 3

⁸⁵⁰ <https://paperspast.natlib.govt.nz/newspapers/NZH18991027.2.67.4>

New Zealand Herald, Volume XXXVI, Issue 11205, 27 October 1899, Page 1 (Supplement)

⁸⁵¹ <https://paperspast.natlib.govt.nz/newspapers/AS18991113.2.85>

Auckland Star, Volume XXX, Issue 269, 13 November 1899, Page 5

wet-crushing process, thus abandoning the method of dry treatment. This alteration has been very successful, as not only is a better extraction secured, but low grade ore that previously would not be handled is now broken out and dispatched to the mill for treatment, where it can be crushed at a profit; and as there are thousands of tons lying in its virgin state, the Crown Mines Company will have many years' work to even exhaust the large quantities of ore reserves to be found from the Waitawhita tunnel upwards. But the company is not depending solely upon the upper workings for crushing material, inasmuch as what is practically a new mine is being opened up below the Waitawhita tunnel, and in this portion of the property some large blocks of ground containing rich chutes of ore are in course of exploitation. The high value of this ore has been fully evidenced in the returns of bullion which have come to hand of late...

In the coming year the output bids fair to be very much larger, as the crushing power of the reduction works is to be supplemented by another 20 head of stamper making 80 heads in all. The initial work connected with the increase is already under way, and at no distant date another 20 head of stamper's will be pounding away, in addition to the present power. In order to keep the big mill constantly running and well supplied with ore, Mr. Daw has been reorganising the tram system which connects the battery and mine. A new tramway about 85ft below the present tram-road is in course of construction, and as it is on an easy grade, and almost level, three horses will be able to work more effectively than the seven now employed, and, in addition to keeping up a better supply of ore, the cost of working will, by the new road, be reduced by fully £1000 per annum. Then more effective pumping-power is wanted at the low level, and the emergency is to be met by the installation of a plunger and draw-lift pump. This plant has already been ordered, and is now on its way from Home. The pump will be capable of lifting 300 gallons per minute from a depth of 1000 ft at a maximum speed of 11 strokes (6ft) per minute, so that the water difficulty will be successfully combated.

The work of opening up the new low levels has been vigorously pushed ahead during the past year, and already two levels (namely, No. 1 below the Waitawhita, and also No. 2) have been opened out, and some more chutes of ore revealed...

The New Zealand Talisman Gold Mining Company's property has had a very successful year's work, some splendid blocks of ground having been opened up. In the Summary of December 1898 reference was made to the fact that during the year the Talisman Company had acquired what was known as the Bonanza special claim, and it was stated that this section gave great promise of being a very valuable asset. These anticipations have now been fully realised, and during the twelve months just ended considerable success has been achieved...

One specially good feature about the mine is that there is such a large area of ground available without sinking being necessary. Fully 900 ft of backs are available from the lowest or No. 7 level, and if at any time sinking was desired the company have fully 700 ft to operate upon between the No. 7 level and the river level...

Altogether the company has a very bright future before it, and the mine has been so systematically opened up by Mr. W. Goldsworthy that the blocks of

ore reserves are sufficient to keep a much larger mill employed. The proposed amalgamation with the Talisman Extended, Royal Mail, and Victor-Waihou is regarded with favour here, as it would not only add another area full of promise to the present acreage, but would also provide an additional battery site. Of one thing there is no doubt, viz., that the producing capabilities of the Talisman are such as to warrant the erection of additional crushing power and treatment plant, and if, as it is proposed, the present stamps are supplemented by 60 more heads under the new conditions, the Talisman should become a very large bullion-producer. The present battery and cyanide works are under the capable management of Mr. Taylor, and everything is working very satisfactorily.

The Woodstock Gold Mining Company's operations have not been attended with the amount of success desired, but a reconstruction scheme has been taken in hand, and everything seems to point to its being successfully concluded, all the shares on the local register having been applied for. It is likely that operations at the mine will be in full swing again in the early part of the year.

Several new works have been decided upon including a shaft, by means of which new levels will be opened up. It is only reasonable to assume that the low level work will prove remunerative, for wherever mining is carried on to any depth in Ohinemuri, successful results follow. The Woodstock Company have already proved their lodes to carry some valuable ore chutes, and where these have been developed in the low levels some good returns of bullion should be forth coming. In the meantime the battery is crushing away on ore already mined, but will stop this work. The battery has been thoroughly equipped with vanners, and Mr Rich, the manager, is very sanguine that if he can get good ore to work on he will be able to get a very high percentage in the extraction of the precious metal. No new development works have been undertaken during the year just ended, and during the period great difficulty has been experienced in getting miners capable of working hard ground satisfactorily.

The Royal Mail group of mines was acquired by the London and New Zealand Exploration Company during the year, and since the purchase a great deal of prospecting work has been carried on with encouraging results. The Talisman Extended and other mines forming the group occupy a good position in the auriferous belt of country and shareholders are confident that as already some promising-looking ore bodies have been unearthed, development work will result in payable runs of ore being opened up.

The Imperial Company is steadily developing its property, and during the latter part of the year the prospects have considerably brightened.⁸⁵²

(clipping of the text made this article a challenge to interpret; some errors may have resulted)

Crown Company are to construct a new tramway to the battery, on the level
(our current walking track).

⁸⁵² <https://paperspast.natlib.govt.nz/newspapers/NZH18991222.2.55>

New Zealand Herald, Volume XXXVI, Issue 11252, 22 December 1899, Page 1 (Supplement)

AJHR 1900

Published 1900, but largely reporting on 1899.

THE GOLDFIELDS OF NEW ZEALAND: REPORT ON ROADS, WATER-RACES, MINING MACHINERY, AND OTHER WORKS IN CONNECTION WITH MINING.

APPENDIX TO THE JOURNALS OF THE HOUSE OF REPRESENTATIVES, 1900 SESSION I, C-03⁸⁵³

Mr. John Hayes, F.S.Sc, Inspecting Engineer

to the Hon. James McGowan, Minister of Mines. Sir, — Mines Department, Wellington, 21st April, 1900. I have the honour to present my first report as Inspecting Engineer to the Mines Department for the year ending the 31st March. My appointment to this position dates from the 1st November last.

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Mr. James Coutts, Inspector of Mines

Thames, to the Under-Secretary, Mines Department. Sir, — Inspector of Mines' Office, Thames, 28th May, 1900. I have the honour to furnish herewith the annual returns and report on the gold-mining industry in the Hauraki district for the year ending the 31st March, 1900.

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Karangahake.

Woodstock.— This company's property is cut in halves by the Waitawheta Stream and Gorge, which traverses it in an easterly direction, and mining operations up to the end of December last were confined to that portion of the property lying to the south of the Waitawheta, which has been worked in all the six levels driven on the Maria lode, and from which 12,000 tons of ore has been broken and treated. Since then all stoping has been stopped, and development and maintenance work only has been carried on.

The development of Taukane Hill to the north of the Waitawheta Gorge is now being steadily prosecuted. This section in years past yielded a considerable quantity of good ore from the small superficial workings then undertaken. Since then very little development work has been done in opening this auriferous section. Now Nos. 1, 3, and Tramway levels, 435 ft., 270 ft., and 73 ft. respectively, above the Waitawheta Stream, are being pushed ahead into the hill in a northerly direction to intercept the main ore shoot, from which the above-mentioned high-grade ore was taken; and the necessary connections between these levels are being made for ventilation, manways, ore-passes, &c. Good ore is now being obtained here. At the same time, Nos. 4 and 5 levels, Maria lode, in the southern section of the property, are also being pushed ahead southerly to open up new blocks, and the operations on the reef in this direction proved even better than was anticipated. A crosscut is also being driven from No. 4 level to intersect Shepherd's and other lodes lying to the west of the Maria lode. The actual amount of work done in the mine during

⁸⁵³ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1900-I.2.1.4.3>

THE GOLDFIELDS OF NEW ZEALAND: REPORT ON ROADS, WATER-RACES, MINING MACHINERY, AND OTHER WORKS IN CONNECTION WITH MINING., Appendix to the Journals of the House of Representatives, 1900 Session I, C-03

the year ending the 31st March, 1900, is as follows: 1,073 ft. of driving, 85ft. of sinking (winzes), 76ft. of rising, and 888 fathoms of stoping. The ore treated during the year has been taken from the Maria reef. The question of sinking below river-level to develop the lower levels of the Maria, Shepherd's, Woodstock, &c, reefs, and also the lower portions of the Crown reef, which dips into the Woodstock property, is now under consideration. The treatment now, as mentioned in a previous publication, consists of reduction of ore by two Blake crushers and forty stamps; concentration by means of sixteen Union vanners, and hydraulic sizers; separation of slimes from general tailings, which latter are then cyanided in percolation-vats. The slimes are concentrated by peripheral overflow discharge settlers, and treated with cyanide by agitation and decantation. The concentrates are being treated at the mill very successfully by means of agitation with cyanide. 11,454 tons was treated for 14,931 oz. of gold, valued at £13,500 2s. 10d. An average of 114 men were employed.

New Zealand Talisman. —This company's mine is opened up by seven adit-levels driven from the side of the hill, the lowest being 900 ft. below the outcrop of the reef on the surface near the top of the hill, and the levels have been driven on the reef from 800 ft. to 1,200 ft., the reef varying in size from 1 ft. to 12 ft. in thickness. The whole of the stuff is sent direct to the battery for treatment as it is won from the mine. The operations in the mine have been chiefly confined to driving and stoping on the reef, 9,558 tons being produced for 45,795 oz. 10 dwt. of bullion, valued at £33,028 14s. 4d., an average of 105 men being employed. The crushing plant consists of twenty head of stamps and one Krupp mill, together with all necessary appliances for the treatment of the ore by the amalgamating and cyanide process. In view of an amalgamation that will shortly take place with the Talisman Extended, an additional fifty head of stamps are about to be erected. Also another important work is to be started in the opening-up of the low level from the level of the horse-tramway that leads into the battery [Horse tramway? Is this low level going to be the No. 8 level. Was the tramway to the edge of the cliff, hopper and cableway to the battery, already there much earlier?].

Talisman Extended. — This property now includes the Royal Mail, the Crown Extended, the Victor, and Waihau, and comprises 199 acres. It is bounded on the south-west side by the New Zealand Talisman, and on the south by the Crown Company's mine. The above claims were worked separately until the 1st February last, when they were amalgamated and formed into what is termed an English company, and named the Talisman Consolidated Gold-mine (Limited). As this mine lies southward of the principal mines in the Karangahake district, the prospects of meeting with payable ore may be considered encouraging. The London and N.Z. Exploration Company (the former owners) have expended a large sum of money in developing-works with a view of thoroughly testing the property. Two low levels are being driven, one from the west side and the other from the east of the hill, a distance of 4,000 ft. apart, and are being driven to meet. This will prove a large belt of country, and 600 ft. below the surface; also the Crown Mines Main Lodes No. 1 tunnel is in a distance of 1,350 ft., and a reef formation has been penetrated through near the face of the drive for a distance of 40 ft., and some of the quartz tested has given encouraging results. The No. 3 tunnel west has been driven a distance of 1,000 ft.; it is penetrating a favourable class of

country for the existence of gold-bearing lodes, and one of the well-known reefs is daily expected to be intersected. No. 4 level has been started 1,200 ft. west of No. 3 tunnel for the purpose of cutting a lode formation discovered on the surface. This drive is now in a distance of 400 ft., and another 50 ft. of driving will cut the lode 200 ft. below the outcrop. North of No. 1 tunnel a crosscut has been driven, and the Dubbo reef intersected, and driven on for a distance of 170 ft. It is about 5 ft. in thickness, and assays from time to time have proved the quartz to be of a payable character. South-west of No. 1 tunnel, a strong lode, which varies from 3 ft. to 7 ft. wide, has been driven on on its northerly course for a distance of 300 ft., and two winzes have been sunk to a depth of 70 ft. These operations have proved the lode to be gold-bearing both in driving and sinking, and also that it improves in appearance with depth. In addition to the workings mentioned above, there have been a number of men employed on surface prospecting and in testing the different outcrops of lode formation located on the surface, and in a number of cases good prospects have been obtained. The average number of men employed during the year was forty-two.

New Zealand Crown Mine. —Operations in this mine have been vigorously carried on during the year: they consist in driving, stoping, &c, on the reef from the No. 6 (or Waitawheta) level upwards, and from here a large tonnage of high-grade ore has been obtained. Good progress has been made with the sinking of the main underlie shaft, which has now attained a depth of 240 ft. below the No. 6 adit-level. From this shaft three levels have been opened out at a depth of 70 ft., 140 ft., and 210 ft., and driven on in a northerly and southerly direction on the course of the reef for a considerable distance. The reef maintains its size, varying from 4 ft. to 14 ft. in thickness, and is said to be even better in quality than at the upper levels. Two Tangye pumps worked by compressed air have up to the present been sufficient to cope with the water under the No. 6 adit level, but a new pumping plant is expected shortly to arrive from England, and will be put in position in the No. 1 underlie shaft, and thus replace the Tangye pumps now in use. This plant will be capable of dealing with any water that may be met with in the lower workings for some time to come. A considerable improvement has been made in the tramway between the mine and the battery. At a point opposite the Talisman cyanide plant a deviation has been made, and an easy grade made to the company's mill, a horse now being able to take eight trucks to the mill instead of one, and three horses doing as much as seven formerly. The tramway terminates on a level with the ground-floor of the battery, and the trucks of quartz are hoisted up an incline tramway on the outside of the crushing plant up to the rock-breaker with an engine erected near the bottom of the incline [two counter-rotating pelton wheels]. The returns for the year ending the 31st March were 33,171 tons crushed for 37,455 oz. 15 dwt., valued at £71,185 12s. 9d. An average of 230 men were employed.

Imperial Mine. —The company has continuously worked the mine during the year, employing from five to nine men. The reef is 2 ft. in thickness at the low level, and has been driven on 246 ft. through very hard country. Assays made from time to time of the stone have given as much as £5 per ton, but most of the ore is low grade. There have also been a considerable amount of surface driving and prospecting done, amounting to 462 ft. of driving, 45 ft. of sinking, and 38 ft. of rising on the reef, also 336 ft. of crosscutting. No returns.

Prospecting operations are also carried on in the Shotover Claim, which is situated on the south side of the trig, station, where several rubbly formations have been discovered, from which good prospects of loose gold were obtained; but nothing properly defined has yet been opened up. An average of four men have been employed. No returns.

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Thomas Casley was killed on the 2nd March in the New Zealand Talisman Company's mine by a piece of rock slipping out of the hanging-wall on him when at work in the stope. The verdict of the Coroner's inquest was that he met his death by a fall of mullock from the hanging-wall, while working in the stope of the New Zealand Talisman Company's mine at about 10.30 p.m. on the 2nd March. As the ground appeared to be perfectly safe, no blame was attachable to any one.—Reported on the 6th March, 1900.

Page 109

Mr. Warden Bush

to the Under-Secretary for Mines, Wellington. Sir,— Warden's Office, Thames, 25th May, 1900. I have the honour to furnish herewith the usual annual report on the Hauraki Goldfields. It affords me very great pleasure to report a considerable increase in the yield of gold for the year ending December, 1899. The Waihi Mine produced gold of the value of £285,381, as against £272,688 in 1898; the Waitekauri, £74,276, as against £66,585 in 1898; the New Zealand Crown Mines, £67,165, as against £55,488; the New Zealand Talisman, £36,246, as against £32,648 ; the Woodstock, £17,088, as against £15,692; the Waihi-Silverton, £15,498, as against £11,501; the Hikutaia Gold Syndicate, £300; Jubilee tributers, £925; Waitekauri Extended, £3,749; Te Aroha, sundries, £1,865; the Alpha, £777; and the Komata Reefs, £7,659, which is a decrease of £10,136...

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Upper Thames. Karangahake.

New Zealand Crown Mines.- —This is one of the most important and consistent gold-producing mines in the peninsula. For the past six months its gold return has averaged between £4,800 and £5,350, notwithstanding the fact that the battery has during that time been compelled, for want of water-power, to crush with half its stamp-power. The shortness of water during the long dry season has been very much felt by the miners generally in this portion of the field. The early advent of the railway to Karangahake will prove a great boon to the mining community, as it will enable the company to supplement their water-power with steam. There are very extensive ore reserves in this mine, which will keep its eighty head of stamps, when the additional twenty are erected, fully employed for the next thirty years. The mine is extensively developed, and it would be a very long day's walk to go over the whole of its underground workings. This company have spent a large sum on machinery. The whole of the hauling in the underground workings is done with compressed air. For this and other purposes a very extensive air-compressing plant has been erected in the Waitawheta Gorge. Further pumping machinery capable of lifting 300 gallons per minute from a depth of 1,000 ft., at a maximum speed of eleven strokes per minute, is now on the way out from England. The management have adopted electricity to explode the explosives,

in place of the old method in the shaft-workings. This is not only a most efficacious plan, but it reduces the risk of accidents to a minimum, and I am told miners, once understanding this method of exploding their charges, prefer it to that so long in vogue. It would be well if electricity were more used for this purpose, if for no other reason than as a precaution against accidents. This mine is earning considerably more per month than pays its working-expenses. A new tram-line is being constructed, and when completed it is proposed to haul the ore from the mine to the reduction works with a locomotive [no] instead of horses as at present.

Woodstock Gold-mining Company. —This company's mine has so far been somewhat disappointing in the returns received, which have fallen short of expectations based on assay results. Some wonderful assays were taken, but results did not correspond in richness, the ore proving difficult to treat. Many methods were tried, and alterations made in the treatment plant, but none so far have proved satisfactory. A large amount of capital was expended, and the company had to reconstruct to procure further funds for development purposes: The company during the past year acquired the Stanley Special Claim, an adjoining property, into which some of their reefs are known to extend. Development-works in the mine are now being carried on, which it is hoped will enable the company to resume crushing operations again with better results. This battery at present is standing idle. The company proposes extending its water-race further up the river, and have already completed a dam. I trust it may be my lot in the next report to class this mine as one of the permanent gold-producers of the field.

New Zealand Talisman Company. —This company has recently acquired some adjacent properties—viz., the Victor Waihou and Crown Extended Special Claims —from the London and New Zealand Exploration Company. Considerable sums of money have been expended on these properties by previous owners, but with no results so far, although it is supposed that the Talisman and Crown reefs are dipping into these claims; but it is difficult to predict how far a reef extends, or what is 20 ft. ahead in solid rock anywhere. The extension of these reefs is therefore only a probability. It will, however, be a matter for congratulation if this company are fortunate enough to unearth them. The original Talisman ground has so far proved a consistent gold producer, and this year's returns are an increase on those of last. From January to April of this year the total yield is £8,370. This company are about enlarging their reduction-works, and the work of excavating is about being commenced. This mine may, I think, be looked upon as one of those which will continue to add its quota to the annual gold-production of this field.

The Imperial is still struggling on, carrying on a little work, and it is rumoured good prospects have been obtained; but until some capital comes to its assistance, so as to enable more energetic development-works to be undertaken, there is very little hope of this becoming a gold-mine.

On the Shotover Special Quartz Claim a considerable amount of driving-work has been done. Coarse gold was discovered in a puggy formation, which, assayed well, but so far no definite lode or reef has been met with.

At Rotokohu the Saxon No. 1 and No. 2 have been abandoned by the syndicate who took them up, because, when the low levels were driven in, the reefs —or, more probably, the outcrops found on the surface—did not exist

there. The fact of the railway-tunnel, which is three-quarters of a mile in length, requiring to be driven through the hill opposite the Crown Mines battery has led to some of the old abandoned claims there being taken up in the hope that the tunnel may lead to some gold-bearing reefs being unearthed within the area of these claims.

PUBLIC WORKS STATEMENT BY THE HON. W. HALL-JONES, MINISTER FOR PUBLIC WORKS, 28th SEPTEMBER, 1900.

APPENDIX TO THE JOURNALS OF THE HOUSE OF REPRESENTATIVES, 1900 SESSION I, D-01⁸⁵⁴

Page iv

Paeroa-Waihi. This was one of the new railways authorised last session. The works undertaken prior to the 31st March were in consequence mostly of a preliminary character. A good start was made shortly before the close of the financial year, and the work, as far as the long tunnel at Karangahake, is now proceeding actively. The approach cutting to the tunnel is being excavated, and the work on the tunnel itself will be commenced immediately the approach has been taken out. The temporary bridge over the Ohinemuri has been completed. This will admit of the spoil from the tunnel excavation being conveyed across the river and there utilised in the formation of the station-grounds, &c. The vote proposed for the current year is £12,000, which will admit of operations proceeding at a satisfactory rate.

⁸⁵⁴ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1900-I.2.2.2.1>

PUBLIC WORKS STATEMENT BY THE HON. W. HALL-JONES, MINISTER FOR PUBLIC WORKS, 28th SEPTEMBER, 1900., Appendix to the Journals of the House of Representatives, 1900 Session I, D-01

1900

31 January

Amalgamation and restructuring argy bargy at Talisman.

<https://paperspast.natlib.govt.nz/newspapers/NZH19000131.2.48>

New Zealand Herald, Volume XXXVII, Issue 11283, 31 January 1900, Page 6

7 February

Mr L. D. Nathan has received a cablegram from his London agent stating that the English office (presumably of the Talisman) does not approve of the amalgamation with the Talisman Extended group, and suggesting the possibility of a much larger combination - the amalgamation of the Talisman; Woodstock, and Crown. The amalgamating tendency with regards to more or less proved mines is very marked, both in Karangahake and Waihi.⁸⁵⁵

16 February

The local shareholders of the Talisman Gold Mining Company met on January 30, to consider proposals for the amalgamation with the Talisman Extended Gold Mining Company, which has since been carried out. A committee of shareholders reported in favour of the amalgamation, and the meeting seemed favourably disposed, but Mr. L. D. Nathan read a telegram from a London shareholder with a large holding in the Talisman, urging New Zealand shareholders not to consent to the amalgamation till they received additional information by letter, now on its way from London. This turned the feeling of the meeting in the direction of delay, and it was decided to take no action pending receipt of the letter referred to by Mr. Nathan. Meantime information has been received by cable from London of the approval given to the amalgamation scheme by the Talisman shareholders, and on February 3 Mr. L. D. Nathan, who is a large shareholder in the Talisman Company, received a cable from his London agent, Mr. C. de Pass, stating that the English office of the Talisman Company did not approve of the proposed amalgamation with the Extended group, and announcing an alternative scheme, stating that the Woodstock Company were open to negotiations with the Talisman Company with a view to amalgamation, subject to an examination of the property by Mr. Bayldon; further, that should this scheme be effected, there was reason to believe that the New Zealand Crown Company would approach the Talisman Company also with a view of amalgamation. The latest news on the subject received here was a cable received on February 5 by Mr. A. H. Curtis, local attorney for the Talisman Company, from the London directors of that company:—"Extraordinary general meeting has been held; terms of resolution carried by show of hands (as follows):—"That this meeting approves of the proposal to amalgamate with Talisman Consolidated by selling to it the undertaking and assets of the New Zealand Talisman Gold Mining Company, less 7½ per cent. dividend, for 149,000 fully-paid shares of the Talisman Consolidated Company.' Poll will be taken on February 14."

⁸⁵⁵ <https://paperspast.natlib.govt.nz/newspapers/THS19000207.2.36>

Thames Star, Volume XXXIX, Issue 9567, 7 February 1900, Page 4

(from our own correspondents.) KARANGAHAKE.

The prospects at the New Zealand Crown Mines are very encouraging, the lower levels being productive of remunerative results. The past month's operations at the battery have not been so steady as usual, the stampers, or at least some of them, having been hung up on account on insufficiency of motive power, due to the long spells of dry weather. Never in the history of Ohinemuri has the river been so low, so that it is difficult to draw off enough water to keep the stampers going...

Some first-class ore is being won from the reef at the No. 3 level, below the Waitawheta. This is the lowest point of operations, the shaft having recently been carried down to the level desired...

The formation of the new tramway has been completed to the battery, and excavations are now being made for the hoisting apparatus to work in alongside the battery. Everything is also in readiness for the installation of the new pumping plant as soon as it arrives, so that when the machinery, which is being made at Home, comes to hand, its erection will be considerably expedited.

The Talisman Gold Mining Company has been steadily exploring its valuable property during the last month, mainly by the advancement of the works that were being carried out prior to the Christmas holidays. Good progress has been made, and the different levels show a decided advance.

The Woodstock, Talisman Extended, and Imperial Companies are employing a fair number of hands in the development of their respective properties. Two tons of ore, broken out from the new reef discovered some time ago in the United section of the Imperial mine, has been sent to the Thames School of Mines for treatment.⁸⁵⁶

New (level, ie horizontal) tramway to Crown battery complete (current walkway). Images show it including a tunnel through a spur near the battery. This spur has been removed some time later (by quarrying activity?).

Hoisting apparatus being installed beside battery, to lift ore from new tramway to top of battery. Will be run by two pelton wheels.

16 March

A long spell of dry weather, of which we have not yet seen the end, has been experienced, and mining is suffering a good deal on account of the scarcity of water. This want is more particularly felt at the batteries where so much water is required for the purpose of providing motive power. The Ohinemuri River was never so low as it is at the present time, while the same complaint of batteries being temporarily stopped on account of scarcity of water comes from the Thames district. The question of motive power is no doubt one that many of the mining companies will have to face - that is if they desire crushing operations to proceed during the dry season without any interference, and this state of affairs can only be brought about by the adding of an auxiliary power in the shape of steam.

⁸⁵⁶ <https://paperspast.natlib.govt.nz/newspapers/NZH19000216.2.58.5>

New Zealand Herald, Volume XXXVII, Issue 11298, 16 February 1900, Page 1 (Supplement)

Local shareholders in the Talisman Gold Mining Company are still divided in opinion as to the two schemes of amalgamation before them. On the result of the poll in London being made known, when the amalgamation with the Talisman Consolidated was reported to have been carried by a majority of 66,000 or 67,000 shares, it seemed to be generally considered that the matter would be settled at the confirmatory meeting called in London for the purpose. However, the action of the Talisman directors in refusing to execute the agreement, and the consequent legal proceedings taken by the shareholders at Home to enforce the amalgamation, have put a different face upon the matter. Colonial shareholders, as represented by the Auckland committee, are taking active measures to assist the Home shareholders in the matter of removing the three directors who have declined to carry out their wishes. The committee's efforts are mainly in the direction of procuring further powers of attorney to increase their majority. At same time they have issued a circular letter pointing out that shareholders who revoke their powers of attorney given to the committee will, by doing so, be voting for the Woodstock amalgamation scheme. This scheme has become distasteful to some of the shareholders by reason of the receipt of a private cable from London, as follow:- "Have ascertained working capital Woodstock Gold Mining Company only £27,000. Stock Exchange quotation $2\frac{5}{8}$ of a shilling per share. Uncalled liability 4s 1d per share. Have ascertained proposed basis of amalgamation is: New Zealand Talisman, 149,000 shares; Woodstock, 150,000 shares." The shareholders who are opposed to the amalgamation with the Consolidated Group consider that the latter is an unworked and unprospected property, and that amalgamation therewith would be a sacrifice of their own interests. Mr. L. D. Nathan, a large shareholder, has taken up this side of the question and is an advocate for amalgamation with the Woodstock Gold Mining Company. He has announced by means of an advertisement, that, if all those who are opposed to the Consolidated scheme of amalgamation, and who wish to revoke their powers of attorney given to the local committee, will send in to him their names and number of shares held, he will cable same to his London agent. In the meantime the Talisman Gold Mining Company continue to work their property single-handed, and have just completed a crushing giving an excellent return of nearly £4 10s per ton...

The Woodstock and Talisman Extended Companies are conducting operations as usual. The former is constructing a fine big dam in the Ohinemuri River, further north of the point where the present supply of water is being obtained.⁸⁵⁷

Woodstock constructing new dam on Ohinemuri River

The remains of this wooden dam can still be seen a little upstream of the later eastern rail tunnel portal.

13 April

KARANGAHAKE ...One of the most important items of news is the amalgamation of the New Zealand Talisman Gold Mining Company's property with that of the Talisman Consolidated Company. As is well known, the

⁸⁵⁷ <https://paperspast.natlib.govt.nz/newspapers/NZH19000316.2.73.4>

New Zealand Herald, Volume XXXVII, Issue 11321, 16 March 1900, Page 1 (Supplement)

question has been under discussion for months, and, though many of the shareholders favoured the proposition, there were others strongly opposed to it, on the grounds that the shareholders of the Talisman were not receiving a quid pro quo. However, after months of indecision, the matter reached a climax during the past couple of weeks, and now the two properties are to be worked conjointly under the same management. One of the first works to be undertaken will be the erection of an additional 50 head of stamps, alongside the Talisman Company's present mill. This will necessarily mean a much larger output, and there is hardly a doubt but that the company will have to go in for extended exploration work, in order to supply the increased demand for ore. Other lodes which are known to traverse the ground will have to be tapped and worked, and, doubtless, one of the first to command attention will be the Dubbo reef. This lode is well known to old-timers as being capable of producing large quantities of payable crushing material, and as it would only mean extending the main crosscut at No. 4 level of the Talisman a distance of about 400 ft, in order to catch the line of reef, it is probable that this will be one of the first works to receive attention. In the meantime, work on both properties is proceeding satisfactorily, and the Dubbo reef is proving itself to be a strong and well-defined lode in the Royal Mail section of the Talisman Consolidated, the width of the ore body where developed being about 7ft. Good assay results are also procurable, and it is anticipated that when put on working tests the lode will prove equal to the emergency, and give satisfactory results. The two low levels, which are being advanced from each side of the range, are making satisfactory progress, and as these works have been undertaken, with a view to opening up the Talisman and Crown lodes, a large belt of country will be prospected thereby...

At the New Zealand Talisman Gold Mining Company's mine the works in hand are much the same as last month, though during the past month the No. 6 level crosscut has been instrumental in intersecting the main lode in the Bonanza section, and driving on its southerly course has been commenced...

The extensive additions to the mill are to be pushed ahead with all possible despatch, The returns for the past month show that 884 tons were treated for a yield of bullion valued at £2931 1s 3d.

The Woodstock Gold Mining Company's mine is in course of development, and the lodes are being opened up on both the northern and southern sides of the river. A winze is also being sunk from the old No. 1 level, Ivanhoe section, to connect with No. 3 level, now being driven in a northerly direction. Other development work is in progress, and, lately, a large and most substantial dam has been constructed across the Ohinemuri River, further north than the Crown Company's race. Regarding the Woodstock Company's mine, there is a good deal of misapprehension as to its productive capabilities, and as some anxiety may exist at Home, it may be of interest to detail the following information, which we have secured from the company:—So far from being worked out, as has been stated, it is a fact that only one of the four known reefs has been developed to any great extent, and as the country has not been explored there may still be other reefs yet to discover...

...As a fact, the management estimates that there are now, at the lowest estimate, fully 600,000 tons of quartz undeveloped in the mine above river level. This all lies in a known auriferous belt, and though, in common with

every other mine in the Auckland province, it must be expected to carry a lot of barren rock, it is inconceivable to suppose that it does not contain a great deal of pay ore, existing in the usual chutes, or "floors." The above shows the fallacy of the rumour that the mine is "worked out" and that its only hope is a resort to shaft-sinking, or amalgamation with the Talisman. It may also show the utter improbability that the Warden would grant to the Talisman Company the right to use the Woodstock levels as adits and highways to their mine so long as the Woodstock Company actively used them, and thought it proper to offer any opposition to such an application.⁸⁵⁸

28 April

Exchange Notes.

A company is being floated in Auckland for the purpose of working the deposits in the Ohinemuri River from the Woodstock Company's battery down a distance of one mile. It is estimated there are 60,000 tons of auriferous deposit, and assays from various parts show an average value of 27s 3d per ton. It is estimated the deposit can be treated for less than 10s per ton.⁸⁵⁹

11 May

Talisman starts work for new battery

Woodstock construct new dam on Ohinemuri

KARANGAHAKE. The New Zealand Talisman Gold Mining Company (Limited), having acquired the Talisman Extended claims, are losing no time in preparing for the treatment of a greater output of ore. Tenders have been received during the month for the excavation for the new battery foundations. The contract price accepted was £1775, and, as the contractors (Messrs. Taylor and Gwilliam) intend to push ahead with the work the new battery works will be expeditiously advanced. In the meantime the development of the Talisman Gold Mining Company's property is proceeding satisfactorily, and a large quantity of payable ore is being mined and treated at the battery. With respect to the Talisman Extended section, operations are being vigorously prosecuted. Two levels are being extended, one from the eastern, and the other from the western side of the range. The eastern face has now been advanced a distance of about 1500 ft, and, just lately, what appears to be a very important development has occurred. I refer to the intersection of a very large body of ore, the width of which is about 20ft from wall to wall. The lode is running north and south, with an underlay to the westward, and it may turn out to be the Talisman lode. This, however, cannot be proved yet, but, as the ore is of a kindly description and has been unearthed at a point where there are fully 600ft of backs available, it will be seen that, as the ore body is large, the discovery may prove of value to the company...

⁸⁵⁸ <https://paperspast.natlib.govt.nz/newspapers/NZH19000413.2.59.4>

New Zealand Herald, Volume XXXVII, Issue 11345, 13 April 1900, Page 1 (Supplement)

⁸⁵⁹ <https://paperspast.natlib.govt.nz/periodicals/NZGRAP19000428.2.16>

New Zealand Graphic, Volume XXIV, Issue XVII, 28 April 1900, Page 780

The Woodstock Gold Mining Company's mine is, once more, in course of active development, and the manager informs me that some good runs of pay-ore have been intersected...

The battery has been renovated, and made ready again for the resumption of crushing operations. A large dam has also been constructed across the Ohinemuri River, some distance above the Crown Company's race, and, I understand, the management intend extending the large mains from the old dam to the new. Altogether Mr. Rich is very pleased with the manner in which the mine is developing, and he anticipates that the new chutes of ore, which at present give great promise, will prove of good value to the company. The report, to the effect that the company's dam had carried away during the recent gales, fortunately proved to be incorrect.

The New Zealand Crown Mines Company's operations at the lower levels have been productive of highly encouraging results, and there is no doubt that the management has received every incentive to continue prosecuting the development of the lode on its downward continuation. Since my last notes on this company's workings the main incline shaft reached a sufficient depth to allow the new, or No. 3 level, below the Waitawheta tunnel, to be run out...

The new tramway to the battery has been completed, and is a great improvement, especially as it will facilitate the conveyance of ore to the mill and at the same time considerably reduce the working expenses. With regard to the new pumping plant Mr. Daw informs me that a cable has been received to the effect that a portion of the plant has been shipped, and is now on its way to the colony. This will arrive in due course, and no time will be lost in its installation.⁸⁶⁰

2 June

KARANGAHAKE SCHOOL OF MINES Paeroa. Friday.

A well-attended meeting of members of the Karangahake School of Mines was held last night in Montgomery's Hall, for the purpose of electing officers and Council, and to finally fix on a suitable site for the school. The chair was occupied by Mr. C. H. Taylor, who introduced the business, and stated that as the committee appointed in October last had reported on the work done to establish a mining school in the district, and had brought the scheme to a satisfactory starting point it was now for the meeting to appoint officers for the future...

The new committee subsequently met and arranged to proceed with the work of erecting the building at once. The number of paying members and students now enrolled is 48, and they are being added to daily.⁸⁶¹

For some background on the local Schools of Mines see: Karangahake School of Mines, Ohinemuri Regional History Journal 32, September 1988⁸⁶²

⁸⁶⁰ <https://paperspast.natlib.govt.nz/newspapers/NZH19000511.2.55.3>

New Zealand Herald, Volume XXXVII, Issue 11369, 11 May 1900, Page 1 (Supplement)

⁸⁶¹ <https://paperspast.natlib.govt.nz/newspapers/NZH19000602.2.5>

New Zealand Herald, Volume XXXVII, Issue 11388, 2 June 1900, Page 3

⁸⁶² <https://www.ohinemuri.org.nz/journals/journal-32-september-1988/karangahake-school-of-mines>

8 June

KARANGAHAKE. The New Zealand Crown Mines Company are continuing to improve upon the old style of working, and Mr. F. R. Daw, their capable superintendent, is ever on the alert to reduce the cost of working expenses, without minimising the efficiency or productiveness of the operations. One of the latest improvements, which will contribute in a large measure towards a substantial reduction on the former cost of conveying ore from the mine to the battery, is a new tramway. This line possesses a very easy grade, and is practically level from the back of the Talisman Company's offices to the branch at the terminus (the stamper floor of the battery). Three horses can now do the same work that until lately required seven, so that on this item alone there is a big saving. The line also is an improvement on the old one, and it has been so well ballasted that it will require very little repairing at any time, the trucks (containing one ton each), are now landed, as I previously stated, on the same floor as the mortar-boxes, and from here are hauled up an incline-tram to the top floor of the mill. The hauling engine is worked by two Pelton wheels, each turning in opposite directions, but attached to the same shafting. They are splendid wheels, and are capable of doing all the work required with three-quarter sluice heads of water per minute. A large hopper is now being erected at the head of the incline-tram, and when completed will enable the management to deal with a much larger quantity of ore than is now being sent up, whilst the tipping and emptying of the large ore waggons will be automatically managed, thus effecting a further material saving on the cost of handling the ore. A large new stonebreaker is also to be added to the crushing capacity of the mill, and it is anticipated that it will be ready for commencing operations in about a month's time...

Crushing operations at the mill have been continuous during the past month, with the exception of three days, during which time the battery was brought to a standstill in consequence of the flood waters. During the last crushing period 2927 tons of ore were treated for a yield of bullion, valued at £5966.

The Woodstock Gold Mining Company's mine is once more in course of active development, the Maria and Shepherd's lodes being operated upon. It is hoped that ere long the company will have the satisfaction of seeing the property once more a bullion producer. The new dam recently constructed in the Ohinemuri River proved its solidity about four weeks ago during a heavy fresh. Though the waters were most turbulent the dam stood the test splendidly, and those immediately connected with its erection deserve commendation for the excellent workmanship put into the structure.

Steady progress characterises the work at the New Zealand Talisman Gold Mining Company's property, and several large and valuable blocks of ground are now opened up ready for development...

The contractors for the new battery excavation are making good progress considering the bad weather, and the first floor has been nearly completed. The Talisman Extended Company's works are testing the country much further south than any other workings at Karangahake, and the importance of the operations in proving the continuation of the Karangahake reef system can hardly be overestimated...⁸⁶³

⁸⁶³ <https://paperspast.natlib.govt.nz/newspapers/NZH19000608.2.73.3>

TALISMAN G.M. COMPANY.

...The question was also asked why if there was so much ore in the Talisman mine was it considered necessary to amalgamate with adjoining areas?

In reply to this it was pointed out what was wanted for the Talisman mine was a battery site. The only other side that the shareholders could recommend was two miles away and at the very least three miles from the mine, which could not be reached by aerial tramway. At the Talisman Extended site the ore could be run straight into the battery by tramway with no intermediate station, so that the ore could be treated more cheaply.

Mr Hanna said the Woodstock Company valued its water race at £50,000 and asked Mr Mercer would it have been a valuable addition to the Talisman?

Mr Mercer said it would really make very little difference. They had ample water already for six months, a small engine to assist for three months, and for the dryest season the big engine. A lengthy water-race meant a lot for repairs, and it was done in ten years.

The question was also asked whether the Woodstock battery of 40 stampers already erected would not have done instead of losing time while erecting a new one. Mr Mercer said the Woodstock battery had been altered, and he understood under present circumstances it would not do for Talisman ore. Of course, it could be altered again, but it would mean working two separate plants with two gangs of men...⁸⁶⁴

21 June

A VALUABLE TUNNEL. PAEROA-WAIHI RAILWAY.

(By Telegraph.—Own Correspondent.) PAEROA, this day,

A petition is being taken round Ohinemuri for signature asking that another station be made at Karangahake at the back of the Karangahake Hotel, as the present site is not sufficiently central. It is, I think, open to doubt if the present site is not only the best, but the most central, but there is another aspect of the question beside the matter of sites for the station. If the line is diverged, as asked, and two short tunnels made through the side of the hill, instead of the main tunnel, at present decided upon, the grandest opportunity of getting a low level prospecting tunnel to prove the whole country on the north side of Karangahake at no expense to anyone will be lost for ever. This tunnel, going through solid country from the river level for 1200 feet, is worth, merely for prospecting purposes, fully £10,000. The main Karangahake reef, the parent lode of the Karangahake district, comes down through the centre of the proposed route of this tunnel. Many attempts have been made to prove its worth, the latest being by the Woodstock Main Reefs Company, but the work has never been thoroughly carried out, and the value of this huge lode is still an unknown quantity. Should a tunnel be put in, as is proposed to be done with this railway tunnel from the river level, discoveries may be made which would prove of the greatest importance to Karangahake, far outweighing the questionable advantage of station sites. For purposes of prospecting the two

New Zealand Herald, Volume XXXVII, Issue 11393, 8 June 1900, Page 1 (Supplement)

⁸⁶⁴ <https://paperspast.natlib.govt.nz/newspapers/AS19000608.2.62>

Auckland Star, Volume XXXI, Issue 135, 8 June 1900, Page 6

short tunnels mentioned would be valueless, which is one reason why I should advise caution in altering the route of the railway at this point.⁸⁶⁵

6 July

The Woodstock Gold Mining Company...

The battery is being fitted up with an ore-conveyor, and everything is being made ready for future work. At the back of the reduction works excavation for the air-compressor and steam plants are underway, whilst during the past month repairs to the new dam have been effected, and the latter, with 120 ft of an overflow, is now one of the finest dams to be found in any of the goldfields districts.

The New Zealand Talisman Gold Mining Company's property has now been amalgamated with the Talisman Extended, Royal Mail, and Victor-Waihou special claims, and from the 1st inst. is to be known as the Talisman Consolidated. That the property will be a valuable one seems more than probable, and one pleasing feature is that the works conducted in both mines will eventually dovetail into one another. For instance, in the Talisman Consolidated two levels have been driven from different sides of the range, and the Dubbo reef has been intersected and driven upon up to the Talisman boundary...

The excavations for the new battery have been most vigorously pushed ahead, and now the retaining walls are being built...⁸⁶⁶

New Zealand Talisman Consolidated Gold Mining Company created

16 July

A fatal accident occurred in the Talisman mine, Karangahake, on June 18, a miner named James Mabbar, a single man, aged 50 being killed by a fall of stone. Deceased was working in the stopes along with C. Gribble and C. Coghland. The ground had every appearance of being secure, but all of a sudden, just as Mabbar had inserted his pick, about 10 tons fell away from the hanging wall, and struck him on the side. When the mullock was removed he was unable to speak, and expired in a few minutes. An inquest is being held at Karangahake.⁸⁶⁷

3 August

Talisman: The excavations for the new battery are proceeding very satisfactorily, under the superintendence of Mr. C. H. Taylor, and about another month should see the work completed. On the first floor, at the base of the hill, a stone-retaining wall, about 120 ft long and 30ft high, is being built, whilst the bed logs for the stampers are being conveyed to the site, and altogether the work here has assumed a very active nature. It is proposed to

⁸⁶⁵ <https://paperspast.natlib.govt.nz/newspapers/AS19000621.2.6>

Auckland Star, Volume XXXI, Issue 146, 21 June 1900, Page 2

⁸⁶⁶ <https://paperspast.natlib.govt.nz/newspapers/NZH19000706.2.65.3>

New Zealand Herald, Volume XXXVII, Issue 11417, 6 July 1900, Page 1 (Supplement)

⁸⁶⁷ <https://paperspast.natlib.govt.nz/newspapers/NZH19000706.2.65.4>

New Zealand Herald, Volume XXXVII, Issue 11417, 6 July 1900, Page 2 (Supplement)

erect an additional 50 head of stamps (making 70 head in all). The crushing of 873 tons of ore during the month resulted in a return of bullion valued at £2150.

New Zealand Crown Mines Company...

The work of erecting another 20 head of stampers is proceeding, and as the greater portion of the necessary labour is done, it will only be the matter of a few months until the company will be crushing with 80 head of stampers...⁸⁶⁸

We will see if they actually do this. Spoiler; they don't.

The management of the Woodstock Gold Mining Company have accepted a tender for excavating a shaft chamber at No. 5 level, and the work is to proceed at once. The location of the shaft will be about 150 ft in from the mouth of No. 5 level, and at a point about 100 ft to the west of the lode...

The development of the Ivanhoe section has been stopped for the present, until the air compressor plant and machinery is installed. The excavation for the plant is proceeding satisfactorily at the back of the battery, whilst the grading of the pipe line for the race is almost completed. A start has also been made to construct the aqueduct across the Ohinemuri River. This is being erected with the object of carrying the fluming over the river.⁸⁶⁹

The grading of the pipe line means installing the large pipe from the new dam and joining it to the existing pipe at the old dam site. This will involve crossing the Ohinemuri River on what will be a Warren Truss bridge (the aqueduct). Bolts and cables of this bridge remain today.

From this time forward, images of the Woodstock Battery will show a steel boiler/furnace chimney, in addition to the brick smelt house furnace.

31 August

Talisman No.8 Level to be constructed

A contract was let during the month by the Talisman Consolidated Gold Mining Company for the erection of the battery buildings, for the reception of their additional plant at Karangahake. The successful tenderer was Mr. J. J. Payne, who contracted for the erection of the company's present battery. Part of the machinery, consisting of 20 heads of stampers and accessories, is on the ground...

Very satisfactory progress is reported in connection with the Karangahake School of Mines affairs, the sum required by the Government having been subscribed, viz., £150, so that the subsidy promised can now be made use of. The number of students who have made application to be enrolled totals 62, so that there is every prospect of the institution being a great success. The councillors have decided to proceed at once with the erection of a school building, and tenders are being called for the work...

KARANGAHAKE. The Talisman Consolidated Company are especially concerned in opening up new ground. A crosscut is being driven from the No.

⁸⁶⁸ <https://paperspast.natlib.govt.nz/newspapers/NZH19000803.2.58.4>

New Zealand Herald, Volume XXXVII, Issue 11441, 3 August 1900, Page 1 (Supplement)

⁸⁶⁹ <https://paperspast.natlib.govt.nz/newspapers/NZH19000803.2.58.4>

New Zealand Herald, Volume XXXVII, Issue 11441, 3 August 1900, Page 1 (Supplement)

4 level, in the Bonanza section, with the object of intersecting the Dubbo reef system, on the southern side of Karangahake Hill...

Another very important work is to be commenced shortly, namely, the driving of No. 8 level, at a point about 200 ft below the No. 7. This level, when driven, will be the main outlet for the mine, as all the ore from the upper workings will be concentrated there, and sent on to the battery, one length of aerial tramline being sufficient to land the ore at the battery [from the adit portal by ground tram to hoppers overlooking the river and battery, then cableway to the battery]. The bad weather recently experienced has militated considerably against speedy progress being made with the mill excavations, nevertheless, the contractor, Mr. F. Brown, has made very good headway considering difficulties. Part of the new plant has arrived, and the contractor for the erection of the battery will commence work very shortly. Mr. A. H. Curtis, representative for Messrs. Bewick and Moreing, and attorney for the company, is supervising the works. During the month of July the battery was kept running full time, and 910 tons of ore were crushed and treated for a yield of bullion valued at £2295 7s 9d.

The New Zealand Crown Mines Company are continuing their low level exploration works, and in addition to the development at the three levels below the Waitawheta tunnel, the sinking of the main shaft is in progress, in order to open up the next level. Altogether there is a very hopeful outlook from these low level explorations, especially as the runs of good ore, worked in the upper level, are found to continue downward, and also to improve as depth is attained. The new tramline, hoist, etc., are efficient, and there is no doubt that Mr. Daw has everything in splendid working order. At the reduction works 2912 tons of ore were treated during the month of July, and as a result bullion to the value of £5727 was obtained, this being an increase of £148 on the previous month's output, when 2840 tons yielded £5579.

At the Woodstock Gold Mining Company's mine the development of the Maria lode is proceeding at the Nos. 2, 3, 4, and 5 levels, whilst Shepherd's lode is also being further opened up in a northerly direction at No. 4 level...

The excavations for the new air-compressor plant are almost completed, and no time will be lost in installing the plant immediately upon its arrival from Home. In the meantime all the works now in hand for the extensive development of the property will be pushed ahead with all possible speed, these works including, of course, the sinking of the new shaft.⁸⁷⁰

28 September

The management of the New Zealand Talisman Consolidated Gold Mining Company lost no time in pursuing the policy laid down recently as a result of the amalgamation of the Talisman and Talisman Consolidated, and the scheme initiated for the extensive development of both sections is now well in hand. One of the most important works lately commenced is the driving of the No. 8 level crosscut, which has been started 200 ft below No. 7 level. This crosscut, at the time of writing, has been advanced a length of about 50ft. The No. 7 level is still being continued southwards on the strike of the Talisman lode,

⁸⁷⁰ <https://paperspast.natlib.govt.nz/newspapers/NZH19000831.2.70.4>

New Zealand Herald, Volume XXXVII, Issue 11465, 31 August 1900, Page 1 (Supplement)

whilst stoping operations are also under way, and from both sources of supply payable ore is being grassed. Very satisfactory results are also being obtained at No. 6 level, where the Bonanza section is yielding stone of a remunerative grade. At No. 4 level a very important work is in course of construction, namely, the extension of a crosscut to intersect the Dubbo reef system, which has already been proved to carry some good chutes of payable material...

The work at the battery site is proceeding very satisfactorily, and the excavations are practically completed, the only remaining boulders at the south end, it is expected, will be removed by the end of this month. The contractor for the erection of the new battery has got the work well in hand, and besides having the heavy timber cut and ready for placing, he has commenced to erect the framework of the building. Given fine weather, the new battery will doubtless be very quickly erected; in fact, Mr. Curtis (Bewick, Moreing and Co.) anticipates that the mill will be ready by the end of March next. It is intended that as soon as the new 50 head of stampers are ready, the present 20 head will be converted for the wet crushing process also. The battery is to be fitted up with the best modern appliances for the extraction of the precious metal, and, when completed will furnish 70 head of stamps. The 50 for the new mill have been ordered, and already 20 have been delivered, whilst the other 30 are in course of shipment. The vats for the cyanide plant have also been ordered, and so that the ore may have every facility for steady percolation the plant is to include 16 vats (22ft in diameter and 10ft deep), also 10 vats 22ft in diameter but 5ft shallower than the others. Altogether the whole of the works are in an advanced stage. During the month of August 950 tons of ore were treated for a yield of bullion valued at £2273.⁸⁷¹

It is obvious that the Talisman Company intend to retain the 20 stamps of the old battery. We will see in the future if this happens. The 50 new heads are going to be wet. The present 20 will be converted to wet. Do these 20 actually get used, and if so, for how long?

All the materials for the new battery can come to the site via the Howe Truss bridge crossing the Waitawheta.

26 October

At the Woodstock Gold Mining Company's mine... The shaft chamber at the No. 5 level is now finished, and the poppet legs are being erected. As soon as this work and the necessary timbering is completed sinking the new shaft will be commenced. The foundations for the air-compressor plant, at the back of the mill, are being prepared, whilst the iron fluming for the new main has come to hand, and generally speaking there is an air of activity about the workings which shows that the company are determined not to spare anything in order to thoroughly test the Woodstock property.

Talisman. The crosscut for No. 8 level has now reached a total length of 104 ft. The country has become more favourable for driving, and contractors may now be expected to make better headway. A tramway from this level has been laid down for a distance of 650 ft to the site selected for the upper hopper of

⁸⁷¹ <https://paperspast.natlib.govt.nz/newspapers/NZH19000928.2.58.3>

New Zealand Herald, Volume XXXVII, Issue 11489, 28 September 1900, Page 1 (Supplement)

the proposed line of aerial tramway to the new mill [so this will be a new tramway, and new hopper]...

The clean-up for September was finished on October 13, 3891oz 11dwt of bullion being recovered, the total value of which was £2193 10s. The percentage recovery was: Gold, 96.1 per cent.; silver, 62.1 per cent. For the new mill the excavation of the machine site and erection of retaining walls are now completed. These works have been greatly retarded by protracted rainy weather. The contractor for the erection of the building is making satisfactory progress. The pit for the reception of blocks for the stamp boxes is approaching completion, and foundations for the engine are being prepared. The whole of the machinery and plant is under order, and the greater part is either delivered, or is ready for delivery, on the battery site. As soon as the erection of the building is sufficiently far advanced, a commencement will be made with the erection of hoppers, stamp framing, and vat stands, and it is expected that by the end of January the bulk of the heavier work will have been completed. The present waterpower plant will be utilised for electric lighting, and for running the agitators. The concentrators are also to be run by water power, the water being obtained through a branch from the main race. A 15in diameter Victor turbine has been purchased for the driving of the concentrators.

The Imperial Gold Mining Company has been successful in intersecting the No. 1 reef in the eastern crosscut, and where cut through the lode was proved to be 5ft wide, the formation being composed of solid quartz. Nice prospects of gold were also obtained in the dish when the stone was tested in this way, and I understand that a bulk parcel is now to be taken out and treated by the battery process. Should the inducement be sufficient it is intended to erect a small crushing plant.⁸⁷²

8 November

A large quantity of mining machinery arrived by the Rakaia, and is now being landed at the wharf. Amongst the shipments are two Babcock boilers, ordered through Messrs John Burns and Co. for the Talisman-Consolidated Company's plant at Karangahake.⁸⁷³

9 November

The local attorneys of the Talisman Consolidated Gold Mining Company have had a model of their property, and part of the surrounding mining district, comprising in all 2600 acres, prepared for the information of London shareholders. The model, which is now in the hands of Mr. A. H. Curtis, is the work of Mr. A. L. Foster. It is on a scale of 200 ft to the inch natural, and includes the Crown and Woodstock properties...⁸⁷⁴

⁸⁷² <https://paperspast.natlib.govt.nz/newspapers/NZH19001026.2.60.4>

New Zealand Herald, Volume XXXVII, Issue 11513, 26 October 1900, Page 1 (Supplement)

⁸⁷³ <https://paperspast.natlib.govt.nz/newspapers/AS19001108.2.5>

Auckland Star, Volume XXXI, Issue 166, 8 November 1900, Page 2

⁸⁷⁴ <https://paperspast.natlib.govt.nz/newspapers/NZH19001109.2.54>

New Zealand Herald, Volume XXXVII, Issue 11525, 9 November 1900, Page 6

10 November

Warden's Court. The following business was dealt with:

Talisman G. M. Coy. Limited, site for an aerial tramway.

Talisman G.M. Coy. Ltd. special site for a hopper site.

Talisman G.M. Coy. Ltd Ground tramway at Karangahake.⁸⁷⁵

The above suggests that the tramway and cable are new features, not reuse of existing. Once the No. 8 crosscut and aerial cableway are completed, all ore from the mine will be transported to the battery by this route. The No. 8 level is the lowest level in the Talisman mine to date. All lower levels as they are created will raise ore to No. 8 level to reach the Battery.

12 November

KARANGAHAKE FIRE BRIGADE ANNUAL SPORTS.

(From Our Own Correspondent.) PAEROA, Saturday.

These sports were held at Mackaytown to-day, and were a great success. There was a very large attendance, fully 1000 being present during the afternoon.

The new bicycle track was greatly appreciated, and if similar ones were formed in Paeroa and Waihi the cycling events at these athletic gatherings would be more largely patronised. In the one-mile bicycle race a dog brought down nine riders, none of whom were seriously hurt, though several machines were badly smashed.⁸⁷⁶

4 December

KARANGAHAKE. The Talisman Consolidated Company's battery site presents a very busy aspect just now, the erection of the new mill being pushed ahead with all possible despatch. The weather lately has been splendid for outdoor work, so that building operations are now being conducted under more favourable circumstances than existed when the constructional work was commenced, for continuous heavy rain fell for several months. Work was not only retarded, but the concrete work did not really get time to properly set, and as a consequence a portion of the high retaining wall in front of the concentrator terrace came away during a severe storm. This caused a collapse of the framework of the vat-shed, in course of erection, but that damage has already been repaired, and the contractor is now making excellent progress with the battery...

The excavation of the site for the necessary new hopper is nearly completed...⁸⁷⁷

24 December

The Talisman Consolidated Gold Mining Company have acquired the Adeline Reefs special claim (formerly known as the Wealth of Nations), and also a

⁸⁷⁵ <https://paperspast.natlib.govt.nz/newspapers/OG19001110.2.14>

Ohinemuri Gazette, Volume IX, Issue 747, 10 November 1900, Page 3

⁸⁷⁶ <https://paperspast.natlib.govt.nz/newspapers/AS19001112.2.24.2>

Auckland Star, Volume XXXI, Issue 169, 12 November 1900, Page 3

⁸⁷⁷ <https://paperspast.natlib.govt.nz/newspapers/NZH19001204.2.76.3>

New Zealand Herald, Volume XXXVII, Issue 11546, 4 December 1900, Page 1 (Supplement)

small area of ground to the west of this claim, the additional areas aggregating over 100 acres. These claims immediately adjoin the Victor Waihou section of the company's property, and it is considered that they will prove to be a very valuable acquisition. Most of the mines shut down for the Christmas holidays on Saturday last, and will not reopen until about January 7.

KARANGAHAKE. Operations at the Woodstock mine are being steadily prosecuted, and the management are desirous of opening up as many new runs of ore as possible, before crushing operations are commenced again. One of the most important works recently commenced is the sinking of the new shaft from No. 5 level. This work is now well in hand, and it is intended to carry it down a depth of 300 ft to commence with, and open out an intermediate level at 150 ft down from the floor of No. 5 level. By this means the lower blocks of the Woodstock mine will be opened up, and it is confidently anticipated that some of the rich runs of ore developed in the upper level will be, if anything, of greater value as depth upon the reef system is attained...

At the New Zealand Crown Mines...

The main shaft has almost reached the required depth, so that early in the new year another source of supply will be available. The installation of the new pumping plant is also well in hand, and this too should be in working order by January or February, so that it will be seen the progressive policy adopted by Mr. Daw, the company's able superintendent, is being actively pursued, and additional reserves of ore opened up for future working...

Another pleasing feature associated with this company's operations is the declaration of the third dividend of 1s per share. The present dividend makes the total disbursed in this manner by the New Zealand Crown Mines Company £30,000.

The Comstock special claim, formerly known as the Sterling ground, has been taken up by a syndicate, and for some time past the large reef has been prospected close to the surface. The manager, however, concluded that the workings were too shallow, and so preparations are now being made to cut the lode at a much lower level. In fact, there will be from 500 ft to 600 ft of backs available on the lode when intersected.

What may prove to be an important discovery has just been made on the Imperial Gold Mining Company's property. It appears that last summer a very heavy bush fire raged in the gully forming part of the Imperial Company's area, and during a recent storm a big tree, which had been almost burned down, fell, and the roots being upturned, a body of quartz was revealed. When this fact came under the notice of Mr. Howard, manager of the company, he decided to trace the lode down the gully, and ascertain if it was worth anything as a carrier of bullion. The lode was located about 90ft east of the Hidden Treasure lode, and was traced down for a length of about 340 ft. As the stone showed some good prospects, Mr. Howard decided to open out on it, and the lode has now been exposed for a distance of over 20ft, with very encouraging results, as the stone, which is carrying sulphides, is impregnated with free gold...

With regard to the Talisman Consolidated the manager furnishes the following report...

The erection of the new battery is now making very satisfactory progress. The roof and sides of the main portion of the battery building are being covered with corrugated iron, and the extension of the cyaniding shed will be well advanced before work is suspended at Christmas. Mortar blocks for 50 new stamps are in position, firmly embedded in heavy concrete work. Contracts have been let for the erection of stamp framing, interval hoppers, and vat stands, and as the necessary timber is already on the battery site, these works should be completed early in the new year.⁸⁷⁸

31 December

We understand that the Minister of Mines has approved the appointment of Mr. W. H. Baker, B.Sc, to the Director ship of the Karangahake School of Mines.⁸⁷⁹

AJHR 1901

Published 1901, but reporting on 1900, 9 months' worth (there has been a change in the reporting period; henceforth for the calendar year).

MINES STATEMENT. BY THE HON. JAMES MCGOWAN, MINISTER OF MINES.

APPENDIX TO THE JOURNALS OF THE HOUSE OF REPRESENTATIVES, 1901 SESSION I, C-02⁸⁸⁰

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A School of Mines was opened in February last at Karangahake to meet the needs of the increasing mining population.

THE GOLDFIELDS OF NEW ZEALAND: REPORT ON ROADS, WATER-RACES, MINING MACHINERY, AND OTHER WORKS IN CONNECTION WITH MINING.

APPENDIX TO THE JOURNALS OF THE HOUSE OF REPRESENTATIVES, 1901 SESSION I, C-03⁸⁸¹

Mr. John Hayes, F.S.Sc, Inspecting Engineer

to the Hon. James McGowan, Minister of Mines. Mines Department, Wellington, 20th May, 1901. I have the honour to present my report, covering those of Inspectors of Mines, Wardens, and other officers connected with the department. As recently passed regulations require returns, for the compilation of statistics, to be sent by holders of mining claims to the Inspectors of Mines made up to the 31st day of December in each year, instead of the 31st day of March, as formerly, the reports, statistics, &c, in connection with mining

⁸⁷⁸ <https://paperspast.natlib.govt.nz/newspapers/NZH19001224.2.61.3>

New Zealand Herald, Volume XXXVII, Issue 11533, 24 December 1900, Page 1 (Supplement)

⁸⁷⁹ <https://paperspast.natlib.govt.nz/newspapers/THS19001231.2.7>

Thames Star, Volume XXXIX, Issue 9830, 31 December 1900, Page 2

⁸⁸⁰ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1901-I.2.2.2.3>

MINES STATEMENT. BY THE HON. JAMES MCGOWAN, MINISTER OF MINES., Appendix to the Journals of the House of Representatives, 1901 Session I, C-02

⁸⁸¹ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1901-I.2.2.2.4>

THE GOLDFIELDS OF NEW ZEALAND: REPORT ON ROADS, WATER-RACES, MINING MACHINERY, AND OTHER WORKS IN CONNECTION WITH MINING., Appendix to the Journals of the House of Representatives, 1901 Session I, C-03

operations herewith submitted are for nine months—viz., from the 1st April to the 31st December, 1900. Future reports, &c, will be for the calendar year, in the same manner as has hitherto been the case in respect to the annual reports on coal-mines. An exception to this rule will naturally occur in the case of tables showing expenditure on roads, bridges, tracks, prospecting, &c, by the Government, which will, as usual, be made conformable to the term of the financial year.

Page 2

SCHOOLS OF MINES. In the North Island the schools at Coromandel, Thames, and Waihi continue to be appreciated, and in the early part of this year a school was opened at Karangahake to meet the requirements of the locality.

Page 3

One of my senior scholars, Mr. E. B. McDuff, has acted as temporary assistant during February and March, and has performed his duties in a highly satisfactory manner; so well, in fact, that at the end of March he was offered, and has accepted, the position of Director of the Karangahake School of Mines.

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Karangahake is now an important part of the Upper Thames Mining District. During the year considerable developments have been effected at the New Zealand Crown, the Woodstock, and the New Zealand Talisman and Talisman Extended Mines. These two latter are now amalgamated under the title of "The Talisman Consolidated (Limited)," and the system of dry crushing hitherto in vogue is being superseded by that of wet crushing, a battery of forty stamps, with amalgamating, concentrating, and cyanide plants, being in course of erection at my visit.

At the Crown Mine, Karangahake, recent improvements consist in the sinking of a new underlay shaft on the reef, and opening out on the latter, which is of considerable width (often attaining 20ft.), and lies at an angle of about 45°. The ore has a value of about £2 7s. per ton. Hoisting and pumping machinery have been erected at this shaft, the power being compressed air, generated near the mouth of the mine by a two-stage compressor, built on the Reidler system by Messrs. Fraser and Chalmers. Compressed air is also used for working rock-drills in the mine. The compressor is worked by a 10 ft. diameter Pelton wheel, under a pressure of water due to a head of 80 ft., or, say, 34 lb. per square inch.

Improvements in the plant connected with the Woodstock Company's battery have been effected during the year, also a shaft for the purpose of winning the reefs at deeper levels has been started. Other mining operations on a small scale are conducted in the locality. I understand recent discoveries at the Imperial Mine are of a satisfactory character, and that it is intended to erect machinery to treat the ore.

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Mr. James Coutts, Inspector of Mines

Thames, to the Under-Secretary, Mines Department. Sir, — Inspector of Mines' Office, Thames, 8th February, 1901. I have the honour to furnish

herewith the returns and report on the gold-mining industry in the Hauraki district for the nine months ended 31st December, 1900.

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Karangahake.

Woodstock Mine. —Considerable development-work and improvements have been carried on during the past nine months. The dam and penstock to which the new pipe-line (extension of old line) is to be connected has been completed. The dam is 140 ft. long over all, has 120 ft. overflow, and in flood-time has carried a crest of 8 ft. of water. The grade-line for this new pipe-line of about 1,800 ft. has been completed, being built up of rubble-work, walling, and trestling. To carry the pipe-across the Ohinemuri Gorge a Warren truss-bridge of 80 ft. span has been built. This bridge has a 7 ft. wide decking in the clear between the trusses, and the bottom chord is 24 ft. above ordinary water-level, and 6 ft. above the highest known flood-level. The water-pipe which this bridge carries is 3 ft. 9 in. in diameter, and is now being connected up on the gradeline. This extension gives a head of 80 ft. at the Pelton wheel (which is to be erected under the battery building), more than doubling the old pressure-head. The old water-power main has been shifted to a lower level at the battery end in order to make room for the air-compressor and steam plants. Two air-compressors are to be erected—one of 1,000 and the other of 40 cubic feet free air per minute, the former an Ingersoll-Sergeant and the latter a Schram compressor. The Pelton wheel to be installed is 11 ft. 2 in. in diameter over all, and is to drive the air-compressors and battery during the greater part of the year. It is intended to install an auxiliary steam plant to give the necessary power when the water is deficient in the summer months. The large turbine by which the mill was recently driven has been removed, as it was quite unsuitable to the increased head of water. The excavation for the air-compressors and steam-engine and boilers is 63 ft. by 57½ft., the foundations being upon solid rock. The extreme height or depth of this excavation from surface at the back of battery to the bottom of the wheel-pit is 74 ft. of rock. The arrangement of machinery is so designed that the battery or air-compressing plant may be driven separately by either steam- or water-power, or both together may be driven by either of these powers, or the water and steam plants may be coupled together to drive the whole of the machinery. A new tail-race 69 ft. long under the mill, and below the old tail-race, has been driven and timbered so as to gain the utmost pressure-head. The old bridge across the Waitawheta Stream (connecting the battery with mine tram-line) has been taken down, as it was much decayed and too light for the economical ore-supply to the battery. A new and more substantial bridge going direct to the battery ore-hopper has now been almost completed. This bridge is 180 ft. long over all. It is designed for the transmission of horse and train of trucks as they come from the mine, and will carry such a distributed load aggregating 10 tons. In the mine, developments have been confined to the extension southwards of Nos. 2, 3, 4, and 5 levels, Maria reef; No. 4 level, Shepherd's reef; No. 3 and Tramway levels, Ivanhoe section; and sinking a vertical shaft to intersect the Maria reef direct, and from which the other reefs will be reached by crosscutting. These developments are said to be satisfactorily proving the existence of further and valuable ore-bodies. The shaft-chamber in No. 5 level, which is 45½ft. long by 37½ft. wide, and 40 ft. high, has been

completed, and a connection from it to the surface also made. The shaft is being sunk 8 ft. by 18 ft. in the clear, and has two hoisting-compartments, 6 ft. by 4 ft.; also a pumping-compartment and ladder-way, 6 ft. by 6 ft. 6 in. The shaft is now down 40 ft. from the floor of the chamber, the collar-set in place, and the concrete work around the shaft-mouth and chamber-floor completed. A small steam-boiler and winch have been set up in the shaft-chamber to expedite sinking until the air-compressor plant is completed. Average number of men employed, sixty. No returns.

Talisman Consolidated. —This company has been vigorously pushing on with developments in the mine, besides the ordinary work, pending the completion of the new reduction plant. This will comprise rock-breakers of the Blake type, fifty heads of gravitation stamps, amalgamating, concentrating, and cyaniding plant, and is expected to be completed about the month of April. The new mill will be of the wet-crushing type, and the number of stamps will be gradually increased with the increase of output from the mine. In the mine the crosscut to the Dubbo reef is now in a distance of 400 ft., and is passing through a good channel of country. A few feet more driving should reach the reef. At No. 5 level—Bonanza section—the reef in the south stopes is from 2 ft. to 8 ft. in width. A large tonnage of ore is being broken out here and forwarded to the mill for treatment. The south drive at No. 6 level is now in a total distance of 300 ft.; the reef is split up, and, in case of anything of importance being left, a crosscut is being put into the east to prove the foot-wall portion of the lode. At No. 7 level the south drive has been extended 130 ft. on the course of the lode. Stopping is also being continued over the back of this level in the Talisman section; the reef is from 3 ft. to 8 ft. in thickness, and is producing good payable ore. The crosscut adit at No. 8 level is now in 400 ft. On the Dubbo reef a rise has been started from No. 1 level on the reef, and is up 60 ft.; the lode is from 1 ft. to 4 ft. thick, the quartz being of a very kindly description. This rise will open up 100 ft. of backs; and from the assays of the stone made from time to time this block should prove highly payable. The crosscut to intersect the No. 2 lode is now in a distance of 135 ft., the country in the face being all that can be desired. The No. 2 level is in a distance of 530 ft. from the point where the reef was intersected. The country has been very hard, but a change for the better has taken place, and with the change the assays made of the quartz shows a great improvement in value. In the Talisman Extended section the north drive on the lode is in a distance of 180 ft.; the lode is 2 ft. 6 in. in width, and is improving as it is driven upon. 7,961 tons of ore was treated for 29,725 oz. 4 dwt. of bullion, value £21,980 2s. 1¼d.; and it is fully expected, with the additional stamps, a considerable increase may be expected next year. 150 men have been employed.

New Zealand Crown Mines Company. —This company has been vigorously pushing on with the development-works in the mine in sinking the main underlie shaft, extending the Nos. 1, 2, and 3 levels from this shaft, and stoping out the reef over the back of the levels from the No. 3 level upwards. The No. 1 underlie shaft has been sunk on the reef to a depth of 225 ft., and the reef has varied from 6 ft. to 12 ft. in width. The whole of the ore broken has been sent to the mill for treatment, and has given highly payable results. The No. 1 level from the main shaft has been driven on the reef south a total distance of 1,530 ft., and north it has been driven on for a distance of 60 ft. The No. 2 level has been driven south on the same reef a total distance of

1,575 ft., and north 225 ft. The No. 3 level south has been driven a distance of 217 ft. on the reef, and 38 ft. north. Driving is also proceeding on a new reef lately discovered in the Waitawheta tunnel, and the prospects of the mine generally are most encouraging. Good payable ore is being obtained from the new lode, and, as the main reef is explored under the Waitawheta (or bed of the river), the outlook is even better than anticipated. The company's works are well supplied with all necessary appliances for economically working the mine; instead of hand-labour, rock-drills are at work in most of the principal places (the motive-power being compressed air), thus reducing the cost of breaking the ore. The company has erected an electric plant, which is used for lighting up the engine-rooms, brace, and shaft, also for firing shots and signalling purposes. The installation of the new pumping plant and the addition to the battery are works of value, and should have an important bearing upon the future prosperity of the company. The tramway between the mine and the battery is undergoing an overhaul, the old rails being replaced with new and heavier rails. 26,130 tons of ore was treated for 26,397 oz. 16 dwt. of bullion, value £52,339 12s. 6d.; and a dividend amounting to £10,000 was paid to the shareholders, making a total of £30,000 paid in dividends. 240 men were employed.

Imperial. —The work carried out in this mine has been of a prospecting and development character. Three separate reefs have been operated on, which have averaged 3 ft. in width, and the same has been driven on for a total distance of 390 ft.; also 90 ft. of crosscutting has been done, 21 ft. of rising, and 37 ft. of sinking. At present there is no machinery on the ground, but the prospects are such that the board of directors contemplate erecting a small crushing plant. A trial crushing of 9 tons was treated for 12 oz. of gold; value, £30. Four men were employed.

Comstock. —The Waverley tunnel has been repaired and timbered for a distance of 500 ft., and 150 ft. also driven on the course of the lode. As the drive advanced, crosscuts were put in to prove the thickness of the lode, which was found to be 60 ft. in places, and carrying a little gold, but not sufficient to pay. As the reef was apparently better going down, the holders decided to extend the low tunnel, which is 300 ft. lower than the one mentioned. The low tunnel is in a distance of 528 ft., and will require to be extended a further distance of 450 ft. to intersect the reef. As the mine is in a good locality and well situated, the prospects are fairly encouraging. Four men are employed.

Crown-Woodstock Junction. —The operations in this claim have been of a prospecting nature. 300 ft. of driving has been done, 200 ft. of trenching and cuttings, and stoping done on leaders to the extent of 90 ft., from which 3 tons of ore was treated for 4 oz. 3 dwt. of gold; value, £10 11s. 6d. Two men are employed.

Adeline Reefs. —Work of a prospecting character was carried on in this mine with two men. I am informed the claim has lately been sold to Messrs. Bewick, Moreing, and Co.

Mr. Warden Bush

to the Under-Secretary for Mines, Wellington. Sir,— Warden's Office, Thames, 31st March, 1901. I have the honour to furnish the usual annual report upon the mining industry within the Hauraki Mining District.

Review of the Year. The gold yield for the year ending 31st December, 1900, amounts to no less than £635,033 19s. 3d. Compared with the output for 1899, this shows a decrease of £6,116 15s. 2d., and with 1898 an increase of £103,449 4s. 9d. The result of the year's operations is very satisfactory when it is considered that the number of companies contributing towards the total yield is less than was the case in 1899. Some notable absentees from the list of the past year's bullion producers are the Woodstock Gold-mining Company, the Waihi-Silverton Gold-mining Company, and the Komata Reefs Gold-mining Company...

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Karangahake.

New Zealand Crown Mines Company. —This company's property, with its sixty-head stamper battery, is producing satisfactory returns of gold each month. The last return was over £6,600. The total yield of bullion from this mine is near £360,000, and there is every prospect of its being one of our permanent gold-producers. Recently this company has acquired a considerable area of ground on the opposite bank of the Ohinemuri River, which it intends thoroughly prospecting. For this purpose a long tunnel is to be driven, the length of which will probably be one mile. Men were put on to this work as soon as the ground was secured. The ground in question had been held by several persons at different times for several years, but had been either abandoned or forfeited from time to time. None of the former holders were able to discover anything to make it worth their while to man and work this ground. I shall be pleased to hear of this venture turning out a success, as it will mean maintaining a considerable population in and around this locality. This company is erecting an engine to supplement its water-power for battery purposes, as it finds it has not enough power from the water-races during the dry season to keep all the stampers at work [this is the boiler and engine at the back of the battery]. A new and powerful pump has recently been erected in the mine, and there is nothing now to prevent this company from sinking to any reasonable depth. The main shaft is down about 300 ft. below the Ohinemuri and Waitawheta Rivers. This company has spent about £150,000 in connection with its mining operations in this mine, and employs some 250 men. Circumstances being favourable, I shall expect to see this mine one of the permanent supports of our gold industry.

The Talisman Consolidated Gold-mining Company, which is not only carrying on extensive development-works, but is also erecting a new and larger crushing plant, has not made any gold returns for the past few months. It is to be hoped, with a more powerful battery at its command, it will very quickly make up in larger returns of bullion what it has been prevented in putting out while the plant was under construction. Opinions are divided as to whether this company will increase its future returns in proportion to the increased area acquired when amalgamating with the Talisman Extended. It is to be hoped this property may prove one of the permanent gold producers of the district.

Woodstock. —For the past year this mine has produced no gold, its battery being shut down; but the company has been pushing on as expeditiously as possible the various works connected with the new development scheme. The extension of the water-race is about completed, and the sinking of the main shaft from below No. 5 level is being carried on; also other development-works on various lodes.

The Imperial Gold-mining Company is still endeavouring to secure ore of a payable quality, and it is said there is a prospect of this being obtained. A considerable quantity of good work has been done on this property, but the owners have received nothing up to the present for their labour and capital.

The Waverley is being worked with about eight men in conjunction with the Comstock, but the work has not proceeded far enough to enable one to express an opinion as to whether the expectations held with regard to the quality of the reef are likely to be realised.

There are a few other claims in this part of the district in existence, but these are either under protection or being prospected with a very small number of men. There is one small river claim on the Ohinemuri, taken up with a view to treating the tailings in the river which have escaped from the various batteries. Whether this will turn out a successful venture remains to be seen. It is doubtful if the results will prove remunerative, as only a very small percentage of gold is now lost in the tailings, so small that the tailings are not worth saving. The only chance of obtaining anything lies in the deposits of the tailings that may have escaped prior to the cyanide treatment being adopted, but in those days only small quantities of ore were treated as compared to what is now going through the reduction-works.

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WATER-CONSERVATION.

Mr. T. Perham, A.M.Inst.C.E., to the Under-Secretary for Mines, Wellington. Sir, — Mines Department, Wellington, 6th June, 1901. I have the honour to forward my fourth annual report, for the year ending the 31st March, 1901.

North Island. Domestic Water-supplies, Thames-Hauraki Goldfields.

The Ohinemuri County Council submitted plans, specifications, and estimates to the department for a domestic water-supply for Mackaytown. They were revised and approved, and are now being carried out, with minor extensions since authorised in consequence of the necessity of providing for numerous new dwellings, principally constructed by the mine-workers from Karangahake, where suitable land for private residences is very limited. A subsidy of £1 for £1 has been granted for this work, to the extent of £351 on a total expenditure of £702.

Other domestic water-supplies initiated and now completed by the Ohinemuri County Council are Karangahake, Waitekauri, and Waihi. The two former have been examined, and, as temporary supplies both for the suppression of fire and domestic purpose—considering the sizes of the mains and storage-tanks, together with the raised elevations of reticulation—were found satisfactory, and approved, pound-for-pound subsidies have been paid to the

extent of £607 6s. 5d. for Karangahake, and £445 2s. 5d. for Waitekauri; total, £1,052 8s. 10d.

An application for assistance towards the cost of the Waihi supply was refused on account of the doubtful purity of the water, and insufficient elevation of the intake for fire-extinction purposes. The temporary supply laid down by the Council is now quite inadequate to the requirements of this rapidly growing township, and a better and more permanent supply is greatly needed. With this object in view, an application has been made to the department to proclaim a reserve of 115 acres on the Mangatoetoe Creek for the purpose, which embraces the site for a dam and reservoir, selected by me, and mentioned in my preliminary report on permanent supplies for these mining townships. Undoubtedly the water from this source is the purest and most permanent to be obtained in the neighbourhood, and the elevation sufficient to command a fair pressure for fire-extinction.

Applications have been made for additional supplies for the growing mining townships of Golden Cross and Waikino, a portion of the latter being a Government township; and at a higher elevation a private township has been laid out, and is becoming rapidly settled by people working at the Waihi Company's battery. The county engineer has trial surveys in hand in connection with supplies for both settlements, but is of opinion that it will be an expensive undertaking, owing to the elevation of the tenements and the scarcity of pure and permanent creeks in the immediate neighbourhood. For Waikino a £2 for £1 subsidy has been asked for up to £800.

Complaint has been made by the Maoris residing round and about Paeroa, on the banks of the Ohinemuri River, that the water is rendered poisonous or impure, and a cause of sickness, by the cyanide discharge from the works at Waikino and Karangahake. It has been proposed to tap the mains of the Paeroa water system for a supply, but nothing as yet has been done in the matter. Although the water is always discoloured, I think it very doubtful that any deleterious influence of the cyanide tailings would extend as far as the immediate neighbourhood of Paeroa. This may be decided by analysis, and, if confirmed, it appears to me the Natives have a strong claim, as before the introduction of mining the water was in constant use by them.

Several plans and reports in connection with the above water-supplies have been revised and recorded.

PUBLIC WORKS STATEMENT BY THE HON. W. HALL-JONES, MINISTER FOR PUBLIC WORKS, 22nd OCTOBER, 1901.

APPENDIX TO THE JOURNALS OF THE HOUSE OF REPRESENTATIVES, 1901 SESSION I, D-01⁸⁸²

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Paeroa- Waihi.

⁸⁸² <https://paperspast.natlib.govt.nz/parliamentary/AJHR1901-I.2.3.2.1>

PUBLIC WORKS STATEMENT BY THE HON. W. HALL-JONES, MINISTER FOR PUBLIC WORKS, 22nd OCTOBER, 1901., Appendix to the Journals of the House of Representatives, 1901 Session I, D-01

Only preliminary work had been done on this line up to the close of the financial year 1899-1900. During last year, however, substantial progress was made, and work now extends for a distance of 6 miles 15 chains. The excavation of the long tunnel is well in hand, the position of the work at the end of September being as follows : — West end—

Top heading 741 feet. Bottom heading 675 „

Bricking 359 „

East end—

Top heading 469 „, Bottom heading 457 „

An air-shaft has also been sunk at the west end of the tunnel, about 600 ft. from the mouth. Platelaying has been started from the junction siding at Paeroa, and is well in hand towards Karangahake. A contract has been let for the construction of a combined road and railway bridge over the Ohinemuri River at Karangahake, the contract price being £8,771.

The expenditure on the line last year was £12,259, but this year it will be larger; an authority for £20,000 is asked for.

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New post-offices were erected at Karangahake...

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D.—I. APPENDIX E.

ANNUAL REPORT ON PUBLIC WORKS BY THE ENGINEER-IN-CHIEF.

The Engineer-in-Chief to the Hon. the Minister for Public Works. Sir,—
Public Works Office, Wellington, 1st July, 1901. I have the honour to submit the following report on the various works completed and in progress throughout the colony during the past year.

RAILWAYS.

Paeroa-Waihi.

Length, 12 miles 40 chains. —The formation on the first four miles up to Karangahake Station is finished ready for platelaying, which will be started shortly. The tunnel has been excavated at the west end for a length of 161 lineal yards, of which 76 lineal yards have been lined, and 106 lineal yards have been excavated at the east end. The tunnel is 1,190 yards long. Beyond the tunnel the works are partly done up to 6 m. 6 ch. A contract for the erection of a combined road and railway bridge over the Ohinemuri, to give access to the Karangahake Station, has been let to Messrs. J. and A. Anderson, of Christchurch.

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Post Offices

Karangahake. —The contract for the erection of a building for a post-office was finished in March.

1901

15 January

MINING AT KARANGAHAKE.

It will be seen from the summarised reports given elsewhere of recent meetings in London of the shareholders in the New Zealand Crown Mines (Limited) and the Talisman Consolidated companies, that additional plants for crushing are contemplated by both companies. The New Zealand Crown Mines (Limited) have now 60 head of stampers, and it is proposed to erect an additional 20 head, making a total of 80 stamps. The Talisman Consolidated Company, whose present crushing power of 20 head is now being added to by the erection of a further 50 head, also propose a still further addition of 30 head, so as to increase their milling capacity to 100 head of stampers. The directors of both companies consider that they are warranted in these contemplated extensions of their plants from the developments in their separate mines. Taking into consideration the fact that the Woodstock Gold Mining Company have a 40-stamper battery, it will be seen that when all the plants are running to their full capacity there will be a total of 220 stampers engaged in crushing the ore product of the Karangahake mines. This must of necessity have the effect of giving a great impetus to the mining industry in that district.⁸⁸³

16 January

TALISMAN CONSOLIDATED (LIMITED).

...The whole of the framework of the building for the new mill, including the cyanide shed, has now been erected, and the greater part covered with corrugated iron. The erection of stamp and hopper framing is making satisfactory progress, and the stands for vats are also in course of erection. Foundations for the engine and boilers are being prepared. A contract is about to be let for the conversion of the cyanide plant on the old machine site into an agitation plant for treatment of slimes, and this work will be put in hand at an early date. The work generally is making very good progress.⁸⁸⁴

18 January

...The Woodstock mine has, during the whole year, been withdrawn from amongst the bullion-producers of the district, owing to the desire of the management to open up on the various runs of ore, so that there may be no difficulty in keeping the battery fully supplied when crushing operations are recommenced. One of the most important of this company's development works was the starting of the new shaft from No. 5 level, which it is intended to carry down 300 ft, with a view of developing the low levels, where the rich runs of ore found in the upper levels are expected to be intersected with greater values.

⁸⁸³ <https://paperspast.natlib.govt.nz/newspapers/NZH19010115.2.7>

New Zealand Herald, Volume XXXVIII, Issue 11551, 15 January 1901, Page 3

⁸⁸⁴ <https://paperspast.natlib.govt.nz/newspapers/NZH19010116.2.61>

New Zealand Herald, Volume XXXVIII, Issue 11552, 16 January 1901, Page 6

At the Woodstock mine the work of extending the main pipe-line between the new dam and the mill is being actively carried on, whilst underground a good deal of activity is also being shown in the sinking of the shaft from No. 5 level and the opening up of new runs of ore on the Woodstock and Maria lodes.⁸⁸⁵

23 January

Navigation of the River.

DEPUTATION TO THE MINISTER FOR MINES.

Yesterday afternoon the Minister for Mines was waited upon at the Criterion Hotel by a large deputation of Paeroa business people, on the question of the navigation of the river.

Mr James Mackay was the first speaker, and he said that for some time past they had been much exorcised regarding the silting up of the Waihou and Ohinemuri Rivers. Until recently the Ohinemuri River had been navigable as far as Paeroa, but now it was being filled up with tailings. A petition to Parliament, asking for relief on this matter had been circulated and largely signed, but it had been too late for presentation to Parliament last year. He (the speaker) would, however, now hand the petition to Mr McGowan. At present an enormous amount of debris was being put into the river, and unless something was done to prevent it, he estimated that soon the mining companies would be putting half-a-million tons annually into the river. He then gave numerous instances of places where the river was shallower at present than it had ever been before. He saw no reason why the tailings at Waihi could not be stacked, and although the matter might be more difficult at Karangahake, still it would be possible to stack the tailings at Mackaytown, below Marsh's place. Dredging might, of course, be tried, and they might have a Tailings Board in Ohinemuri to make a levy on the mining companies to pay for the cost of dredging. It was not reasonable that the Paeroa people should have to pay to keep the river open. He did not know that the mines would last for ever, and it was a great pity that when nature had endowed the place with a fine navigable river that it should be ruined. He asked that the Minister for Mines would give the subject his earnest consideration.

Mr Moore said that there was no doubt the river was silting up. Three years ago the whole river was clear for navigation, but now there was only a narrow channel...

Mr McGowan said that this was a large question, and it would be well to look at it from all points. The steamers had stuck in the river even before there was any Waihi mine to put tailings into the river. The settlers as well as the mining companies, put silt into the river by draining. The lighter portions would be washed out to sea, while the heavier parts would settle in the river. The best way to find out what changes had been made was by having a survey. He would have an officer sent to report on the subject, and the report would be put before Parliament.⁸⁸⁶

⁸⁸⁵ <https://paperspast.natlib.govt.nz/newspapers/NZH19010118.2.74.3>

New Zealand Herald, Volume XXXVIII, Issue 11554, 18 January 1901, Page 1 (Supplement)

⁸⁸⁶ <https://paperspast.natlib.govt.nz/newspapers/OG19010123.2.13>

Ohinemuri Gazette, Volume X, Issue 771, 23 January 1901, Page 2

Hmm!

25 January

Hugo's Buffalo Minstrels opened to a crowded house in Paeroa, and were well received all round. They also performed in Karangahake two nights to crowded houses. At Waikino there was not standing room. The company were billed for one night, but were compelled to open two nights. The tour so far has been a great success.⁸⁸⁷

26 January

The Paeroa-Waihi railway works are proceeding as expeditiously as the railway vote will permit, and at the present time over 100 men are employed. Two faces are being advanced in the construction of the big tunnel at Karangahake, three shifts being engaged in each face. Over 20 men have been employed since Christmas on formation work on the Waihi side of the tunnel.⁸⁸⁸

4 February

Karangahake School of Mines

W H Baker, assistant instructor at the Thames School of Mines, had been elected to be Director of the Karangahake School of Mines which was then opened on Monday 4 February, 1901 by the Hon James McGowan, Minister of Mines. The School of Mines at Karangahake was opened on Monday with a satisfactory attendance of people. There are 50 students on the register.⁸⁸⁹

⁸⁸⁷ <https://paperspast.natlib.govt.nz/newspapers/AS19010125.2.29>

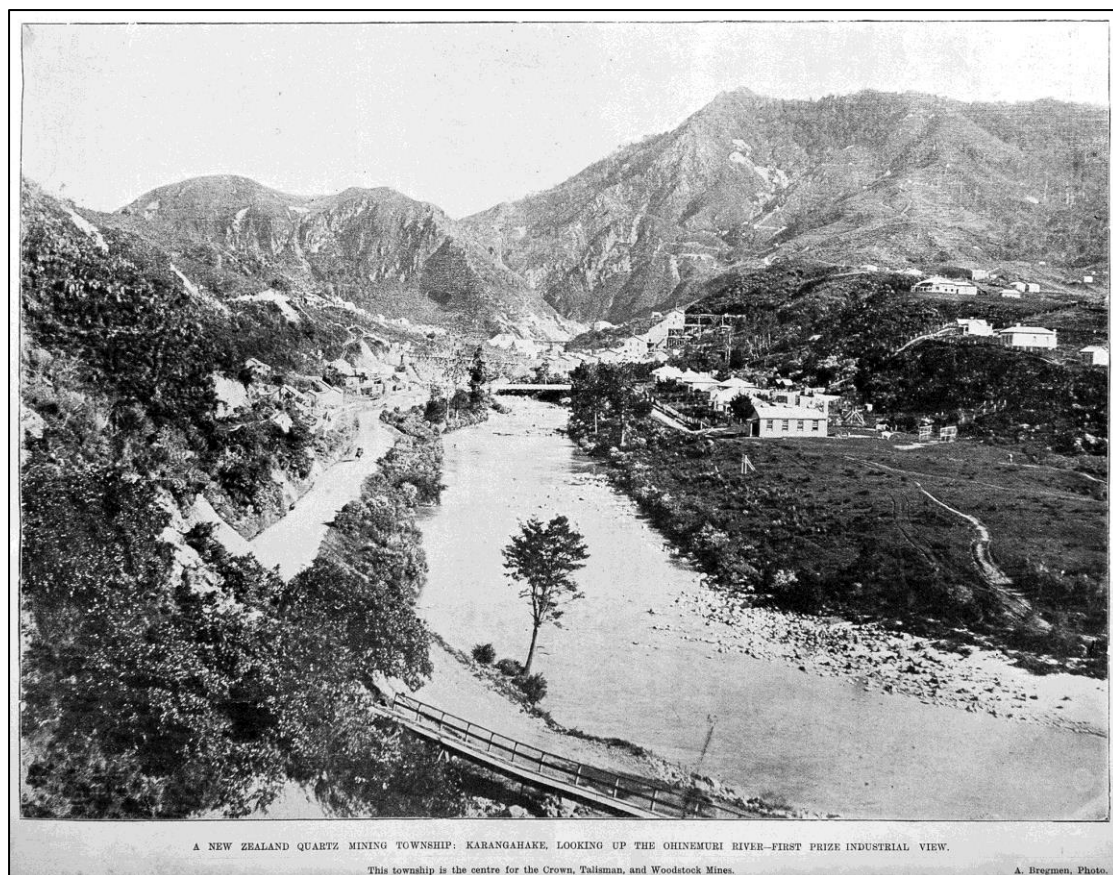
Auckland Star, Volume XXXII, Issue 21, 25 January 1901, Page 4

⁸⁸⁸ <https://paperspast.natlib.govt.nz/newspapers/NZH19010126.2.20>

New Zealand Herald, Volume XXXVIII, Issue 11561, 26 January 1901, Page 4

⁸⁸⁹ <https://www.ohinemuri.org.nz/journals/journal-32-september-1988/karangahake-school-of-mines>

Karangahake School of Mines. Ohinemuri Regional History Journal 32, September 1988



A New Zealand Quartz Mining Township. Published May 1901. AWN.

The newly built School of Mines building is the near building at the end of River Road, beyond the vacant ground that will later become the bowling greens. The building has a single gable, it will be extended (doubled) in 1903.

Over the river in the distance can be seen the suspension bridge between Irishtown and River Road, and beyond that the temporary bridge servicing the railway tunnel excavations. Note also the denuded nature of Taukani and Karangahake mountain.

Auckland Libraries Heritage Collections AWNS-19010503-01-02 A Bregmen.

6 February

The Woodstock Company have constructed a substantial bridge across the creek, from the tramroad to their battery. Adjoining the battery a building is being erected in which an air-compressor is to be kept, and from which, air-pipes are being laid to the shaft to carry air for the specific purpose of driving a pump, the engine at the shaft being reserved for winding purposes.⁸⁹⁰

25 February

Karangahake Notes. (From our resident agent.)

Considerable improvements are being made by the various local mining companies, and the employment of a large number of workmen is necessarily required in the erection of buildings and the construction of machinery. The Woodstock Company has recently erected a corrugated iron building at its mine; it is to be used for a change-room, and will afford convenience to the

⁸⁹⁰ <https://paperspast.natlib.govt.nz/newspapers/OG19010206.2.9>

Ohinemuri Gazette, Volume X, Issue 777, 6 February 1901, Page 2

workmen who are engaged in the mine. A number of men are employed laying heavy airpipes from the company's battery to the shaft; in all probability this work will occupy two or three weeks' time. Sinking operations have been recommenced in the shaft in real earnest. Hayes and Miller were the successful tenderers for the sinking of the shaft. It is rather a novel sight to see smoke ascending from the hillside, underneath the surface of which the winding engine is actively working [steam powered winding engine?].

A cessation of crushing operations has taken place at the Talisman battery during the past week, as a series of alterations are to be made prior to the completion of the new battery. The roofing of the new building is almost completed, and the machinery is being erected with all possible speed. The sight of about twenty men exerting their strength as they pull some heavy piece of machinery up the incline to the battery reminds one of the illustrated pictures, "How the naval guns were taken to the summit of some almost insurmountable kopje." Including carpenters, more than forty workmen are constantly employed erecting machinery, masonry, timber work, etc.

Ere long a large pump will be in proper working order at the Crown mine, and should more than suffice for the present pumping requirements.

Travelling shows, troupes and entertainments, during the past week have been conspicuous by their absence. The rarity has been obviously noticeable. Seemingly, itinerant performers know when the time of their visitation will be opportune, and they usually obtain ample remuneration by appearing about the time of the monthly payments of wages...

A continuous down-pour of rain was experienced here all day on Friday last, and consequently the volume of water in the river has been much greater than usual. It may justly be said tons of debris from tips, tailings from batteries and other refuse have been washed down the rapidly-flowing stream. A few downpours of rain, similar to the above-mentioned, will materially assist in the silting-up of the Ohinemuri River which is almost innavigable now below Paeroa.⁸⁹¹

28 February

Recommended to Minister for grant: Talisman Consolidated Company, one special site and one aerial tramway, Karangahake...⁸⁹²

22 March

KARANGAHAKE.

At the New Zealand Crown Mines Company's property every preparation is being made for the extensive development of the lower levels, and in order that the water may be effectively dealt with a splendid pump has been installed. The machinery for pumping and winding is such that almost every contingency is guarded against. During the month of February 2804 tons of ore were treated at the reduction works for a yield of bullion to the value of £4502, making the total output of the mine to date £337,581.

⁸⁹¹ <https://paperspast.natlib.govt.nz/newspapers/OG19010225.2.12>

Ohinemuri Gazette, Volume X, Issue 784, 25 February 1901, Page 2

⁸⁹² <https://paperspast.natlib.govt.nz/newspapers/NZH19010228.2.43>

New Zealand Herald, Volume XXXVIII, Issue 11588, 28 February 1901, Page 5

At the Woodstock Gold Mining Company's property at Karangahake very satisfactory progress is being made with the various works in hand, and the scheme formulated some time ago for the development of the lower levels of the mine is being carried out as quickly as possible. The shaft from No. 5 level has now attained a depth of about 90ft, and fairly good headway is being made, there being nothing out of the ordinary course of shaft-sinking to contend against. It is intended to sink the shaft to a depth of 350 ft, one level to be opened out at 150 ft down, and the other at the bottom of the workings. A rise is-being carried up from the back of No. 4 level on Shepherd's lode, and at present ore of a payable nature is being opened out for a width of over 5ft. Rising is also in progress over the No. 4 level on the Maria lode, and, until connections are effected and the works well ventilated, further driving will be suspended.

All the energies of the manager and staff are just now being devoted to getting the power plant installed, with a view to facilitating sinking operations, which at the present time are the first consideration of the company. The 8in compressed-air pipe line is completed, excepting about 60ft of connections on to the receivers at each end, whilst the reheater has been set up and bricked in in the chamber. The small compressor in the power-house has also been lined up on its foundations, and the men are now engaged fitting in the large Pelton wheel. This is about 11ft 2in in diameter, and, with six buckets [surely more than 6?] and shafting, it weighs five tons, and is capable of developing 450 horse-power. The nozzle connections have been made at the foot of the stand-pipe, so that it will be seen the work at this section is in a very forward state. The foundations for the large compressor, shortly expected, are also ready, and the manager intends to have the plant installed within 10 days of its arrival. Altogether a good deal of work is being carried on, and it is to be hoped that the large expenditure now being incurred will be repaid to the shareholders in the shape of good bullion returns.

Talisman Extended [being described separately, but part of Talisman Consolidated]...The excavating for the new hopper at the mill site is completed, and the timber is now being carted on to the ground, and the work of erection will be commenced shortly. The No. 2 hopper, at the No. 8 level, is in course of erection, and the work of excavating for the hopper at the No. 7 level is well underway. The dry-crushing plant has been finally closed down, and preparations are being made for the fitting of agitators within the cyanide vats, on the machine site. The erection of the building, hoppers, stamp-framing, and vat-stands, is now nearly completed. The erection of shafting and of the steam-power plant is making good progress, and the steel vats are being rivetted up in position; and, generally, the work is making very satisfactory progress.⁸⁹³

The 8in compressed-air pipe line that the Woodstock Company have installed crosses the Waitawheta River on the distinctive wooden bridge, from cliff to cliff. It is seen in many photographs, at about the location of the modern "Windows".

⁸⁹³ <https://paperspast.natlib.govt.nz/newspapers/NZH19010322.2.79.3>

New Zealand Herald, Volume XXXVIII, Issue 11607, 22 March 1901, Page 1 (Supplement)

Compressed-air pipe line crosses the Waitawheta River on distinctive wooden bridge



Staples collection. Date undetermined.

We are looking upstream, Waitawheta Gorge. In the foreground the compressed air pipe on its supporting bridge. The photograph is taken from one of the “windows”, a precarious undertaking, hence some camera shake is present in the image.

At right, below the bridge, is the Crown tramway, and in the distance the bridge that takes it across the river.

12 April

The New Zealand Crown Mines (Limited) commenced pumping operations with their newly-installed plant during the last week of March. By the

facilities thus afforded it is expected that a marked effect will be the result upon low level operations in the company's mine...

At Karangahake mining affairs are fairly active, and at the Woodstock Company's property preparations are being made for extensive work. Quite a large amount of new machinery is being imported into the place, and gangs of men are busily engaged forwarding it on to its destination. The greater portion of the plant continually arriving is for the Woodstock Company. In addition to the installation of a new and complete air-compressor, the opening up of new reaches of ore is steadily proceeding, and this operation is being attended with satisfactory results...

The air-pipes between the mill and the mine have been connected, and carried in to the shaft chamber; the small air-compressor plant is in position, whilst the large compressor (Ingersoll Sergeant) has just arrived, and no time will be lost in placing it in position. The water mains between the dam and the mill are all but completed, the contractors being now engaged on the last section. Everything is, therefore, proceeding satisfactorily, and it is anticipated that a turn will be taken out of the small compressor in less than a fortnight's time.

The New Zealand Crown Mines Company have just completed the installation of a splendid pumping plant for use in the development of the deep levels of the mine, and the machinery is working well. The whole of the company's underground machinery is now worked by a powerful air-compressor, and it is doubtful if a more complete and up-to-date plant is to be found on the Australasian goldfields. The company's deep level operations were very necessary, for, although there were thousands of tons of ore reserves above the Waitawheta level, the major portion of the stone was not really payable. Improvement in the battery treatment was also necessary, and by the aid of Mr. Hutchinson (manager of the battery), Mr. J. Napier metallurgist, and his staff, Mr. Daw introduced a new system of wet crushing, which has already proved itself highly beneficial, ores that would not previously pay being now included in the company's output, and giving profitable results. An incline shaft was also sunk, and from the four levels below the Waitawheta some fine runs of ore have been intersected, and are in course of development. A new chute of ore discovered some time ago at the Waitawheta tunnel has also given very satisfactory results, and the mine never looked better, or promised so well as it does at the present time - a success that may be largely attributed to the capable way in which the property has been handled by Mr. Daw. The underground manager (Mr. Norman McGruer), who has been in the service of the company since its inception, and who piloted the operations prior to Mr. Daw's advent, has also done much towards bringing about such a healthy state of affairs as now exists.

In the Talisman Consolidated G.M. Co.'s mine at Karangahake, the Talisman reef in the stope at No. 4 level, is from 2ft to 5ft in width, and the ore has improved in value during the past month...

The hoppers at the mill site and at No. 8 level are nearing completion. The No. 1 section of the aerial tramway has been taken down and re-erected, so as to deliver ore to the new mill...[moving the battery hopper to the other, upstream, side of the new battery building?]

Crushing operations in the old mill were stopped on February 16, as stated in last report, and a final clean-up of the plant was completed on March 18,

resulting in a recovery of 972oz 15dwt of bullion, the estimated value of which is £763 16s 1d A portion of the machinery in the mill building has been removed so as to make room for the erection of the agitators. The contractors for the erection of the battery buildings, hoppers, stamp framing, and vat stands, have completed their work, with the exception of a few petty details. Messrs. A. and G. Price's contract for the erection of one-half of the required number of steel vats for cyaniding is making fairly good progress, but the contractors for the remaining number have not yet commenced delivery of material. Good progress has been made with the erection of engines and boilers. The installation of the electric lighting plant has been completed, with the exception of two arc lamps, which will be delivered at an early date.⁸⁹⁴

17 April

Karangahake Notes. (From our resident agent.)

MACHINERY ACCIDENT.

A machinery accident of a serious nature occurred yesterday afternoon at the Talisman Company's New Battery, whereby a large driving wheel that weighed two and a half tons, was smashed into fragments. The accident was most unfortunate and inopportune. Those who have read Karangahake Notes will have learned that the New Battery is now in course of completion. Work has so far advanced that the aerial tramway has been constructed for the conveyance of quartz to the battery, and the erection of machinery has been pushed ahead with all speed preparatory to the large mill being set in motion. The completion of the battery has been anxiously watched by those interested in the welfare of the town, as the starting of the battery would necessarily mean an increase in the number of workmen. The bulk of the machinery had been placed in position, and work generally was proceeding most satisfactorily.

Two large wheels—a fly wheel and a driving wheel—had been left to the last. The men had been employed for several days moving these two large wheels from the bridge, where they were lying, to the battery. The accident happened to the driving wheel, just as it was being hoisted into position, in the accomplishment of which it was necessary to lift the wheel with a block and tackle. This was being done and the wheel was suspended about two feet above a concrete foundation, when a bolt in the tackle suddenly broke and fell out, consequently, the wheel fell heavily and was broken in pieces.

Since commencing to build the large mill, in the construction of which the company has unstintingly expended a considerable amount of money in order to possess up-to-date appliances for the treatment of ore, several accidents have happened. Such a piece of machinery as that now broken is not easily replaced, and the accident is decidedly unfortunate, as it will retard the progress of the work when so near completion.⁸⁹⁵

⁸⁹⁴ <https://paperspast.natlib.govt.nz/newspapers/NZH19010412.2.77>

New Zealand Herald, Volume XXXVIII, Issue 11625, 12 April 1901, Page 1 (Supplement)

⁸⁹⁵ <https://paperspast.natlib.govt.nz/newspapers/OG19010417.2.12>

Ohinemuri Gazette, Volume X, Issue 801, 17 April 1901, Page 2

6 May

The corrected census returns show that the population of Ohinemuri is 9975...The population of the four Ridings is therefore: Waihi, 4271; Karangahake and Waikino, 2239; Paeroa, 2142; Waitekauri, 1207; Waitoa, 116; total, 9975.⁸⁹⁶

10 May

At Karangahake the Woodstock Gold Mining Company are pushing ahead as expeditiously as possible the various works connected with the new development scheme. The main pipe line, connecting the large dam in the Ohinemuri River with the battery has been completed, and other works are showing that good progress is being made...

The Talisman Consolidated Gold Mining Company is responsible for a large amount of work...

Surface works: The large receiving hopper at the mill site has been completed, and the No. 1 section of the aerial tramway erected. The new hopper at No.7 level is in course of erection, and will be finished early next month, and No. 2 section of the aerial tramway will be erected, also the self-acting ground tramway from No. 6 to this level..⁸⁹⁷

For a detailed examination of the Talisman mine ore transport infrastructure, including the No. 8 tramway and aerial cableway, see the document "Aerial Cableways".

The short answer is that the various Talisman levels, 2 to 8, were connected to the battery by chute, self-acting ground and aerial tramways, and ground tramways, the arrangement of which changed over the years till 1901.

By early 1896 an aerial cableway of 914m connects the No. 4 level and the battery. This appears to comprise two cableways combined with ground tram (even incline on the Woodstock Blow?). In 1897 a separate route is established, No. 5 level to No. 6 by cableway, then combined by ground tramway to short incline to No. 7 level, then cableway to Woodstock Blow. Both routes cable to the battery from the Blow, maybe on the same cable. No. 8 level has a new horse tramway, hopper and cableway to the battery.

Talisman**To connect to the No. 8 level (1901) and then with the battery:-**

No. 3 to No. 4 level is connected by an outside chute.

No. 4 level to battery:-

A self-acting aerial tramway and hoppers has been erected, connecting the No. 4 level with the battery, a distance of fully 3000 feet [914m].⁸⁹⁸ "The ore from No. 4 level will be conveyed as at present"⁸⁹⁹ This was the early connection of the mine with the

⁸⁹⁶ <https://paperspast.natlib.govt.nz/newspapers/THS19010506.2.36>

Thames Star, Volume XXXIX, Issue 9934, 6 May 1901, Page 4

⁸⁹⁷ <https://paperspast.natlib.govt.nz/newspapers/NZH19010510.2.80.4>

New Zealand Herald, Volume XXXVIII, Issue 11649, 10 May 1901, Page 1 (Supplement)

⁸⁹⁸ <https://paperspast.natlib.govt.nz/newspapers/NZH18960215.2.40>

New Zealand Herald, Volume XXXIII, Issue 10055, 15 February 1896, Page 5

⁸⁹⁹ <https://paperspast.natlib.govt.nz/newspapers/AS18970708.2.33.2>

battery. It appears to have been a self-acting cableway from No. 4 level to the flank of Woodstock Blow. Then a section of ground tramway, and then by cableway across the river to the battery.

No. 4 to No. 5. There is no connection between the levels.⁹⁰⁰

No. 5 level connected to No. 6 level (No. 3 hopper?) by aerial cableway (No. 3 section?).

No. 6 to No.7 level connected by a new short self-acting ground tramway.

A new hopper at No.7 level (No. 4 hopper) is connected to No. 8 level by aerial tramway (No. 2 section).

From the new No. 8 level a ground tramway is laid down “for a distance of 650 ft [198m] to the site selected for the upper hopper of the proposed line of aerial tramway to the new mill”.⁹⁰¹ The cableway to the battery hoppers, No. 1 section⁹⁰², is 324m by GIS. It appears that this hopper position is a new site, not a recycling of an old hopper.

This last combination is shown on a map by Jarmin.⁹⁰³

Below is the best image I have showing this infrastructure, dated 1901. Have I imagined too much?

To add to the mix, it is not clear whether the Talisman Company continue to use the old Woodstock No. 2 level cableway. Or some other cableway. A 1909 photograph shows two cableways terminating at the battery, though images of the No. 2 hopper suggest it is derelict.

Auckland Star, Volume XXVIII, Issue 157, 8 July 1897, Page 6

⁹⁰⁰ <https://paperspast.natlib.govt.nz/newspapers/AS18970708.2.33.2>

Auckland Star, Volume XXVIII, Issue 157, 8 July 1897, Page 6

⁹⁰¹ <https://paperspast.natlib.govt.nz/newspapers/AS19001024.2.6>

Auckland Star, Volume XXXI, Issue 153, 24 October 1900, Page 2

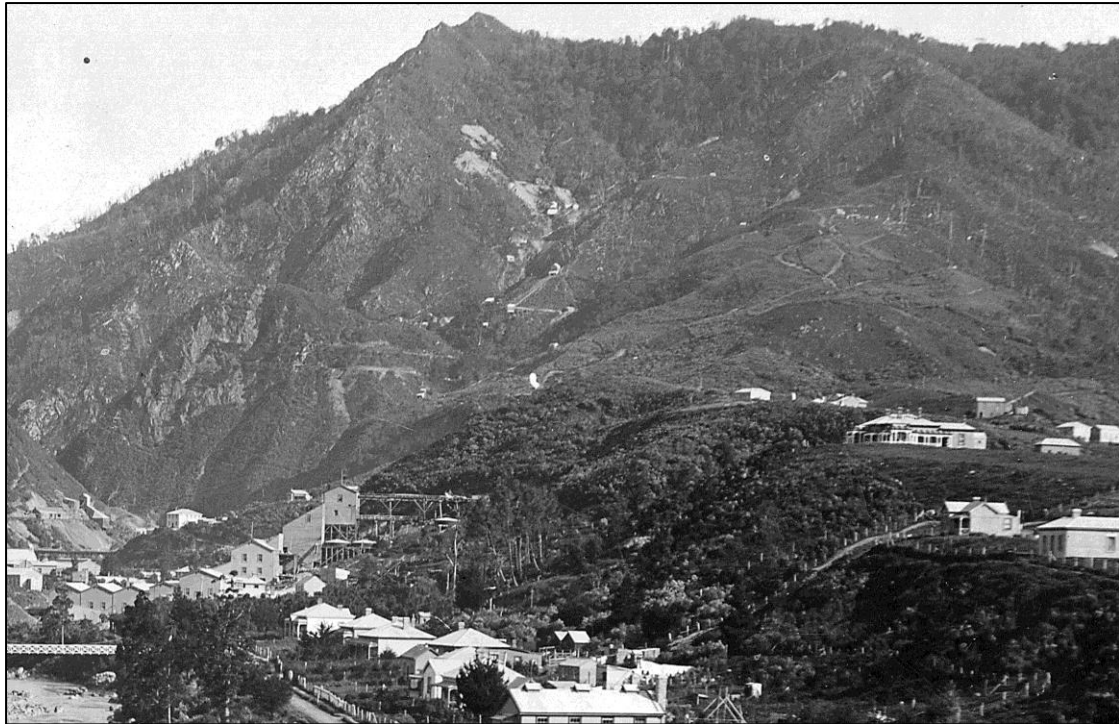
⁹⁰² <https://paperspast.natlib.govt.nz/newspapers/NZH19010412.2.77>

New Zealand Herald, Volume XXXVIII, Issue 11625, 12 April 1901, Page 1 (Supplement)

⁹⁰³ Mining and Ore-Treatment at the Talisman Mine, Karangahake, New Zealand.

By: Arthur Jarman.

Presented at the Australasian Institute of Mining Engineers Thames 1911.

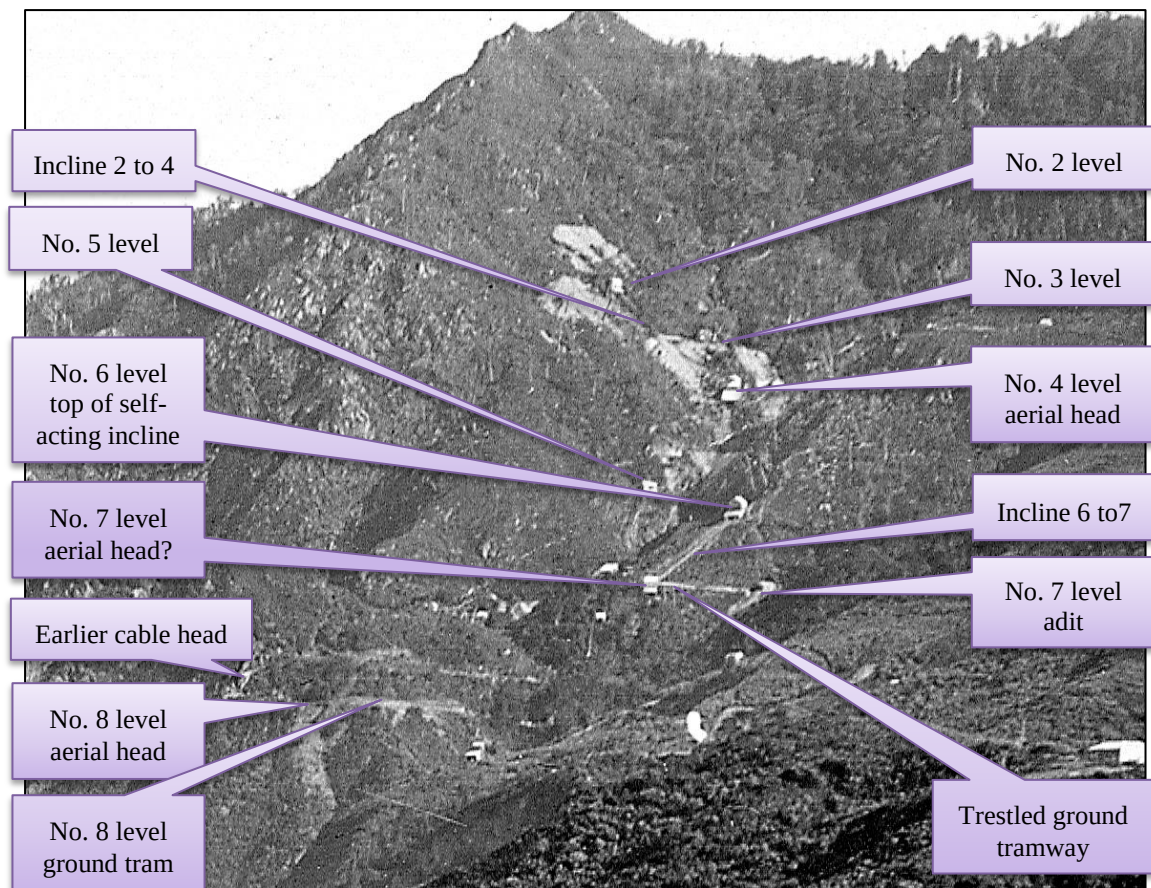


“View of Karangahake from Mackaytown (crop). 1901. Staples collection.

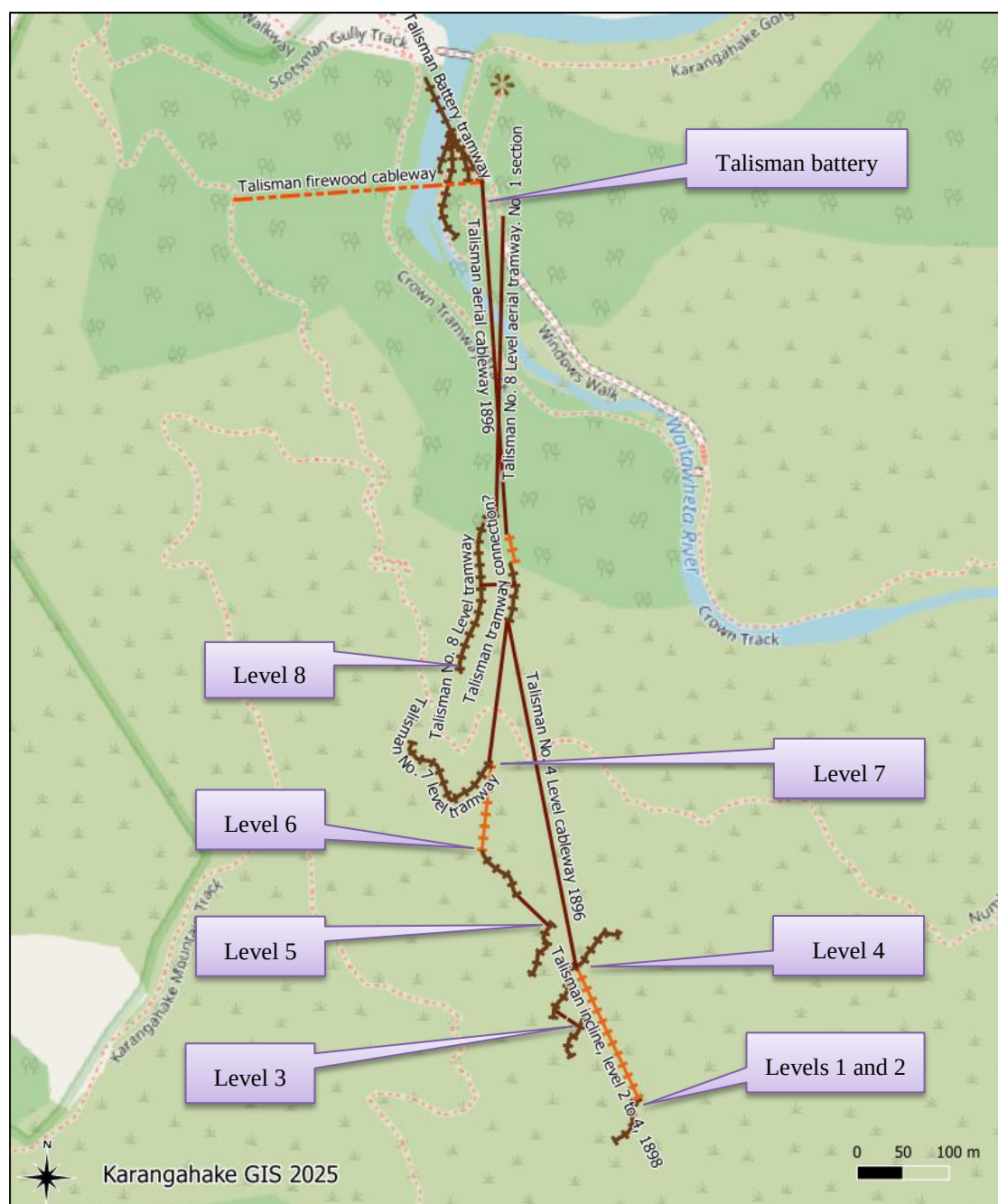
Below Karangahake trig are the Talisman workings, and lower to the left is the Woodstock Blow. On the left flank of the Blow we see the Woodstock No. 2 level ore chute and hopper, and below that a track across the steep face above the river. I have not seen that before.

The right (western) flank of the Blow shows the new No. 8 level tramway and cableway hopper, and above that another level with hopper and chute? This may be a left-over from an earlier cableway? Further up the valley to the higher Talisman levels we can see the aerial cableway head hopper (No. 4 Hopper) of No. 7 level. It delivers ore to the No. 8 Level. Ore from No. 7 level adit (to the right) is delivered by ground tramway which includes a trestled section. Above the No. 7 level hopper is the short self-acting incline from the No. 6 level (it has a pointy roofed building). Above this building is a cableway head, No. 5 level. It delivers to No. 6 level. Above and to the left of the No. 5 level is No. 4 level, with the hint of a self-acting incline.

See enlargement below.



A crop from the above image, showing assumed interpretation of the Talisman levels.



Talisman No. 8 level and surface connections 1901. Representational only, based on the above interpretation. The locations of the adit levels are based on an old map, Karangahake-June 87_006, kindly provided by Wayne Chowles. The connections stylized from the interpretation given above. The No. 8 level tramway and aerial cable are based on Jarman 1911, so show the cableway discharging at a hopper at the battery building.

Ore is taken directly from No. 8 adit. Ore off the mountain comes by two separate systems:

Levels 1, 2, 3 and 4,

Levels 5, 6 and 7.

22 May

TALISMAN CONSOLIDATED G.M. CO. (LIMITED).

... The crosscutting adit for No. 8 level has been extended a further distance of 50ft, making a total of 590 ft. ... The erection of No. 4 hopper at No. 7 level is almost completed. The No. 2 section of the aerial tramway, which connects

Nos. 7 and 8 levels, is in position. The new self-acting ground tramway between Nos. 6 and 7 levels is in course of erection. ...⁹⁰⁴

7 June

County Council. MONTHLY MEETING

The ordinary monthly meeting of the Ohinemuri County Council was held yesterday afternoon, when the following members were present: — Crs. Barry (chairman), Bowler, Stackpole, Marrinan, Poland, Cassrels, Moore, and Saunders.

The Engineer's Report.

Silting up of Ohinemuri River. —in compliance with instructions, I have fixed six permanent stations on the right bank of the river, between the traffic bridge, Paeroa, and the Junction Wharf. I have not, however, been able to take the levels, but will do so in the course of a few days. In connection with this matter, I would like to draw the attention of the Council, to the very large quantity of soil being deposited in the river, in the Karangahake Gorge, by the Government, by the railway works. To such an extent is this being done, that the river bed is reduced to half its width. This is almost certain to result in considerable injury being done to the road, during the first flood that takes place, besides the large quantity of soil that will be washed down and deposited in the river flats...

Scotchman's Gully. Annie Staunton, Karangahake, asked the Council to give her an entrance to her property at Scotchman's Gully...⁹⁰⁵

14 June

KARANGAHAKE.

A considerable amount of work is being done at the Woodstock Gold Mining Company's mine, and everything in connection with the development scheme inaugurated by Mr. F. Rich is in a very forward condition. The air pipe line between the mill and the mine is very satisfactory, and has given practically no trouble at all, only four appreciable leaks being found in the whole distance. The steam boiler has been removed from the shaft chamber, and sinking operations have been carried on with satisfactory results, more especially during the past fortnight, when compressed air has been utilised in connection with the work, and progress at the rate of between two and three feet per day has been made...

The surface works in hand and finished during the past week are, the completion of the Pelton wheel and tail drain [tail race?], the connection between the Waitawheta Bridge, the ore bin, and the compressor room, and the completion of the buildings covering these; also the raising of the platform at the mill end of the bridge, ready for the completion of ore transit arrangements. The newly installed power plant is also giving great satisfaction. The trouble with the old water-power pipe line (of which the new

⁹⁰⁴ <https://paperspast.natlib.govt.nz/newspapers/NZH19010522.2.62>

New Zealand Herald, Volume XXXVIII, Issue 11659, 22 May 1901, Page 6

⁹⁰⁵ <https://paperspast.natlib.govt.nz/newspapers/OG19010607.2.10>

Ohinemuri Gazette, Volume X, Issue 812, 7 June 1901, Page 2

pipe line is an extension) seems now to have been overcome. The pipe line bridge across the Ohinemuri River, of over 80ft span, has taken its load very well, the camber being affected only to the extent of 3/8th of an inch. The bridge across the Waitawheta, when a test of 13 tons was put upon it, also only gave about 3/8th of an inch deflection in the 74ft span, with no permanent set, the bridge resuming its original curvature when the load was removed. This speaks well for the design, material, and workmanship.⁹⁰⁶

3 July

At the Woodstock Gold Mining Company's mine...

Very satisfactory progress continues to be made with the sinking of the shaft, especially since the rock drills were put into the workings. Four of these machines are now being utilised in the shaft, and are being operated by compressed air, as are also the pump and hoist. The reheater in the shaft chamber for the compressed air is giving most satisfactory results, and, in consequence, there is no trouble from freezing at the pumps, etc. The air pipe line between the mine and the mill acts well, a loss of only 1lb in pressure resulting in the transmission of the compressed air from the mill (generating station) to the mine. The mill office and smithy have been moved, to make more storage room, and a storeroom has been built for battery supplies, etc. These changes permit of a storage platform being built at the battery end of the Waitawheta bridge, a much-needed and most economical improvement. The air and power plant continues to work satisfactorily, and the mill machinery is now being connected up with it again.

The erection of the Talisman Consolidated Company's battery and the installation of an up-to-date extraction plant is all but completed, and it is anticipated that crushing will be commenced on Monday next. Everything is in readiness at the mine to supply a large tonnage of ore, and some extensive blocks of ground have been opened up for development.⁹⁰⁷

26 July

The Great Slip

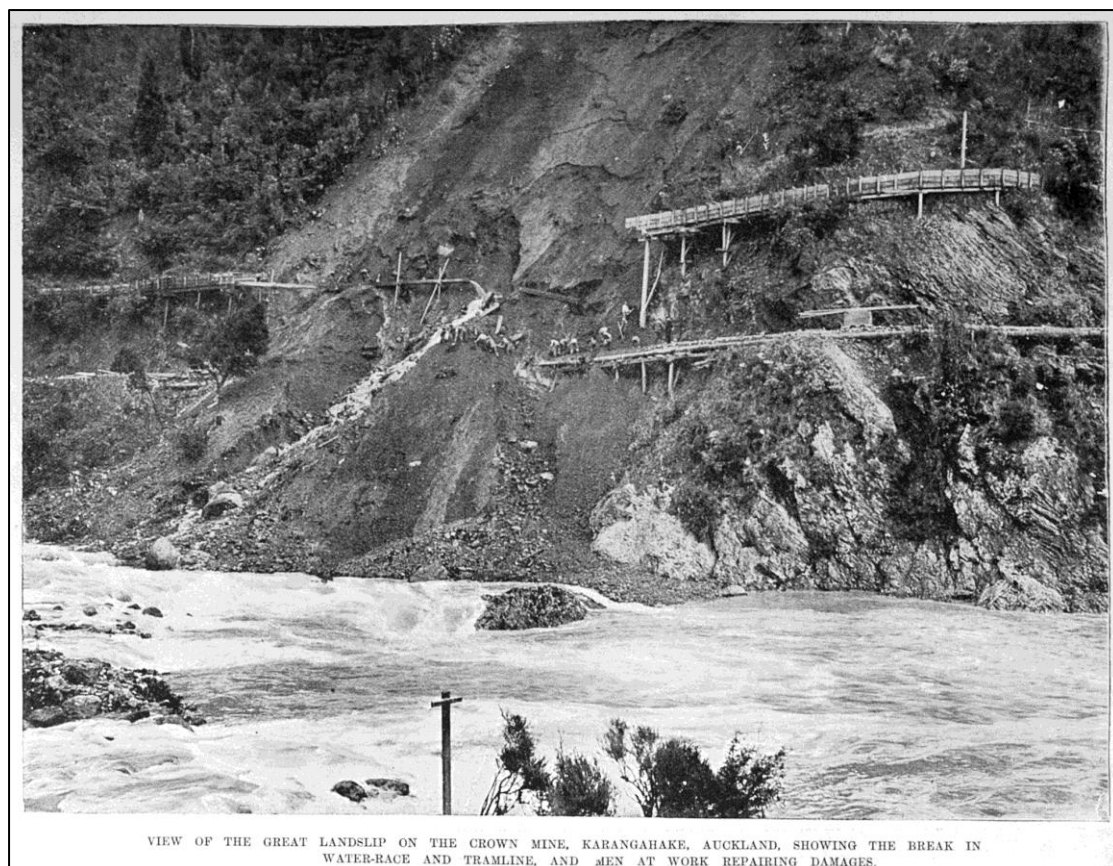
A considerable landslide occurred at Karangahake on Sunday, 14th inst., on the hills facing the township, which caused part of the New Zealand Crown Mines' water race to carry away and the company's tramline to be blocked for some distance. The matter has caused a serious set-back, as, owing to the large quantity of debris (some thousands of tons) to be cleared away and to the repairs necessary, crushing operations had to be suspended, and may not be resumed for some weeks...

⁹⁰⁶ <https://paperspast.natlib.govt.nz/newspapers/NZH19010614.2.72.4>

New Zealand Herald, Volume XXXVIII, Issue 11679, 14 June 1901, Page 1 (Supplement)

⁹⁰⁷ <https://paperspast.natlib.govt.nz/newspapers/NZH19010703.2.81.4>

New Zealand Herald, Volume XXXVIII, Issue 11695, 3 July 1901, Page 1 (Supplement)



“View of the great landslide on the Crown mine, Karangahake, Auckland, showing the break in water-race and tramline, and men at work repairing damages.”

Auckland Libraries Heritage Collections AWNS-19010726-10-01. Published 26 July 1901.

Approximately 20 men are at work in a very dangerous situation. Photograph taken from the road, at the downstream end of the modern Reserve. The tramway is our current walkway between the Crown battery and Battery Flat.

KARANGAHAKE. Since the publication of last Summary there has been an exceptionally heavy rainfall, and several large landslips have occurred. About the most serious, however, was that on the New Zealand Crown mines tramline and water-race at Karangahake, thousands of tons of earth having slipped away from the hillside. Though the tramline is uninjured, the line has been blocked with debris, and it has been found impossible to get quartz down to the mill, the consequence being that the reduction works have been stopped for close on a fortnight. The old water-race has also been carried away for a considerable distance by the heavy slip. A large staff of men have, however, been constantly at work clearing the debris, and though the task has been a difficult one, owing to the continual creeping away of the hillside, the men have about got through it, and it is confidently believed that crushing will be resumed without unnecessary delay. Otherwise the Crown works are proceeding very satisfactorily, and some splendid chutes of ore are being opened up...

The new battery for the Talisman Consolidated is now practically complete, and a run has been taken out of the shafting, belting, etc.. and the whole of the machinery works smoothly and well. The rock-breakers have also been crushing ore during the last week preparatory for the stamps, which will also commence running on Wednesday next. Altogether the plant is most up-to-

date, and the company have an advantage in the fact that their reduction works were erected for wet crushing, so that now no alterations in the matter of a conversion from dry to wet process will be necessary. Operations at the mine are also proceeding very satisfactorily, and some excellent blocks of ground are being opened up. Communication between the No. 4 and the upper levels having been established, the ore from the latter is now being sent down to the No. 4 level, Talisman section, for delivery at the new mill...

At the Woodstock Gold Mining Company's mine excellent progress is being made with the sinking of the shaft, the work having attained a sufficient depth to allow the excavations for the No. 6 level chamber to be undertaken. This work is already well in hand, and when completed sinking will be resumed...

The recent heavy rain damaged the tail-race, which at the time was not quite completed, but repairs have been effected, and the race is now being fastened down permanently.⁹⁰⁸

New Talisman battery underway

1 August

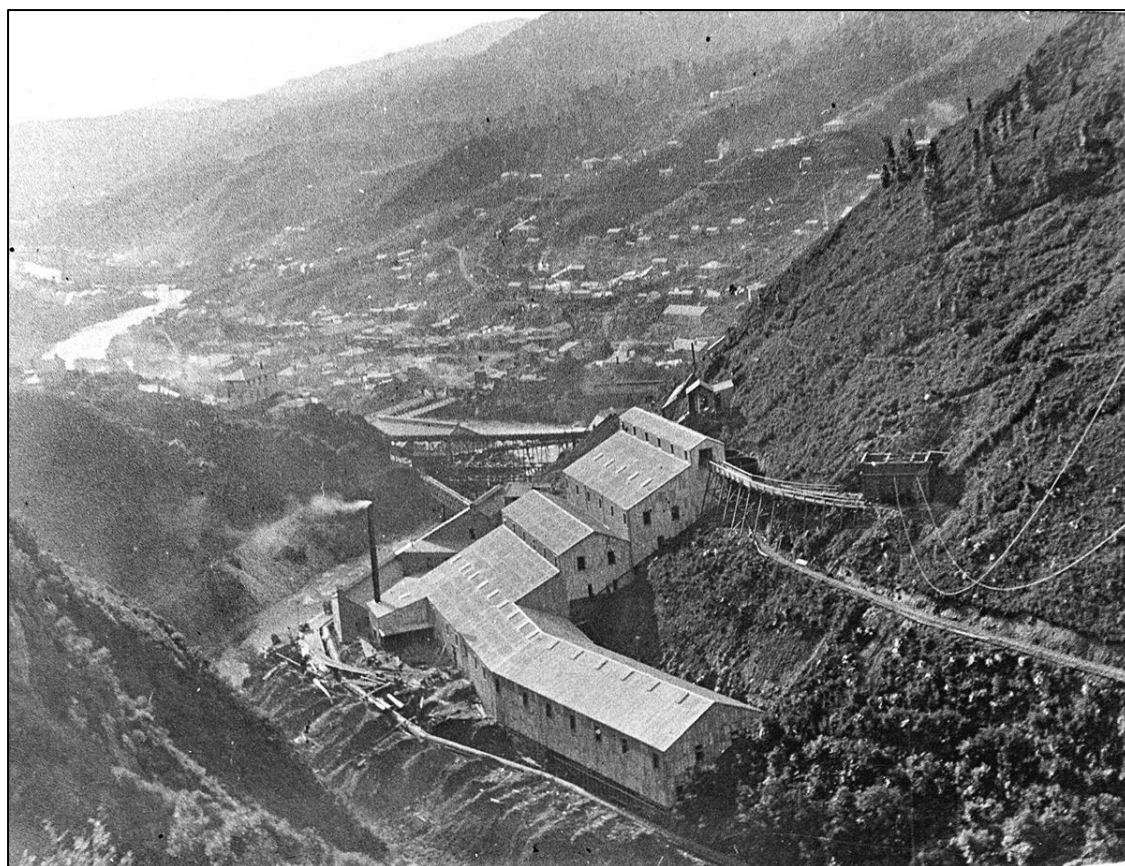
Talisman Consolidated. Description of the Battery.

The starting of the 50 head battery just erected by the Talisman Consolidated marks another step in the advancement and development of the Karangahake goldfield. The battery buildings are the largest in the Upper Thames after the Waihi plant. The cyaniding shed is alone more than 300 feet in length, with a span of 56 feet. The ore is delivered by aerial tramway from a station at No. 8 level to a large storage hopper outside the mill, whence it is trucked a distance of about two chains to the breaker house.

The two chains [40 m] are an elevated section of tramway between the cable terminus and the battery building.

⁹⁰⁸ <https://paperspast.natlib.govt.nz/newspapers/NZH19010726.2.78.3>

New Zealand Herald, Volume XXXVIII, Issue 11716, 26 July 1901, Page 1 (Supplement)



The Talisman battery viewed from beside the hopper from the No.8 Level. The battery hopper is well away from the battery, connected by a trestle tramway. This hopper will be moved to the battery building at a later date (before 1907).

The cyaniding shed is the large structure in the foreground.

The chimney locates the boilers in the battery, the engine probably adjacent. There is no engine house at the top of the battery, and no large chimney at the powerhouse on Battery Flat; they come later (1909).

The water race pipe can be seen between the battery and the river.

Date 1901? Photographer unknown. DoC Thames.

The rock breaking plant consists of two 10 x 16 Blake crushers, and one 10 x 7 Blake crushers. The hopper under the crushers is 90 feet in length, and is capable of holding over 1000 tons of ore. The crushed ore is fed to the stamps by automatic feeders. The pulverising plant consists of 30 gravitation stamps, each weighing 10501bs, and 20 stamps, weighing 9001bs, the latter being placed at the further end of the line.

The stamps are erected in batteries of 10, of which each five heads are run independently.

The ore after pulverisation by the stamps passes through the screens of the mortar-boxes over amalgamated copper plates, for the recovery of the coarser particles of gold, the pulp then passing to classifiers, which separate the coarse and fine sands, which are then caused to flow through launders to the concentrators on a lower terrace. The slimes escaping from the classifiers go through a launder to pyramidal boxes by means of which a large proportion of the water is separated; and the slimes, thus thickened, pass to the agitators for treatment with cyanide.

The agitating plant consists of four wooden and two steel vats, 22 feet diameter by 5 feet deep, forming part of the cyanide plant in the company's old mill on the immediate adjoining machine site. These vats have been fitted by Messrs A. and G. Price, of Thames, with agitators of simple construction, operated by water power.

The concentrating plant, to which the coarse and fine sands separated by the classifiers are passed, consists of eight 6ft Union vanners, and the concentrates obtained, constituting about 1 per cent of the ore, are to be treated with strong cyanide solution in steel vats of small diameter fitted with agitators.

The plant for the cyaniding of the coarse sands, consists of 10 steel vats, 22ft in diameter x 5ft deep, also fitted with overflow launders and automatic distributors. The solutions from these vats pass to extractor boxes, six in number, for precipitation of gold and silver, and thence into concrete wells below the floor of the cyanide building, whence they are pumped to steel storage vats, four in number, 22 feet in diameter by five feet deep.

The greater number of vats were supplied by Messrs A. and G. Price, of Thames.

It is intended to increase the number of stamps as soon as the outputting capacity of the mine justifies any addition. The present concentrating plant is equal to the requirements of 70 stamps, while the cyaniding and combined steam and water power plants are equal to 100 heads of stamps.

The whole of the mill, including the buildings, was designed by Mr Alfred Harper Curtis, Associate M. Inst. C.E., New Zealand partner in the firm of Messrs Bewick, Moreing and Co., the company's general managers and consulting engineers. Mr Curtis personally prepared the necessary drawings and supervised the erection of the mill. Mr C. H. Taylor, the company's battery manager, acted as clerk of the works in a most creditable manner.

THE LUNCHEON. After the successful start of the battery, Mr Curtis invited those present to luncheon at Mr Ryan's hotel. The dining-room was filled to its utmost capacity. Mr Curtis occupied the chair, and Mr Wm. Goldsworthy, the manager of the mine, the vice chair. An excellent Repast was provided and the wines were good and plentiful...

Mr Curtis, in replying, said he felt grateful for the expressions of esteem which had been shown him. He referred to the difficulties he had had to encounter, but his firm supported him loyally, and had found the money to erect, without cost to the shareholders, the plant they had just inspected. He felt confident that the mine manager (Mr Goldsworthy) would keep the plant supplied with ore, and the battery manager (Mr Taylor) would successfully treat it...

Mr Taylor proposed success to the adjoining mines, coupling the toast with the name of Captain Rich, of the Woodstock.⁹⁰⁹

TALISMAN CONSOLIDATED G.M. CO. (LIMITED). OPENING OF COMPANY'S NEW 50-STAMP MILL. (by telegraph. correspondent.)
Paeroa, Wednesday.

⁹⁰⁹ <https://paperspast.natlib.govt.nz/newspapers/THS19010801.2.23>

Thames Star, Volume XXXIX, Issue 10017, 1 August 1901, Page 3

An event which has been looked forward to with great interest at Karangahake took place to-day under most favourable circumstances, namely, the opening of the Talisman Consolidated (Limited's) new 50-head stamper battery and wet crushing plant, which adjoins the old mill, and is situated on the northern side of the Waitawheta...

The plant is erected on the Talisman Extended special site immediately adjoining the company's old machine site [Is this why the Talisman Company had to erect the vat plant at Battery Flat? They could not extend their battery upstream, as they have done now?], on the right bank of the Waitawheta River, near its junction with the Ohinemuri River, at Karangahake, and is connected with the mine, by means of an aerial tramway. The cyaniding shed is more than 300 ft in length, with a span of 56ft. The ore is delivered by an aerial tramway from a station at No. 8 level, to a large storage hopper outside the mill, whence it is trucked a distance of about two chains to the breaker-house. The rock-breaking plant consists of two 10in by 16in Blake crushers of improved type, and one 10in by 7in Blake crusher. The hopper under the crushers is 90ft in length, and is capable of holding over 1000 tons of ore. The crushed ore is fed to the stamps by Challenge automatic feeders. The pulverising plant consists of 30 gravitation stamps; each weighing 1050lb. and 20 stamps, weighing 900lb, the latter being placed at the further end of the line. The stamps are erected in batteries of 10, of which each five heads are run independently. The mortar-blocks are from 18 ft to 20ft in length, some in two pieces and some in one piece, of first-class kauri, firmly embedded in a concrete pit, extending the whole length of the battery of stamps. The stamp framing is of the front-and-back-knee type, and the counter-shaft, from which the cam-shafts are driven, is fitted with Imperial friction clutch pulleys.

The ore, after pulverisation by the stamps, passes through the screens of the mortar boxes over amalgamated copper plates, for the recovery of the coarser particles of gold, the pulp then passing to classifiers, which separate the coarse and fine sands, which are then caused to flow through launders, to the concentrators, on a lower terrace. The slimes escaping from the classifiers go through a launder to pyramidal boxes, or spitzkasten, by means of which a large proportion of the water is separated; and the slimes, thus thickened, pass to the agitators for treatment with cyanide. The agitating plant consists of four wooden and two steel vats, 22ft diameter by 5ft deep, forming part of the cyanide plant in the company's old mill, on the immediately adjoining machine site. It is intended to operate the concentrators and centrifugal and vacuum pumps by water power, and a new turbine is in course of erection for that purpose. The steam power plant consists of two 86 horse-power Babcock-Wilcock boilers, with Snow Co.'s duplex feed pump, the engine being a Wheelock-Corliss single cylinder horizontal engine, with automatic expansion gear, and Blake condenser. The whole of the works are electrically lighted with incandescent and arc lamps. It is intended to increase the number of stamps as soon as the outputting capacity of the mine justifies any addition. The present concentrating plant is equal to the requirements of 70 stamps, while the cyaniding and combined steam and waterpower plants are equal to 100 heads of stamps.⁹¹⁰

⁹¹⁰ <https://paperspast.natlib.govt.nz/newspapers/NZH19010801.2.66>

Another article, expanding a little on the above description can be seen here:
Auckland Star, Volume XXXII, Issue 170, 31 July 1901, Page 5⁹¹¹

See also: Thames Star, Volume XXXIX, Issue 10017, 1 August 1901, Page 3⁹¹²

16 August

Of these the Talisman Consolidated Company is the first to recommence actual crushing operations. This company's new and up-to-date 50-stamp mill was started upon its initial run on Wednesday, July 31. A description of the plant will be found under our correspondent's summary in another column. Within the next two months it is expected that the Woodstock Gold Mining Company will resume crushing operations...

The plant on the whole is one of the most complete and up-to-date mills for the reduction of ore and extraction of bullion in the southern hemisphere, and it stands as a monument to the enterprise of the company and the constructive skill of the designer. Mr. A. H. Curtis, the company's general manager. One great feature is the automatic appliances with which the mill abounds, and practically no handling is required from the moment the stone is deposited into the stone-crushers until the bullion is saved. The battery also connects with the mine, and the dirt is forwarded direct from its source to the reduction works, so that it will be seen the cost of transit, etc., has been reduced to a minimum. At the mine the southern portion on the Dubbo reef is now connected with the Talisman section, and this good bullion producer has commenced to furnish crushing material for the mill. The stone is forwarded direct, and as every facility is now afforded for the speedy and effective development of the property, the Talisman Consolidated should now assume a front position among the ranks of our standard and regular bullion contributors.

The Woodstock Gold Mining Company has been expediting its important development scheme inaugurated some time ago, for the carrying on of extensive operations, and every attention is being devoted to advancing the works necessary to enable the deep levels of the property to be worked advantageously and with profit. The Maria lode is being prospected, on its downward continuation, whilst stoping is in full swing in several parts of the mine, and excellent progress has been made with the shaft works. Everything possible is being done to allow crushing operations to be resumed in about two weeks' time, so that with the Talisman and Woodstock batteries supplementing the regular yield from the Crown Mines, the Karangahake district should assume a very important position among the goldfield districts. The returns should also have a most beneficial effect upon the industry as a whole.

As is pretty generally known, the Government are extending the railway line from Paeroa to Waihi, the branch having to pass through Karangahake en route. The line, instead of being carried round the river bank, is to penetrate the big bluff at the Rahu Gorge, and whilst conducting the tunnel operations a fine large lode was intersected. Of course, no development work has been

New Zealand Herald, Volume XXXVIII, Issue 11721, 1 August 1901, Page 6

⁹¹¹ <https://paperspast.natlib.govt.nz/newspapers/AS19010731.2.50>

Auckland Star, Volume XXXII, Issue 170, 31 July 1901, Page 5

⁹¹² <https://paperspast.natlib.govt.nz/newspapers/THS19010801.2.23>

Thames Star, Volume XXXIX, Issue 10017, 1 August 1901, Page 3

done upon the reef beyond the extension of the tunnel through it, but the stone broken out from it proves it to contain a good percentage of bullion. The discovery is one of importance, and it is said that the Crown Mines will be benefited considerably thereby.

The New Zealand Crown Mines...

It will be remembered that, just prior to the departure of the last 'Frisco mail there had been a very heavy rainfall, which had resulted in the subsidence of the hillside overhanging the tramway and water-race, and in addition to carrying away a good portion of the race had submersed the tram-line with debris for a good number of yards in extent. Crushing, as a material sequence, had to be suspended until the slip was cleared, and all the debris removed from the line. The task was a very arduous one, involving as it did the lifting of several thousand tons of earth. The general manager, Mr. Daw, with his accustomed resourcefulness, soon became master of the situation, and by the aid of sluicing the movable mass he was in a couple of weeks' time enabled to have the repairs to the race effected, the tram cleared, and the battery once more running on ore. Everything is now proceeding on the property as satisfactorily as possible.⁹¹³

6 September

The Woodstock Gold Mining Company resumed crushing operations on August 30, after a trial run on the previous day. The returns from Karangahake should, in the near future, be considerably swelled by this company's results. The crushing operations now proceeding on behalf of the Talisman Consolidated Gold Mining Company at their new battery at Karangahake are giving satisfactory results, a good quantity of amalgam having already been obtained from the plates...

The New Zealand Crown Mines Company are vigorously prosecuting the development of their lower levels...

As the summer weather is now advancing provision is being made for the continual operation of the battery during the dry season by the installation of a powerful steam plant. This will take the place of the water when there is not sufficient of the latter in the river to provide the requisite motive power for driving the mill. Two large Babcock boilers have already arrived, and excellent progress is being made with the foundations.⁹¹⁴

County Council. MONTHLY MEETING

The Engineer's Report (D. W. McArthur)

Railway Tunnel.—In accordance with your instructions, I wrote to the Railway Department asking if they would cover up the Woodstock pipe and tip the debris so as to widen the road; the reply was, that if the Council timbers over the pipe the Railway Department will tip the stone along the side of the road. The General Manager of the Woodstock mine has no objection to the Council timbering over the Company's pipe, so long as the timbering is 7ft

⁹¹³ <https://paperspast.natlib.govt.nz/newspapers/NZH19010816.2.70.3>

New Zealand Herald, Volume XXXVIII, Issue 11734, 16 August 1901, Page 1 (Supplement)

⁹¹⁴ <https://paperspast.natlib.govt.nz/newspapers/NZH19010906.2.73.3>

New Zealand Herald, Volume XXXVIII, Issue 11752, 6 September 1901, Page 2 (Supplement)

high by 7ft sill and 6ft cap., all in the clear. The County to keep the timbering in repair, and the travelling way clear...

TUNNEL AT KARANGAHAKE. N.Z. Crown Mines asked permission to cut a tunnel under the road at Karangahake. On the motion of the Chairman, the permission was granted, provided the Engineer sees that the tunnel will not damage the County road...⁹¹⁵

Miner's Dispute⁹¹⁶

Not reported here.

27 September

The Paeroa-Waihi railway is making good progress, the rails being now laid past Mackaytown. It is expected they will be down into Karangahake within the next month. Some 6000 yds of metal have been broken and stacked at the quarry reserve near Mackaytown. The Public Works Department has imported a large stone-breaker and engine, with which it is estimated some 130 yds of metal can be broken daily. The tunnel is being pushed ahead from both ends.⁹¹⁷

23 October

Public Works Statement

Paeroa-Waihi: Only preliminary works had been done on this line up to the close of the financial year, 1899-1900. During last year, however, substantial progress was made, and work now extends for a distance of six miles 15 chains. The excavation of the long tunnel is well in hand, the position of the work at the end of September being as follows: West end, 741 feet; bottom hading⁹¹⁸, 675 feet; bricking, 359 feet; east end top hading, 469 feet; bottom hading, 457 feet. An air shaft has also been sunk at the west end of the tunnel, about 600 feet from the mouth. Platelaying has been started from the junction siding at Paeroa, and is well in hand towards Karangahake. A contract has been let for the construction of a combined road and railway bridge over the Ohinemuri River at Karangahake, the contract price being £8881. The expenditure on the line last year was £12,259, but this year it will be larger. An authority for £20,000 is asked for.⁹¹⁹

This bridge gets built after the tunnel has been started, ie it is not used to get the tunneling underway, or to get the spoil into the river. A temporary bridge is used at first. "The temporary bridge over the Ohinemuri has been completed. This will admit

⁹¹⁵ <https://paperspast.natlib.govt.nz/newspapers/OG19010906.2.9>

Ohinemuri Gazette, Volume X, Issue 850, 6 September 1901, Page 2

⁹¹⁶ <https://paperspast.natlib.govt.nz/newspapers/NZH19010927.2.80.18>

New Zealand Herald, Volume XXXVIII, Issue 11770, 27 September 1901, Page 3 (Supplement)

⁹¹⁷ <https://paperspast.natlib.govt.nz/newspapers/NZH19010927.2.23>

New Zealand Herald, Volume XXXVIII, Issue 11770, 27 September 1901, Page 5

⁹¹⁸ The angle of inclination from the vertical of a vein, fault, or lode.

<https://www.thefreedictionary.com/Hading>

⁹¹⁹ <https://paperspast.natlib.govt.nz/newspapers/AS19011023.2.4>

Auckland Star, Volume XXXII, Issue 242, 23 October 1901, Page 2

of the spoil from the tunnel excavation being conveyed across the river and there utilised in the formation of the station-grounds, &c”⁹²⁰

Dry weather, river low

8 November

The Woodstock Gold Mining Company are also advancing their low level works, and it is hoped that this company will now be rewarded with that amount of success it merits for the enterprise and pluck it has displayed in inaugurating and pushing forward so expeditiously an extensive and expensive scheme of development work, as well as practically installing a new reduction works. Within the last two or three days it has been announced that owing to an insufficiency of water to work both mine and battery machinery, the mill is to be closed down, whilst development is proceeded with. Whilst this will reduce the bullion output of Karangahake in the meantime, much good may result from the thorough opening up of the mine, and this should in time make up for the temporary cessation of crushing.⁹²¹

Despite their new dam, the water power produced (at low water flow) is insufficient to run both the stampers and the air compressors. They choose the compressors as this allows mining to continue.

The Waihi Gold Mining Company has stripped the forest from the headwaters of the Ohinemuri River. The river is now prone to floods and quickly receding flows. The Waitawheta catchment has been less impacted at this time, but the Victoria battery kilns have been devouring huge volumes of timber since 1898.

29 November

The mining operations of Ohinemuri have suffered somewhat during the past two weeks, owing to the dry season having approached so quickly. The river, from which source motive power is generally available for driving the several batteries in the district, is now very low, and as a consequence the Woodstock Company, who have prior claim on the first 100 sluice-heads, find that there is not water sufficient to run the air compressors, let alone the battery, and so the latter has been stopped. As there were no means, therefore, of treating the quartz obtained from the mine, the underground operations have also been temporarily suspended, excepting the sinking of a winze from No. 5 level and the extension of the low level. This step, rendered compulsory upon the management, has thrown a good number of men out of employment, and naturally a feeling of depression exists. However, it is hoped that operations will be resumed again about March next. In the meantime I understand that the installation of a steam plant is being considered, and if the scheme is adopted it may not be so long until the Woodstock is once more affording employment to a large number of hands. The runs of the battery, Mr. Rich informs me, were remunerative, and it is a very serious drawback to the company having to

⁹²⁰ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1900-I.2.2.2.1>

PUBLIC WORKS STATEMENT BY THE HON. W. HALL-JONES, MINISTER FOR PUBLIC WORKS, 28th SEPTEMBER, 1900., Appendix to the Journals of the House of Representatives, 1900 Session I, D-01

⁹²¹ <https://paperspast.natlib.govt.nz/newspapers/NZH19011108.2.75.3>

New Zealand Herald, Volume XXXVIII, Issue 11806, 8 November 1901, Page 1 (Supplement)

stop milling just now, when the big scheme of development works had advanced to its present stage. He also added that contracts were stopped on good ore all round, but it was useless to go on breaking ore until there was a chance of milling it.⁹²²

How is the Crown Company battery getting on for water power? Their dam is below the new Woodstock dam. They have been installing boilers.

20 December

Messrs. Bewick, Moreing and Co. furnish the following particulars regarding operations in the Talisman Consolidated Gold Mining Company's mine:—
... "The bullion returns since the commencement of crushing operations at the new mill have been very disappointing so far".

The Woodstock battery is still closed down in consequence of the shortness of water necessary to drive the plant.⁹²³

AJHR 1902

For the year 1901

THE GOLDFIELDS OF NEW ZEALAND: REPORT ON ROADS, WATER-RACES, MINING MACHINERY, AND OTHER WORKS IN CONNECTION WITH MINING.

Appendix to the Journals of the House of Representatives, 1902 Session I, C-03⁹²⁴

Mr. John Hayes, F.S.Sc, Inspecting Engineer,

to the Hon. James McGowan, Minister of Mines. Sir, — Mines Department, Wellington, 15th May, 1902. I have the honour to present my report for the year ending the 31st December, 1901, together with those of Inspectors of Mines, Wardens, and other officers connected with the Department.

Page 11

KARANGAHAKE SCHOOL OF MINES.

The Director, Mr. R. B. McDuff, writes: —

I have the honour to furnish herewith the first annual report on the Karangahake School of Mines for the year ending the 31st December, 1901.

At a public meeting held in October, 1899, for the purpose of establishing a school of mines at Karangahake the following gentlemen were appointed to carry out the resolutions passed at the meeting: Messrs. C. H. Taylor, J. R. Noble, W. Goldsworthy, G. N. McGruer, F. Rich, R. Stackpole, jun., and Alexander Hogg. At a committee meeting held at the close of the public meeting Mr. Hogg was appointed secretary, and Mr. W. Goldsworthy and H. W. Guthrie trustees. So untiring in their efforts was this committee that in a

⁹²² <https://paperspast.natlib.govt.nz/newspapers/NZH19011129.2.81.3>

New Zealand Herald, Volume XXXVIII, Issue 11824, 29 November 1901, Page 1 (Supplement)

⁹²³ <https://paperspast.natlib.govt.nz/newspapers/NZH19011220.2.69.3>

New Zealand Herald, Volume XXXVIII, Issue 11842, 20 December 1901, Page 1 (Supplement)

⁹²⁴ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1902-I.2.1.4.3>

THE GOLDFIELDS OF NEW ZEALAND: REPORT ON ROADS, WATER-RACES, MINING MACHINERY, AND OTHER WORKS IN CONNECTION WITH MINING., Appendix to the Journals of the House of Representatives, 1902 Session I, C-03

little over a year the school was erected and fitted up with all the necessary appliances ready to open at the beginning of the present year.

Applications for the position of Director were called, and that of Mr. W. H. Baker, B.Sc, of the Thames School of Mines, was accepted. Mr. Baker took charge at the beginning of the year, and continued up till the end of March, when he resigned, having received the offer of a more lucrative position in Tasmania. Applications for the directorship resulted in my appointment, and I commenced my duties on the 1st April, 1901.

The school has had a most successful year, the attendance at the lectures being excellent, as is shown in the table appended.

The course of instruction is similar in all respects to that of the Waihi School of Mines, and embraces all the subjects necessary for the Government mine-managers', battery-superintendents', engine-drivers', and assayers' certificates.

The school-year is divided into three terms: First term, from the first Monday in February to the 30th April; second term, from the 9th May to the 20th August; third term, from the 9th September to the 20th December.

The fees charged are 5s. per term for each subject taken up. In addition to the class fees there is a membership fee of £1 per annum.

No Saturday science class is held for children.

The following improvements have been made in the school during the year: Sixteen lockers for the assaying class; a lecture-bench placed in front of the blackboard; a mineral case provided; and the assay-room ceiled with iron.

The capacity of the assay-room is taxed to its utmost at present, it being only 14 ft. by 10 ft., and, with an attendance of twenty students, working becomes very inconvenient. If the number of students in this class increases—as I am convinced it will do next year—some addition will have to be made to allow the work to be carried out successfully.

One great drawback to the school is the want of a waiting-room for the students; having only one class-room, they are compelled to remain outside until the earlier class is over, which is not very pleasant in the winter months.

Table of Attendances for Year ending 31st December, 1901.

Total individual students 25 31 37 [for terms 1, 2 and 3.].

TABLE OF ATTENDANCES for Year ending 31st December, 1901.

Subject.	First Term.	Second Term.	Third Term.
Mining	8	11	11
Surveying	9	12	12
Assaying	13	16	20
Theoretical chemistry	10	18	20
Metallurgy	11	13	11
Mathematics	4	7	13
Geology	3	3	4
Mineralogy	3	3	4
Drawing	4	4	3
Practical chemistry	13	18	20
Totals	78	105	118
Total individual students	25	31	37

The Hon J McGowan, Minister of Mines, has visited the school, and approved of what has been done; and, on representing that the survey class was working with a primitive theodolite, he kindly sent a new and up-to-date theodolite when he returned to Wellington. This gift was much appreciated by the Council and students.

The annual meeting was held in the school on the 22nd July, when the following officers and Council were elected: President- A. H. Curtis, Esq.; vice-presidents- D. G Waddell Esq., F Rich Esq., C. H. Taylor, Esq.; Council- Messrs. C. H. Taylor, W. Goldsworthy, F. M. Brown, R. Stackpole, jun., C. Trezise, H. W. Guthrie, J. Jackson, R. D. Jones; treasurer— R. D. Jones; secretary— Alexander Hogg.

The number of assays done for the public during the year was eleven, all being for gold and silver. One analysis of coal was also made for a local syndicate, who are prospecting near the township.

The annual examinations on the papers sent by the Mines Department have just been completed, twelve students presenting themselves for the subjects which they had taken up. This number would have been greater had not a slump in mining matters taken place, causing some of the best students to temporarily leave the district.

In conclusion, I must heartily thank our President, Mr. A. H. Curtis, for his handsome gift of seven valuable books to the school library, the Council for their hearty co-operation with me in every plan for the improvement of the school, and the donors of mineral specimens. In this connection the thanks of the school is especially due to Mr. F. B. Allen, of the Thames School of Mines, and Mr. W. H. Baker, of Tasmania.

Mr. James Coutts, Inspector of Mines

to the Under-Secretary for Mines, Wellington. Sir,— Inspector of Mines' Office, Thames, 13th March, 1902. I have the honour to furnish herewith the returns and report on the gold-mining industry in the Hauraki district for the year ended the 31st December, 1901.

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Woodstock Gold-mining Company (Limited), Karangahake.—A very large amount of work has been done by this company in improvements and development-work. The 4 ft. main water-power pipe-line extension has been completed, connecting the new dam with the old pipe-line, a distance of 1,800 ft. A new water-power plant has been installed, and consists of two Pelton type wheels—one 11 ft. 8in. diameter, and the other 11ft. 4 in. diameter—the main driving-pulley for the air-compressors being 12ft. 3in. in diameter and 38 in. face for a 36 in. (10-ply) Balata belt⁹²⁵, and the mill is driven by a 32 in. face 7 ft. 6in. diameter pulley and a 30 in. (8-ply) Balata belt. Two air-compressors have also been installed—one an Ingersoll-Sergeant compound, rope-driven, low-pressure cylinder 24 1/4 in. diameter, high-pressure cylinder 15 1/4 in. diameter, 18 in. stroke, ordinary capacity 1,170 cubic feet free air per minute; and the other a Schram single-compressor cylinder 14 in.

⁹²⁵ Balata belting is a tough, robust belt that has a rubber friction surface on both sides. It is constructed from premium quality high tensile cotton and natural rubber.

<https://www.par-group.co.uk/rubber-and-polyurethane/conveyor-belting/balata-conveyor-belting/>

diameter, 24 in. stroke. The compressed-air pipe-line erected during the year is of 8 in. diameter wrought-iron welded pipes with loose flanges, and is about 2,300 ft. in length, connecting the compressors and the shaft-chamber. At each end of this pipe-line there is a receiver, and in the chamber a porcupine reheater. The reheater is enclosed in brickwork, requires very little fuel, and entirely prevents any trouble from freezing at the pumps. The shaft has been sunk a further distance of 212 ft., making a total depth of 252 ft. A chamber has been cut out at this depth, and No. 6 level driven a distance of 28ft. Two winzes are being sunk from No. 5 level on the reef to connect with No. 6 level: one is down 66 ft., and the other down a depth of 10ft. These winzes will open up blocks of ground and insure good ventilation at No. 6 level. A considerable amount of ore has been opened up by the recent developments, which will keep the mill going for some time. Since the end of the year the mine has been closed down for want of funds but it is said the company has been reconstructed, and it is expected the contemplated works will soon be in full swing. Ninety-two men were employed by this company.

Talisman Consolidated (Limited),—On the Talisman main reef, No. 4 level has been continued in a southerly direction as a crosscut to intersect the Dubbo reef in the Bonanza section of the company's property, which it enters from the Earl of Glasgow section of the property of the New Zealand Crown Mines (Limited). On intersecting the Dubbo reef it was driven on southwards for a distance of over 500 ft., the ore-body being from 2 ft. to 3ft. in width in the neighbourhood of the present face. This drive is being continued with a view to reaching a promising shoot of ore intersected by a crosscut in the Royal Mail section of the company's property, about 200 ft. south of the present face in the No. 4 level. The Nos. 5, 6, and 7 levels have been continued in a southerly direction on the Talisman reef for varying distances, and the crosscut at No. 8 level (which will intersect the reef at a depth of 200ft. below No. 7 level) had attained a total distance of 1,000ft. at the end of the year. The reef is expected to be cut at this level by the end of February, when driving on the reef will at once be commenced. On the Dubbo reef three adit levels have been driven in a northerly direction up to the Crown Mines boundary, and ore from the stopes above these levels has been forwarded to the company's mill for treatment. The reef in these upper levels has proved to be very variable and small, but it is expected a larger and more regular ore-body will be found at depth. During the year under review the Adeline Reefs and Adeline Reefs Extended Claims were acquired by the company. The area of these claims is 103 acres, so that the total area of the company's mining property is now 372 acres. The new claims are immediately contiguous to the company's property, being bounded on the west by the Victor and Waihou Special Claims. Gold-bearing reefs exist on the new claims, and it is proposed to develop them in due course by means of crosscuts from the Dubbo reef. On the 31st July, 1901, the company's new fifty-stamp wet-crushing and cyaniding plant, erected on the site acquired from the Talisman Extended Company, was formally opened, but, owing to necessary adjustments of the steam-power plant, regular crushing operations did not commence until the second week in September. The returns to date have been extremely disappointing in comparison with the results obtained with the old dry-crushing plant and of the assays obtained from the mine-manager's samples; but a gradual improvement is expected to

take place, and it is anticipated that a large body of profitable ore will be developed at No. 8 level.

The new battery, which was erected from designs by Mr. Alfred Harper Curtis, Assoc.M.Inst.C.E., mining engineer, representative in New Zealand of Messrs. Bewick, Moreing, and Co., London, is a wet crushing and cyaniding plant consisting of four rock-breakers of Blake type; thirty heads of 1,050 lb. stamps, and twenty heads of 950 lb. amalgamated copper plates for recovery of the coarser gold; classifiers for separation of sands and slimes; spitzkasten for thickening the slimes prior to treatment in agitators; fifteen 6 ft. Union and Frue vanners for concentrating; ten steel vats, 22 ft. diameter by 10 ft. deep, for cyaniding coarse sands; six steel vats, 22 ft. diameter by 5 ft. deep, for cyaniding fine sands; four wooden and two steel vats, 22 ft. diameter by 5 ft. deep, fitted with agitators for treatment of slimes with cyanide; also the usual sumps, storage-tanks, pumps, precipitation-boxes, and other accessories. The concentrators, pumps, and agitators are operated by water-power; the breakers and stamps are operated by steam-power; the plant for generating the steam consisting of two Babcock-Wilcox boilers, and the engine being a Wheelock-Corliss single-cylinder horizontal engine of 245 indicated horse-power, with automatic expansion gear and Blake condenser. 11,252 tons of ore was treated during the year for 20,705 oz. of bullion, valued at £17,256 13s. 3d.; and an average of 180 men was employed.

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New Zealand Crown Mines Company (Limited).—This mine still continues to be one of the best gold-producers in this district, and is being extensively opened up at various levels. The large underlay shaft has been sunk a further distance of 147 ft. during the year, making the total depth now 372 ft. below the No. 6 Waitawheta level. At this depth the No. 4 B level chamber is being opened out, and when completed the main levels will be extended north and south on the reef, and thereby open up large blocks of ground, as there is 120ft. of backs between this level and No. 3 B level. The reef (which varies from 4ft. to 12ft. in width) has been driven on at No. 3 B level a distance of 1,076 ft. south, and 340ft. north; and at No. 2 B level it has been driven on a distance of 1,730ft. south, and 284 ft. north. Stopping operations are being vigorously carried on over the back of this level, where a large amount of payable ore is obtained. A considerable amount of driving, rising, and stopping is in progress in the upper workings above No. 6 Waitawheta level, where there is also a large tonnage of quartz produced. The Waitawheta Tunnel has been driven on the reef a total distance of 2,894ft. It is at present being extended on the eastern branch with very good results, and at this place the reef is intact for some distance upwards, so that the prospects are exceedingly encouraging, the recent developments showing that there is a likelihood of the mine producing payable ore for an indefinite period. As the mine is well equipped with pumping and winding machinery, there should be no difficulty in obtaining an increased supply of ore to keep the additional twenty heads of stamps (in the course of erection) [never happened] constantly going. Auxiliary steam-power is being erected, which will be used to assist in driving the plant when the water runs short in the summer months. The tram-line between the mine and the mill is being widened, and relaid with heavier rails, with the intention of running a small locomotive on it to bring the ore from the

mine to the battery [the locomotive never happened]. The quantity of ore treated was 32,028 tons for 35.660 oz. 14 dwt. of bullion, valued at £66,203 17s. 9d.; and £10,000 was paid to the shareholders in dividends. An average of 240 men was employed.

Comstock United Mine.—An option was held over this property by a syndicate, who directed the operations to extending the low-level tunnel a distance of 650 ft., making it a total distance of 1,100ft. This work was done for the purpose of intersecting a large reef which is said to exist in this end of the ground, but, not being successful in cutting the reef within the distance named, the men were discharged; but the manager is sanguine that the reef will be met with should the drive be extended a few feet further. Six men were employed in this mine.

Leap Year Mine. —A considerable amount of work has been done on this property by two men. The work has consisted in prospecting and driving on a reef that was discovered about 3 ft. in width. Assays of the quartz are said to have given results varying from £2 8s. 3d. to £27 16s. per ton, but in this instance (as in many others) it will require capital to develop the property.

Mr. Warden Bush

to the under-secretary for mines, Wellington.

Warden's Office, Thames, 1st March, 1902.

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At the commencement of 1901 it was hoped that the year would disclose such an advancement in the Upper Thames portion of the goldfield as hitherto had not obtained during its history, but unfortunately the miners' dispute arose, which unsettled mining business all over the field, more especially at Waihi, where it originated. With the award of the Arbitration Court, however, the mining dispute gradually was lost sight of, and a better and more hopeful feeling prevailed over the whole district than was the case for months previously. Notwithstanding this dispute, the gold-return for this portion of the district for 1901 shows an increase over the previous year of £143,284. In 1895 the gold-return was £169,134, only about £25,000 more than the increase of this year's output, the total for which is £635,004.

The Waihi Company's return for February was £41,090 from 12,939 tons, making a total of £205,506 since the commencement.

The New Zealand Crown Mine Company's (Karangahake) return for February was £6,388 from 2,560 tons, making a total of £40,862 since commencement of crushing. The crushing-power in the latter case is limited to sixty head of stamps, while that of the Waihi Company is 290...

Karangahake.

The New Zealand Crown Mines Company's property here may, I think, at the present time be called the premier mining property in this locality. This company last year took some ground; on the opposite side of the Ohinemuri River to that on which the Crown Mine itself is situated, which it is intended to work from a shaft now some 300ft. below the Ohinemuri River. A tunnel is now being driven through the Woodstock ground to enable this ground to be reached as quickly as possible. It is to be hoped that this venture of this company may meet with such a reward as persons laying out their money in

such large prospecting-works deserve. Should these prospecting-works result in unearthing something fairly good, the future not only of Karangahake, but also of Paeroa and surrounding country, would be assured. An engine is being erected at the Crown Company's reduction-works to supplement the water-power during the dry season, the want of water at such season very much hampering its milling operations.

The Talisman Consolidated have completed their new battery of fifty stamps, which has been crushing for some months, but, unfortunately, they appear to have got into a poorer class of ore; I shall therefore not be surprised to hear that for a time they will require to shut down the battery, and carry on development-works only, with a view to discovering more payable and richer ore at lower depths. It seems to me there are two ore-zones in the Karangahake district, one which may be termed the "surface zone" and the other the "deep-level zone." The lodes in the surface zone appear to get very poor below 400ft., but at 700ft. and deeper become of greater value. The Talisman Mine seems to have got to this portion, and it will require some months to enable it to make another start at crushing. This is unfortunate as this is one of our most energetic companies.

The Woodstock is another unfortunate company. The quartz is very hard to work, consequently expensive. A reconstruction, however, has recently taken place, which no doubt will put life into the mining operations of this company, which it is to be hoped will lead to more permanent benefits being secured to it in return for the capital expended so far without any return.

Outside of these properties there is little or no mining being carried on at present. The Waverley, the Imperial, and one or two other mining properties are in existence, but are in a languishing state for want of capital to develop them.

PUBLIC WORKS STATEMENT BY THE HON. W. HALL-JONES, MINISTER FOR PUBLIC WORKS, 16th SEPTEMBER, 1902.⁹²⁶

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Paeroa-Waihi. Work on this line has been continued throughout the year, principally on the Karangahake Tunnel. Some very heavy ground has been met with, and progress has consequently been slow.

The rails are laid from the junction with the Thames line at Paeroa to Karangahake. A ballast-pit has been opened out, and a quantity of rock quarried ready for crushing in the stone-breaker which has been procured for the purpose. Beyond the tunnel the formation is about half done for another mile and a quarter. The contractors for the Ohinemuri Bridge, Messrs. J. and A. Anderson, have cast the cylinders in their foundry in Christchurch, and have started work in connection with the abutments and piers at the site of the bridge. As soon as this bridge is completed so as to connect the Karangahake Station yard with the main road on the opposite side of the river it will be possible to open this section of the line for traffic. The expenditure last year

⁹²⁶ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1902-I.2.2.2.1>

PUBLIC WORKS STATEMENT BY THE HON. W. HALL-JONES, MINISTER FOR PUBLIC WORKS, 16th SEPTEMBER, 1902., Appendix to the Journals of the House of Representatives, 1902 Session I, D-01

was £18,324, or £24,993 allowing for the value of the permanent-way materials used. For the current year a vote of £25,000 is asked for.

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APPENDIX A. AUDITED STATEMENT OF EXPENDITURE ON PUBLIC WORKS OUT OF THE PUBLIC WORKS FUND FOR THE YEAR 1901-2.

Prepared in compliance with Section 8 of "The Public Works Act, 1894."

Sir, — Public Works Department, Wellington, 31st May, 1902. In compliance with the 8th section of "The Public Works Act, 1894," I enclose a statement of the expenditure during the preceding financial year on all works and services chargeable to the Public Works Fund. I have, &c, Wm. Hall-Jones, Minister for Public Works. The Controller and Auditor-General, Wellington.

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Paeroa-Waihi.

Length, 12 miles 40 chains. —The culverts, formation, and fencing have been practically finished to Karangahake, and the rails have been laid to the beginning of the station-yard. The west end of the tunnel is now driven 844 ft. full size (top heading 72 ft. further), and lined 742 ft. from the face. At the east end it is driven 607 ft., and the lining is done for 72 ft. from the face. The top heading is driven to 640 ft. from the face.

A ballast-pit has been opened at 2 m. 30 ch., and a stone-crusher has been erected. The contractors for the Ohinemuri Bridge are about to start its erection. The formation from the tunnel to about 6m. 15 ch. is about half done. Heavy rains caused some slips and wash-outs.

GOLDFIELDS AND MINES COMMITTEE: REPORT ON THE COAL-MINES ACT AMENDMENT BILL, TOGETHER WITH MINUTES OF EVIDENCE

ABSTRACTS OF COMMUNICATIONS RECEIVED BY, AND EVIDENCE TENDERED IN WRITING TO, THE CHAIRMAN OF THE GOLDFIELDS AND MINES COMMITTEE IN REFERENCE TO THE QUESTION OF THE PROPOSED AMENDMENT OF THE HOURS OF LABOUR IN MINES.⁹²⁷

Copy of Telegram sent by the Chairman of the Goldfields and Mines Committee, Wellington.

The Goldfields and Mines Committee of the House of Representatives is taking evidence on the Mining Act Amendment Bill and Coal-mines Act Amendment Bill regarding amending clause 5 of "Mining Act, 1901," by deleting the words "exclusive of meal-times" from that clause. If you desire to tender any evidence on the subject prior to the 1st August the Committee will be prepared to receive it. _____ 17th July, 1902.

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⁹²⁷ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1902-I.2.3.3.5>

GOLDFIELDS AND MINES COMMITTEE: REPORT ON THE COAL-MINES ACT AMENDMENT BILL, TOGETHER WITH MINUTES OF EVIDENCE., Appendix to the Journals of the House of Representatives, 1902 Session I, I-04a

From the New Zealand Crown Mines Company (Limited), Karangahake.
Auckland, 21st July, 1902.

Re amendment of clause (1) of section 5 of "The Mining Act Amendment Act, 1901": I understand from your telegram of the 17th instant re this clause that the Goldfields Committee has under consideration the words "exclusive of meal-times," and that the clause referred to in your telegram will read, after these words are removed, "Subject to the provisions of the Act, a miner shall not be employed underground for a longer period in any day than eight hours."

The Mining Act appears in some measure to be subordinate to the Industrial Conciliation and Arbitration Act, for under an award given by Mr. Justice Cooper, in Auckland, on the 4th October last year, we find, under "Hours of Labour," "That the week's work for all men employed in and about the mine other than surface labourers shall consist of forty-six hours for men working day shift and afternoon shift, and forty-seven hours for men working night shift, including the customary allowance for crib-time. Work to commence at 1 a.m. on Monday, and cease at 8 p.m. on Saturday. Six shifts per week." Therefore, whether the words "exclusive of meal-times" are eliminated from the Mining Act or not the position on the goldfields will not be affected thereby so long as the award remains in force.

The average actual and legal number of hours per week that a miner can remain underground is forty-six hours and a half, and the average number of hours per week he can work, allowing one hour per day for crib, is forty and a half, or six hours and three-quarters per day. In other words, he works $15 \frac{5}{8}$ per cent. less time than the ordinary surface labourer, and earns per hour, based upon a minimum wage of 8s. per day, about 1s. $2\frac{1}{4}$ d.

Our annual net profits over a period of several years (saying nothing for the lean years that preceded the profit-earning period) have been 5 per cent, on a capital of £200,000, and, as you are no doubt aware, every year lessens the value of a mine by the value of the bullion recovered from it. Therefore a provision for amortisement of the large sum invested should be made; but the very low-grade ore we have to mine and treat, together with high rate of wages, short hours of labour, gold duty, rents, and other assessments, will not allow of any sum being set aside for this purpose. The sum required to be invested annually at 3 per cent, compound interest to recoup the capital invested in the Crown Mine at the end of ten years is £17,446.

In South Africa (according to the papers) the Government has made an assessment of 10 per cent. on the net profits earned by mining companies there, and also allows them to make an annual provision for the amortisement or redemption of the capital invested. Here in New Zealand the Crown Company is paying in gold duty and other assessments over 20 per cent. on our net profits: this very heavy and unfair assessment prevents the company from making any provision for the recouping of capital over a given period of time.

The effect of such heavy assessments and labour restriction is now being felt, and in a year's time will be more so. What has come about, and is coming, was evidently seen by Mr. Justice Cooper, who, in giving his reasons for the award (as a result of his inquiry into the mining dispute), said, in speaking for the assessors and himself, "We are satisfied that the gold-mining industry in this

industrial district is, notwithstanding an increased output of gold from the Waihi Mine, in a languishing and depressed condition."

This opinion could not have been arrived at hastily, because the learned Judge had ample time of going thoroughly into the question. His inquiry was not confined to any particular section of the goldfields: he travelled over every part where mining operations were being conducted, and after a most searching investigation he and his assessors came to the conclusion that the mining industry was in a languishing and depressed condition; and now in face of this opinion, supported by the stopping of many mines and curtailment of operations in others, we find the Goldfields Committee at Wellington considering the question of deleting some words from the Mining Act for the lessening of the hours of labour, and the raising of wages a considerable percentage in a dying industry.

DEPARTMENT OF PUBLIC HEALTH (REPORT OF THE) BY THE CHIEF HEALTH OFFICER.

The Hon. the Minister of Public Health to His Excellency the Governor. My Lord,— Public Health Office, Wellington, July 28, 1902. I have the honour to submit to Your Excellency the report of the Public Health Department for the year 1901-2. I have, &c, J. G. Ward, Minister of Public Health.⁹²⁸

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Ohinemuri County (population, 5,000). —Here, again, the presence of a number of mining communities makes sanitary matters difficult. In one of them—Karangahake, a very crowded township—the conditions were serious, owing to the lack of nightsoil-removal and the pollution of the river-banks. On my representation the Council have agreed to institute a nightsoil service, which shall be compulsory for the householders in the congested parts. This will shortly be enforced.

Pollution of rivers: A serious question, occurring in many country districts, but especially in Ohinemuri County, is the pollution of the rivers and streams. Here the pollution is partly by sewage and refuse from the various townships on the banks of the Ohinemuri River, but chiefly from the water-overflow, from the stampers, &c, of gold-extracting batteries. There is so much of this that the water is always of a pea-soup consistency, smelling strongly of cyanide. It is quite unfit for human consumption or for cattle, and the settlers lower down suffer in consequence. I do think it would be possible to stop this state of pollution without interfering with the mining industry, but I have been endeavouring to get the local bodies to put a stop to the practise of using these watercourses as sewers for drainage, and as convenient tips for refuse, nightsoil, and such filth.

⁹²⁸ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1902-I.2.3.2.48>

DEPARTMENT OF PUBLIC HEALTH (REPORT OF THE) BY THE CHIEF HEALTH OFFICER., Appendix to the Journals of the House of Representatives, 1902 Session I, H-31

1902**8 January****KARANGAHAKE SCHOOL OF MINES.**

At Karangahake, Messrs. Hogg (secretary), Stackpole, and Tresize, council of the Karangahake School of Mines, waited upon the Minister [Hon. J. McGowan, Minister for Mines], and asked for financial assistance in the school's operations...

The council also asked for a grant to enable the land enclosing the school to be fenced, and thus prevent the classes from being disturbed by those who made use of the vacant allotment for recreation purposes. Then again, they asked for the enlargement of the assay room. Already the room was crowded. As a large number of the young fellows were finding out that without the necessary education the school afforded they could not obtain employment in batteries so readily, they expected an increase of 25 per cent. in the number of pupils. They also desired the Government to give them supplies of Government publications for use in the school's library...

KARANGAHAKE'S UNEMPLOYED.

The next deputation to wait on the Minister was one representing the Karangahake branch of the Miners' Union. The deputation consisted of Messrs. Tresize, Graham, and Stackpole. The former said he would like to draw the Minister's attention to the number of unemployed in Karangahake. Lately there had been a large amount of hardship and distress caused by the number of men thrown out of work at the mines and railway works, and they wished to know if the Minister would use his best endeavours to get the railway works started again as soon as possible, and thus afford relief to those concerned.

The Minister said that many of the men who were thrown out of work by the temporary suspension of mining operations in the Woodstock mine were a class who would not care to work on railway works under any conditions, and it could not be expected that he should start mining works to help the miners. He might say that if the Kauri Freehold Gold Estates Company adopted the report of the mining superintendent (Mr. Montgomery) a number of first-class miners would be required at Opitonui. The Waihi Company, he understood, also intended to increase its staff of miners, and perhaps good miners could get work in these places.

With regard to the curtailment of work on the Waihi railway extension, he was prepared to take a certain amount of blame. He would like to explain that there were 16 railways under construction, each of which was important to the particular district it would touch. These were carried on by means of the Government raising small loans each year without going in for a large loan policy for doing big public works. This was previously done, but if the Government acted in a similar way it would mean that hundreds of thousands of men would come from the other colonies and take up work. But as soon as the works were finished all these men would be thrown out of employment, and, as he had said, small amounts were raised without causing the introduction of foreign labour. He (Mr. McGowan) was anxious to see the line carried through as quickly as possible, knowing, as he did, its importance to

the district, and in view of the Miners' Union trouble he had asked the Minister for Public Works to put as many as he could on the works. That was done, and as a result the money voted was quickly absorbed, so much so that they could not continue on at the same rate to the end of the financial period. More was spent than was allocated, and they were obliged to shorten hands until next March. He had seen Mr. Poland (county chairman) about the matter, and had suggested that the County Council should, instead of letting large contracts for road formation, let small sections to about six men at each section. This would absorb a large number of the unemployed, and would tide them over the present depression, or, at all events, until the next sessional vote...

Mr. Stackpole then drew the Minister's attention to the deep level works which were being carried on at Karangahake, and the large amount of fuel being consumed. The Crown mines were putting in a large 200 horse-power engine [180hp, at the battery]; the Woodstock and Talisman had big engines, and the cost of coal transit from Paeroa to Karangahake was so great that the Minister would be helping the mining companies very considerably if he could succeed in getting the line ballasted from Paeroa to Karangahake, and thus give the companies an opportunity of getting their coal supplies at a greatly reduced freightage, as well as giving employment to men in ballasting operations.

The Minister promised to bring the matter before Mr. Hall-Jones.

In reply to Mr. Graham Mr. McGowan said that the railway tunnel would be kept going.⁹²⁹

NEW ZEALAND CROWN MINES, LIMITED. ANNUAL REPORT.

In order to guard against all risk of a temporary shut-down, through shortage of water-power in the summer months, a 180 h.p. steam engine, with the necessary boilers, had been despatched to the mine...

A steam plant had been ordered for the reduction works to provide against a stoppage during droughts, and to enable the company to increase their crushing power later on. The engine was being supplied by Messrs. Davey, Paxman, and Co., Limited, and the boilers by Messrs. Babcock and Wilcox, Limited. The plant was capable of developing 180 effective horse-power. It was hoped to have the foundations for this plant completed by the time the engine arrived. The boilers had arrived in first-class condition.⁹³⁰

Steam engine and boiler/s are installed at the battery.

10 January

Woodstock battery closes

Early in the present week instructions were cabled out from the Home directors to the local management of the Woodstock Gold Mining Company to close down the company's mine at Karangahake. It is understood that the financial position of the company renders it necessary to reconstruct, and that the suspension of operations which has taken effect will be only temporary...

⁹²⁹ <https://paperspast.natlib.govt.nz/newspapers/NZH19020108.2.69>

New Zealand Herald, Volume XXXIX, Issue 11857, 8 January 1902, Page 6

⁹³⁰ <https://paperspast.natlib.govt.nz/newspapers/NZH19020108.2.65>

New Zealand Herald, Volume XXXIX, Issue 11857, 8 January 1902, Page 6

One rather unfortunate incident associated with this district during the past week is the closing down of the Woodstock mine, at Karangahake, pending reconstruction. The capital necessary for the development of the mine has been absorbed in the extensive scheme that has been operating at the Woodstock, and it is a great pity that such has occurred just now, especially as the low level workings have proved that the downward continuation of the lode carries a better class of ore than that obtained in the upper levels. Had the battery been able to keep running it is questionable if closing down would have been rendered necessary, as Mr. Rich is confident that the returns from the mill would more than have covered expenses incurred in connection with the mining of the ore. He had also reduced working costs to a low figure. In 1899 the chairman of directors intimated at the annual meeting that Mr. Rich had reduced the working costs from 45s to under 30s per ton, and the latter gentleman now informs me that he has still further reduced the cost by about 20 per cent.—an estimate which he bases on the results of the last crushings. It is a misfortune, therefore, that the dry season compelled the closing of the mill. It is a pity too, because the mine development has been retarded, particularly in view of the fact that the No. 6 level which is down 240 ft below the No. 5 level, has intersected the Maria lode, and proved it at that depth to carry a high grade ore. It is hoped, however, that the closing down will not be of long duration, for it would seem as if the company were just about to be benefited by the heavy expenditure just incurred, when force of circumstances compelled another halt. In the meantime all the men have been discharged, and though rumour has it that the pumps are to be lifted, Mr. Rich informs me that this is not correct—at all events at present. It is expected that if the company can be reconstructed operations will be resumed in about three months' time.⁹³¹

17 January

Mr. F. Beattie, inspector of nuisances, reported on certain recommendations made by Dr. Makgill. Regarding the institution of a nightsoil service in Karangahake, he recommended that the service be established, provided that a depot, consisting of Crown land, and located at Turner's Hill, can be procured. It was resolved that the matter be held over for one month, pending more complete details being obtained.⁹³²

31 January

The result of the Talisman Consolidated Company's operations have so far been of a disappointing nature. The outcome of the crushings put through on the completion of the company's new mill, did not by any means come up to expectations, the ore yielding less per ton than was anticipated according to the assay values. The returns for the year from 12,023 tons dealt with, totalled £16,765 - an amount which was not payable. A change was made in the mine management at the end of the year, Mr. Goldsworthy's place being now filled by Mr. Deane Mitchell (recently of West Australia), appointed by the Home

⁹³¹ <https://paperspast.natlib.govt.nz/newspapers/NZH19020110.2.82.7>

New Zealand Herald, Volume XXXIX, Issue 11859, 10 January 1902, Page 1 (Supplement)

⁹³² <https://paperspast.natlib.govt.nz/newspapers/NZH19020117.2.66>

New Zealand Herald, Volume XXXIX, Issue 11865, 17 January 1902, Page 6

directors. The Talisman Company have, it is understood, added to their holding by taking over the property until recently owned by the Imperial Gold Mining Company, and which the latter sold at the end of the year to a private buyer.⁹³³

1 February

New Zealand Illustrated Magazine

The New Zealand Tourist.

...Between Paeroa and Waihi are sights that cannot be seen in any other part of this or the Australian colonies. The coaching and vehicular traffic on this road alone are worth going to see. One picture in this article of a number of teams on the road to Waihi will give some idea of the traffic, though these teams are all the property of one firm. Numerous firms are employed in the carrying business, while there are three companies running passenger coaches with four, five and six horses. Along the whole fourteen miles of road between Paeroa and Waihi is a constant stream of vehicles going and coming. The coaches rattle along at a ding-dong pace — there are three competing lines for public favour — and to sit behind a good team when the whips are cracking, and the drivers have their teams "eyes out" is most exhilarating, particularly going through the marvellous Karangahake Gorge. Here the road is a narrow ledge of rock, cut out from the perpendicular wall. The river rushes along below the roadway, and the scenery is grand and inspiring. The gorge itself is quite as fine in its awful ruggedness as anything of the kind we have in the Colony.

This is an ideal spot for the amateur photographer. More good pictures can be obtained in two hours in the Karangahake and Waitawhata Gorges than could be got in most places in two weeks. One has only to leave the coach for a hundred yards or so, and any number of very fine and interesting pictures can be had, not only of the gorges, but also of the batteries, aerial trams, bridges, flumes, water-races, etc. Karangahake is unique in this way: that all the best sights can be seen without any climbing or difficulty. Ladies can, without trouble, walk along the tramlines to the best points. Karangahake is a perfect show place of big pictures and mining scenes. I have never, in any of my travels, seen a place so rich in pictures as Karangahake. There are some really lovely things to be had here — worth going miles for. I would most strongly advise tourists who want pictures not on any account to miss Karangahake. This place is only five miles from the Paeroa railway station, and as coaches run every hour, it is easily accessible.⁹³⁴

21 February

At Karangahake the Talisman Consolidated Gold Mining Company's property is now being worked under new residential managership. The January return shows that 2486 tons of ore were treated for a yield of £3063 worth of bullion, the average per ton being a fraction over £1 4s 7d.

⁹³³ <https://paperspast.natlib.govt.nz/newspapers/NZH19020131.2.83.6>

New Zealand Herald, Volume XXXIX, Issue 11877, 31 January 1902, Page 1 (Supplement)

⁹³⁴ <https://paperspast.natlib.govt.nz/periodicals/NZI19020201.2.18>

New Zealand Illustrated Magazine, Volume V, Issue 5, 1 February 1902, Page 417

The Woodstock Gold Mining Company's property is still closed down, pending reconstruction, which has every probability of being carried to a successful issue, and a large working capital provided for the continuation of the big development scheme inaugurated for the exploitation of the lower levels. In fact, it may be said that reconstruction has already been accomplished at Home, and a little while will see the scheme successfully carried through and mining operations once more in active progress at Karangahake.

The New Zealand Crown Mines Company are continuing the progressive policy they instituted when Mr. Daw came out to take charge of the property, and the mine is second only to the Waihi in the Ohinemuri district. The lower levels are turning out well, and the lode is maintaining all its splendid characteristics on its downward continuation. The new steam plant for driving the reduction works when water is scarce is being erected on the battery site, but as the weather is now apparently broken it is hardly likely that it will be required this season. However, it will prove a most valuable auxiliary, and when running will enable crushing operations to be carried on without stoppages during the dry season.⁹³⁵

12 March

Paeroa, Tuesday. About ten o'clock last night a fire occurred at Mr. E. D. White's house, consisting of five rooms, at Mackaytown. There was no one occupying the house at the time, the previous tenant having shifted about 10 days ago. The Karangahake Fire Brigade were early on the scene with their reel, but as no water supply was available, and a strong wind was blowing, they could do nothing, and the building was completely destroyed. The building was, I understand, covered by insurance.⁹³⁶

14 March

KARANGAHAKE. Since the last Summary was published the management of the Woodstock Company received instructions to resume development work in the mine, and the old staff of miners have been got together and operations resumed. The news was received with a great degree of satisfaction, as the resumption of work not only affords a good deal of work to the miners, but it will enable the low level development to proceed again. It will be remembered that when work was suspended the No. 6 level had been driven 20ft after striking the Maria lode in the shaft, and now, according to instructions, the advancement of that level is to be proceeded with, though before that work could be undertaken it was necessary to pump the water out of the shaft. All the works about the mine will be vigorously prosecuted with the exception of crushing operations, the resumption of which will be delayed until there is sufficient water power available from the river to keep the mill and the compressors running without stoppages.

⁹³⁵ <https://paperspast.natlib.govt.nz/newspapers/NZH19020221.2.68.3>

New Zealand Herald, Volume XXXIX, Issue 11895, 21 February 1902, Page 1 (Supplement)

⁹³⁶ <https://paperspast.natlib.govt.nz/newspapers/NZH19020312.2.31>

New Zealand Herald, Volume XXXIX, Issue 11911, 12 March 1902, Page 5

The New Zealand Crown Mines Company are pushing ahead the exploitation of the reef system below the Waitawheta tunnel, and very good results are being obtained. The reef maintains a fair width for the length opened up, and its character is proved by the quantity of stone produced. At the reduction works the erection of the new steam plant is proceeding expeditiously, and when completed it will prove of great benefit during the dry season of the year when the water in the river is very low. The return for the past month shows that 2560 tons of ore were treated for a return of bullion valued at £6388.⁹³⁷

25 April

Talisman Consolidated Company...

The cause of the Talisman Company's stoppage was the installation of an electrical air-compressor plant for operating rock drills in the stopes.

The New Zealand Crown Mines...

At the battery the new engine has been fixed in position, and the sheds to cover it are now being built, so that the company will in future always have auxiliary power for driving the mill in the event of the river being too low during the dry season, or of an accident at any time to the water-races.⁹³⁸

180hp steam engine at Crown battery

16 May

An arrangement has been come to between the Woodstock and the Talisman Gold Mining Companies, enabling the latter to utilise the upper levels of the former company in order to reach their own ground from the Woodstock levels at a lower depth than hitherto has been feasible. At the present time the Talisman Company are driving from the Woodstock No. 3 level towards a point which will intersect their own property several hundred feet below their present lowest (No. 8) level.

At Karangahake the New Zealand Crown Mines, Woodstock, and Talisman Consolidated are carrying on active operations, and though the Woodstock has not yet resumed crushing and the Talisman has temporarily suspended milling, the Crown Mines keeps on the even tenor of its way, and its bullion production for the past month is a very satisfactory one.

The Talisman Consolidated Company have lately purchased an air-compressor plant, which is now on the ground and in the process of erection. During the past few weeks an arrangement was come to whereby the Talisman Company are utilising the upper levels of the Woodstock Company, and work is now proceeding therein at several hundred feet below the present lowest (No. 8) level of the Talisman mine, with satisfactory results. The work in question consists of driving on the vein of ore in the Woodstock No. 3 level into the Talisman ground below No. 8 level, where driving on the reef is proceeding as rapidly as possible with hand labour, and will be pushed ahead with the rock drills as soon as the air-compressor plant is in readiness. Nos. 6 and 7 levels

⁹³⁷ <https://paperspast.natlib.govt.nz/newspapers/NZH19020314.2.71.6>

New Zealand Herald, Volume XXXIX, Issue 11913, 14 March 1902, Page 1 (Supplement)

⁹³⁸ <https://paperspast.natlib.govt.nz/newspapers/NZH19020425.2.79>

New Zealand Herald, Volume XXXIX, Issue 11949, 25 April 1902, Page 1 (Supplement)

are also being pushed on southwards through the Bonanza section of the property, and, generally, very large development works are rapidly going ahead. With regard to the battery some minor alterations will be made during the closure to enable the mill to deal with a larger tonnage monthly when milling operations are resumed. Prior to shutting down a parcel of ore was treated, and a general clean-up of the mill made, bullion resulting worth £2865 17s 6d.⁹³⁹

The Talisman Company are installing an electrical air-compressor plant for operating rock drills. Is electricity sent from battery to mine, running compressor in/at the mine? Is there more evidence for this?

7 June

The monthly meeting of the Ohinemuri County Council...

Main Road near Irishtown.—The engineer reported that the river is making serious encroachments towards the main road, caused by the current being deviated by the island now forming below the Railway Bridge, this he regarded as a very serious matter, as by another flood the whole road may go; and he was now endeavouring to train the current through the heap of stones now collected in the river bed. As this danger to the road has been largely caused by the Public Works Department depositing the spoil from the railway tunnel at Karangahake in the river it was decided to ask the Government for £100 towards effecting permanent repairs.⁹⁴⁰

26 June

At Karangahake the Talisman Consolidated, Woodstock, and New Zealand Crown mines are all in an active development stage. The New Zealand Crown Mines Company is the only one that is at present utilising its battery, though the Woodstock is expected to resume crushing operations shortly.⁹⁴¹

17 July

So far quartz mining has been the chief characteristic of Ohinemuri, but Messrs. Rich and Brown are now making an effort to obtain special river claims for the purpose of working the thousands of tons of tailings which have been emptied into the Ohinemuri River by the various companies carrying on crushing operations. These applications are in respect of eight river claims, extending from the junction at Paeroa to Mackaytown, and, if granted, the owners, I understand, propose working the deposits on a large scale. The applications came before the Warden of the Ohinemuri district on last Court day, but a number of objections were lodged by the Ohinemuri County Council and by settlers living on the banks of the river. The objectors in their evidence referred to the damage that had been caused by mining operations, as a result of the river being declared a sludge channel, and contended that

⁹³⁹ <https://paperspast.natlib.govt.nz/newspapers/NZH19020516.2.100.3>

New Zealand Herald, Volume XXXIX, Issue 11967, 16 May 1902, Page 1

⁹⁴⁰ <https://paperspast.natlib.govt.nz/newspapers/AS19020607.2.22>

Auckland Star, Volume XXXIII, Issue 134, 7 June 1902, Page 3

⁹⁴¹ <https://paperspast.natlib.govt.nz/newspapers/NZH19020626.2.75.3>

New Zealand Herald, Volume XXXIX, Issue 12002, 26 June 1902, Page 1 (Supplement)

mining operations on the river would increase the damage. After hearing argument and evidence the Warden intimated that it would take some time to look carefully into the many authorities quoted on both sides, and that he would reserve his decision.

The Karangahake mines still continue to afford work for a large number of men, the New Zealand Crown mines being the principal employers. This company's mine maintains the prestige it has gained for steady and consistent bullion production, and the manner in which the low levels from the Waitawheta tunnel down to the No. 4 level below are opening up gives the greatest satisfaction. Sinking is in progress for the No. 5 level, and when this also is in development splendid blocks of ground, revealing thousands of tons of ore reserves, will be available. Large quantities of crushing material from the upper workings are also coming to hand, and generally speaking the mine is looking well. The return for June showed that 2833 tons of ore were crushed and treated for a yield of bullion valued at £5966.

The Woodstock Company, Limited, are pushing ahead the low level development works in hand, and several blocks of stopes are fully manned, and are contributing supplies of good crushing material.

No official report is to hand from the Talisman Consolidated Gold Mining Company, but development work is still proceeding steadily in the mine.⁹⁴²

8 August

STEPS AT RAILWAY TUNNEL. The Council decided to erect steps near the mouth of the railway tunnel at Karangahake...

AID TO PROSPECTING. T. Scanlon and. H. Eyre applied for assistance to prospecting in the Karangahake district. Cr Marrinan supported the application, and thought the Council should do all in its power to aid prospecting. Cr Draffin also said prospecting should be encouraged, as by it he thought fresh finds might be made. The Chairman moved that the application be granted, and the Council give 10s per. week per man, and ask the Government to grant a similar sum. The motion was put to the meeting and carried, Crs Barry and Bowler voting against it.⁹⁴³

17 September

PUBLIC WORKS STATEMENT.

THE PAEROA-WAIHI LINE. Paeroa-Waihi: Work on this line has been continued throughout the year, principally on the Karangahake tunnel. Some very heavy ground has been met with, and progress has consequently been slow. The rails are laid from the junction with Thames line at Paeroa to Karangahake. A ballast pit has been ordered out and a quantity of rock quarried ready for crushing in a stone breaker, which has been procured for the purpose. Beyond the tunnel the formation is about half done for another mile and a quarter. The contractors for the Ohinemuri bridge, Messrs J. and A. Anderson, have cast the cylinders in their foundry in Christchurch, and have

⁹⁴² <https://paperspast.natlib.govt.nz/newspapers/NZH19020717.2.81.3>

New Zealand Herald, Volume XXXIX, Issue 12020, 17 July 1902, Page 1 (Supplement)

⁹⁴³ <https://paperspast.natlib.govt.nz/newspapers/OG19020808.2.9.2>

Ohinemuri Gazette, Volume XII, Issue 989, 8 August 1902, Page 2

started work in connection with the abutments and piers at the site of the bridge. As soon as this bridge is completed so as to connect Karangahake station yard with the main road on the opposite side of the river it will be possible to open this section of line for traffic. The expenditure last year was £18,324, or £24,993 allowing for value of permanent way materials used. For the current year a vote of £25,000 is asked for.⁹⁴⁴

18 September

OHINEMURI. The mining industry of Ohinemuri has for some time past been under a cloud of depression, but there are now indications that that cloud is lifting, and that the future prosperity of this important industry here will be placed on a permanent basis.

KARANGAHAKE. At Karangahake the outlook is especially encouraging. For some time past both the Woodstock and the Talisman batteries have been idle, but, as mentioned last Summary, the former plant has resumed crushing and now the Talisman Company are getting ready to resume ore-reduction and treatment. Both mines are employing a huge number of hands, and when their returns are coming in regularly the output from the district should be considerably augmented.⁹⁴⁵

9 October

Operations in the various mines at Karangahake have been carried on continuously since last summary was published, though the Woodstock and Crown mines have had a good deal of water to contend with in their lower workings. The Woodstock especially encountered a great influx in the shaft, owing probably to the striking of a large fissure in the rock. The result was that the pumps underground were quickly submerged, and bailing with tanks was rendered necessary. These tanks have proved effective in reducing the water considerably, and it is hoped that it will not be long before the difficulty is quite overcome. The intersection of the fissure is having the effect of draining off a large section of country, and this no doubt accounts for the heavy flow into the Woodstock shaft...

The new boilers for the auxiliary plant [Woodstock battery] have arrived, and a start has been made with their erection. The first return since the resumption of crushing operations is expected to come to hand within the next day or two.

Messrs. Bewick, Moreing, and Co. furnish the following report on the Talisman Consolidated Gold Mining Company's property: —The company's mill will resume crushing operations on the 20th of the present month, and judging by the result of developments in the past six months, during which time the mill has been closed down, a successful future lies before the company. During the time the mill has been shut down an extensive and vigorous policy of mine development has been pushed ahead, and a practically new mine has been opened up. Some 400 ft below the previous lowest level have been exploited by levels Nos. 8 and 10, and by a working intermediate

⁹⁴⁴ <https://paperspast.natlib.govt.nz/newspapers/OG19020917.2.6>

Ohinemuri Gazette, Volume XII, Issue 1006, 17 September 1902, Page 2

⁹⁴⁵ <https://paperspast.natlib.govt.nz/newspapers/NZH19020918.2.89.4>

New Zealand Herald, Volume XXXIX, Issue 12074, 18 September 1902, Page 1 (Supplement)

between levels Nos. 7 and 8. These adits for practically the whole of their extent have exposed a huge payable ore-body, which has in places attained a width of 20ft. Instead of the system of long and expensive crosscuts previously employed to develop the mine, underground haulage to No. 8 level will be resorted to and a large hoisting plant is now being erected in that working, and an incline shaft proceeded with. Various portions of the mill have been remodelled with a view to saving of labour, and the management are confident of most materially reducing costs. At no previous period in the history of the mine have general prospects been of such an encouraging nature.

The New Zealand Crown Mines Company's operations are of a steadily progressive nature...

All the machinery is working well, and the battery during the dry season of this year will be worked by the new steam plant being erected contiguous to the reduction works.⁹⁴⁶

Talisman start incline shaft

11 December

New steam plant at Crown battery working well

KARANGAHAKE. The returns from the Talisman, Crown, and Woodstock mines for the past month show about £16,000 worth of bullion. The Talisman Consolidated return is an exceptionally good one, and shows an advancement on the previous output prior to shutting down. The tonnage crushed was 2912, and the yield of bullion £6576 5s 4d. The return is satisfactory, especially when it is considered that there was only an average of 32 heads of stampers at work.

The Crown. Mines return is also a good one, 2614 tons having produced £6336. The company are meeting with considerable success in the low level operations, some fine blocks of ground being opened up. The new steam plant at the battery is working well.

The Woodstock Company are also pushing ahead with their development work, and the return of bullion for the last month's crushing was £3077 from 1845 tons.⁹⁴⁷

15 December

Tennis.

On Saturday afternoon the Paeroa Tennis Club journeyed to Mackaytown for the purpose of having a match with the Karangahake team. The Paeroa team was most hospitably received by the Karangahake team, who provided afternoon tea.⁹⁴⁸

⁹⁴⁶ <https://paperspast.natlib.govt.nz/newspapers/NZH19021009.2.78.3>

New Zealand Herald, Volume XXXIX, Issue 12091, 9 October 1902, Page 1 (Supplement)

⁹⁴⁷ <https://paperspast.natlib.govt.nz/newspapers/NZH19021211.2.77.3>

New Zealand Herald, Volume XXXIX, Issue 12141, 11 December 1902, Page 1 (Supplement)

⁹⁴⁸ <https://paperspast.natlib.govt.nz/newspapers/OG19021215.2.16>

Ohinemuri Gazette, Volume XII, Issue 1044, 15 December 1902, Page 3

An early mention of Karangahake tennis. It seems likely that the courts were at Mackaytown until 1909 when courts combined with bowling greens were established at River Road.

27 December

The position of mining at Karangahake shows distinct progress during the past year. The N.Z. Crown Mines has been crushing regularly during the 12 months, the output totalling £46,510, out of which a dividend of 1/6 per share has been declared on the 200,000 shares in this company. At the market rate of 12/, the dividend is good interest, as the ore reserves are reported as large. The total output from the Crown Mines amounts to £465,510.

The Woodstock Company resumed crushing about September, and has since then obtained bullion worth £11,812 13/4, the total output from this mine now being £80,958 13/4.

The Talisman Consolidated Company's new battery got to work again towards the end of the year, and the result of the first crushing showed that ore of much better grade is now coming to hand, as 2912 tons yielded £6576 5/4, whereas the last crushing in March yielded £2865.17/6 from 2360 tons. The output for the year was £18,781 6/10, the battery not being at work for about six months while being enlarged and improved. The total output from the Talisman property amounts to £138,781 5/10. Ore of much better value was met with in the course of development works, and there seems every chance of the Talisman Consolidated Company being now a regular bullion producer...

The value of the mining industry in Ohinemuri County may be gathered from the fact that the total yield to date from the Waihi, Talisman, Crown, Woodstock, and Waitekauri Companies amounts to £3,521,419. This does not include the returns in earlier days from Owharoa, Te Aroha, also the Silverton, Union Waihi, Komata Reefs, and other companies.⁹⁴⁹

AJHR 1903

For the year 1902

THE GOLDFIELDS OF NEW ZEALAND: REPORT ON ROADS, WATER-RACES, MINING MACHINERY, AND OTHER WORKS IN CONNECTION WITH MINING.⁹⁵⁰

Mr. John Hayes, F.S.Sc, Inspecting Engineer

to the Hon. James McGowan, Minister of Mines. Sir,— Mines Department, Wellington, 11th May, 1903. I have the honour to submit my report, together with those of Inspectors of Mines, Wardens, and other officers connected with the Department, for the year ending the 31st December, 1902.

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⁹⁴⁹ <https://paperspast.natlib.govt.nz/newspapers/AS19021227.2.5>

Auckland Star, Volume XXXIII, Issue 307, 27 December 1902, Page 3

⁹⁵⁰ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1903-I.2.1.4.3>

THE GOLDFIELDS OF NEW ZEALAND: REPORT ON ROADS, WATER-RACES, MINING MACHINERY, AND OTHER WORKS IN CONNECTION WITH MINING., Appendix to the Journals of the House of Representatives, 1903 Session I, C-03

As an instance of the success of the deep penetration of payable gold into the volcanic rocks of Cape Colville Peninsula, it will suffice to mention the case of the mines at Karangahake. The Crown reef and the Woodstock and Talisman reefs have been traced, the first to the higher part and the last to the top of the mountain, which is 1,786 ft. above sea-level, and the works of the Crown Mine must now be considerably below the level of the sea; and in connection with the Woodstock, the lode promising to maintain a good show of gold, it was some time ago proposed to sink to levels that would prove the continuance of the lode through a vertical distance of more than 2,000 ft. Whether this work is being proceeded with I cannot say, but there is here sufficient evidence of the continuance of gold in depth, and what, if it be not a warrant, is at least an encouragement to prosecute the search at the Thames.

It is true that Karangahake has been particularly favoured with respect to the natural exposure of its reefs in a vertical distance of 1,700 ft., but this fact has no bearing on the question of the penetration of the reefs and their gold-bearing quality, since did the gorge of the Waitawheta not exist the fact of the existence of the reefs had been the same. Information respecting barren zones at various levels in both the Martha, Shepherd's, and Crown reefs would be of great interest in connection with any proposal for deep sinking at the Thames. Such information has not been compiled with the care that is required in this case, but it could easily be obtained...

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KARANGAHAKE SCHOOL OF MINES.

Mr. R. B. McDuff is the Director of this school.

The following is the annual report of the Council: —

It affords the Council great pleasure to present the fourth [second] annual report on the work done and the results obtained during the year ending the 31st December, 1902.

Attendance. —During the year the attendance was a slight increase on that maintained for the previous twelve months, being for the three terms 32.3 students, taking an average number of 104 classes. With the improvement in mining matters at present obtaining in this district, even larger attendance can be looked for during the present year.

Equipment. —As stated at the last annual meeting, the equipment of the school for the advantageous study of the subjects embraced in the curriculum was fairly complete, and during the year a few additions —notably a set of bullion rolls for the assay class and some additional text-books— have been added, and the Council have lately received an offer from the Very Rev. Dean Hackett of some further technical works, which will greatly enhance the value of our library. The Council take this opportunity of reminding all members of the institute, whether students or not, that they are entitled to the use of the books of the library at any time, provided the book is not taken away from the building, and, as these works comprise most of the best authorities on any of the mining branches practised in this district, members may gain great help by taking advantage of their privileges in this respect.

Examinations. —At the examination for mine- and battery-managers' certificates held last year six candidates were provided by the school. They sat at Waihi, and the results showed four to have gained first-class certificates,

one a partial pass, and one to have failed. Owing to the inconvenience journeying so far in order to sit, the Council forwarded a recommendation to the Board of Examiners that Karangahake be appointed an examination centre in future, and the Board has been pleased to grant this.

At the annual Government examinations in connection with the schools of mines throughout the colony, held in December last, thirteen students presented themselves, and the results to hand show the Karangahake School to have headed the honour list for New Zealand, in spite of the fact that several other schools boast a larger attendance and presented a greater number of candidates, and, further, that this school is the youngest in the colony. This must be most gratifying to the members and students, and especially to the Director (Mr. McDuff), whose painstaking efforts have been a continual source of pleasure to the Council.

The gold medal offered by our President (A. H. Curtis, Esq.) to the student gaining the highest aggregate in any five subjects was won by Mr. R. D. Jones with an aggregate of 376, Mr. F. Cordes being next with 348.

Receipts and Expenditure. —The treasurer's statement shows the total receipts from all sources to have been £322 16s. 6d., while the expenditure totalled £232 12s. 8d., leaving a credit balance at bank and in hand of £90 3s. 10d.

Recommendations. —The Council before retiring from office wish to recommend to the new Council that immediate steps be taken to enlarge the school building, the present assay department especially being totally inadequate to accommodate the large class taking this course, the Director having had, perforce, to split the class, thus doubling his work in this particular subject, in order to overcome the difficulty of accommodation. The Council therefore recommends that the Government be approached with the request for a special grant to carry out these additions.

Election of Officers and Councillors. —During the year our President, vice-president, and one Councillor left the district, the Council under by-law 11 appointing Mr. T. G. Vinson to fill the vacancy caused by the resignation of Mr. Travers.

Mr. James Coutts, Inspector of Mines

Thames, to the Under-Secretary, Mines Department, Wellington. Sir, — Inspector of Mines' Office, Thames, 21st March, 1903. I have the honour to furnish herewith the returns and report on the gold-mining industry in the Hauraki district for the year ended 31st December, 1902.

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Karangahake.

Woodstock Gold-mining Company. — During the first three months of the year operations at the mine and mill were suspended, pending reconstruction of the company. This having been accomplished, another start was made in April to push on the development-work by driving the No. 6 level southwards from the shaft, and by sinking the No. 1 winze from No. 5 level to connect with this level. The No. 6 level at the end of the year had been advanced 730 ft., and the winze from No. 5 level connected therewith at a point about 700 ft. south of the shaft, after sinking and rising 250 ft. Stoping has been in progress since June, ore being broken from over Nos. 2, 3, 4, and 5 levels. About 8,000

tons of ore had been broken at the end of the year. Crushing operations were resumed at the end of August, and have been continued without a break since then. At the end of the year 7,814 tons had been treated, yielding bullion to the value of £12,434 7s. The mode of treatment has been the same as heretofore—viz., crushing through breakers and stamps, amalgamation with Muntz-metal tables, concentration over vanners, and cyanidation of the sands, concentrates, and slimes, the former by percolation, the two latter by agitation. A new steam plant has been installed as an auxiliary to the water-power during the dry season of the year. This plant consists of two 150-horse-power Elephant boilers and a 250-horse-power Corliss engine. These have been set up at the mill, and are so arranged that either the mill or compressors, or both, may be driven by either steam or water, or, if need be, both steam and water power can be coupled together. The plant has had a fortnight's run, and everything works admirably. An average of ninety-one men has been employed.

Talisman Consolidated. —Operations in this mine have been vigorously pushed ahead during the year in opening up and developing the property at various points, the principal work being the intersection and exploring of the Talisman main lode at the No. 8 level. This has proved to be a large body of payable quartz varying from 4 ft. to 16 ft. in width, and has been driven on in a southerly direction for a distance of about 500 ft. Stopping operations are proceeding over the back of this level on a block of ground 200 ft. in height between 7 and 8 levels. No. 10 level: On the 26th April negotiations were entered into with the Woodstock Company for the use of that company's No. 3 level, situated at a depth of 200 ft. below No. 8 level, and were brought to a successful arrangement being made, when the company immediately commenced work at this level. The reef here is a large body of ore at least 10 ft. in width. During the period under review crosscuts were put in at intervals to ascertain values, and for nearly 100 ft. assay returns of £2 per ton were obtained, while some isolated patches of very rich ore were met with. The very divergent strike of the reef at this level compared with that in the workings above tends to show that this is either a separate reef or a branch of the main ore-body, but this will be proved as soon as time will permit by crosscutting, &c. A chamber has been cut out and an incline shaft is being sunk on the reef from No. 8 level to connect with a level to be called the No. 9 level, and also No. 10 level, and when completed will be the outlet for all the ore below the No. 8 level. The No. 9 level is being pushed ahead from the Woodstock stopes with all possible speed, and, as there is a distance of 500 ft. to drive on the course of the lode to the incline shaft, this will open up a large block of ore containing probably something like 50,000 tons. This is merely an approximate estimate, as absolutely nothing is known of widths and values of the whole 200 ft. of vertical extent between Nos. 8 and 10 levels. A crosscut east from No. 8 level has been commenced in order to ascertain whether the rich vein struck in the crosscut at No. 7 level continues down. Should this vein (which has given such favourable results) prove to be something more than an isolated patch, the discovery will be a most important factor in the matter of returns from the mill. The return sent in from this mine up to the end of the year was 13,396 tons for 50,409 oz. of bullion, valued at £20,163 13s.; and an average of 120 men was employed.

New Zealand Crown Mines (Limited). —It is pleasing to note that operations in this mine have again proved remunerative, whereby, after working-

expenses, &c, were all paid, a substantial surplus was left, enabling the directors to disburse in dividends to the shareholders during the year the sum of £15,000, which must be highly satisfactory, more especially as the prospects of the mine are well maintained at the deep levels, thus giving every reason to expect that payable returns will be forthcoming for an indefinite period. The main incline shaft has now reached a depth of 430 ft., and sinking is still proceeding. The No. 2 level from the main incline shaft has been extended 315 ft., making a total distance from the shaft of 2,309 ft. The average width of the reef has been 4 ft. 1 in., which yielded for a distance of 31 fathoms 10 tons 6 cwt. of quartz per fathom, worth about £1 8s. 8d. per ton; the remaining 128 ft. 6 in. has been driven on the course of a small leader which is supposed to be the reef (as there are no indications of the reef being heaved out of its course), but this will be proved by crosscutting into the walls when time will permit. No. 3 level: This level has been extended a total distance of 378 ft. from the shaft. The reef at this point was pinched up to about a foot in thickness owing to the hard nature of the country, and it is sometimes difficult to know whether it is the reef or not, as there are no indications whatever showing in which direction (if any) it has been heaved out of its course. This level was also extended a distance of 125 ft. south of the shaft, and connected with a drive that had been driven north from the winze. The drives north and south of the winze and south of the shaft now constitute the No. 3 level. This level south of the winze was extended 284 ft., and in this extension 428 tons of quartz was broken out, which gave a return of £1,115; the average width of the reef was 3 ft. 7 in. The total length of the level from the shaft is 1,741 ft. No. 4 level: This level has been driven south of the shaft a distance of 169 ft. alongside the reef, which is hard and small, but of good value for some considerable distance. 14½ tons of quartz was broken, which was worth £39. The reef has now opened out in width, and the value of the quartz improved considerably. In some of the samples a little free gold could be seen. In the No. 1 level, south of the main incline shaft, and south of the Great Fault, 94 fathoms of the reef was stoped out over the back of the level, which yielded 1,169½ tons of quartz, worth £2,699. At No. 2 level, south of the main shaft, the stopes have produced very good ore during the year; 672 fathoms of ground yielded 5,988¾ tons, worth £19,287. No. 3 level, south of the main shaft: On the back of this level 774 fathoms were stoped out, which yielded 9,456 tons of quartz, worth £29,098. There has also been a large amount of driving, stoping, and rising done at and above the Waitawheta Tunnel. A total of 33,523 tons was crushed from the various places in mine for bullion worth £74,764 4s. 2d.; and 245 men were employed.

Comstock United. —Operations in this mine have been confined to driving the low-level crosscut, which has been extended 500 ft. during the year, making a total distance of 1,700 ft. from the mouth of the level. Although the point has been reached where it was expected the reef would be intersected, nothing of importance has yet been met with, thus showing that the lode has taken a different underlie to that shown on the surface, or otherwise it does not continue down. An average of six men has been employed.

A little prospecting has been done around the mines mentioned in the Karangahake district, but no important discovery has been made.

Mr. Warden Bush

to the Under-Secretary for Mines, Wellington. Sir,— Warden's Office, Thames, 18th May, 1903. I have the honour to forward the annual report on mining matters for the year ending the 31st December, 1902, within the Hauraki Mining District.

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Karangahake.

Mining has been fairly active in this portion of the district, and the New Zealand Crown Mine continues to merit its name as a consistent gold-producer. The other mines, however, I regret to say, at times are not able to put out returns continuously. The New Zealand Crown Mine so far has proved itself to be the premier mine in this locality. The owners have spent a very large sum in development and machinery. Every year large sums are spent on improvements to the property and plant. During the last twelve months an engine and boiler have been added [at the battery], besides more powerful pumps, and further air-compressing machinery is being erected. The decrease of water in the Ohinemuri River has made it necessary to supplement the water-power with steam. I trust in the course of the next year or two, as the development-works extend, to be in a position to report this mine as being one of the best in the district. Should the developments realise present anticipations this mine has a great future before it, and I look to it to become one of the main supports of the field. It is now the second largest employer of labour on the peninsula.

The Talisman Extended Company's properties were making no returns for some months, but during the past four or five months fairly good returns have been made, which is very encouraging, especially if they continue monthly. The crushing plant consists of a battery of fifty stamps, which I am informed has not been able to work with the full number of stamps since it resumed crushing, owing to the ore not being at hand rapidly enough to keep the whole going continuously. The company also has erected an engine.

The Woodstock Company appear to be remarkably unfortunate. A great amount of capital has been sunk in this mine without returning anything to the proprietors. The battery runs for a few months, when it ceases to crush. Fair returns are made for the time, but the supply of ore is not sufficient to keep it working. The quartz here is very hard, and evidently so far of low grade. Recently boring operations have commenced, which it is hoped may result in finding something more workable and payable.

A syndicate have taken up a greater part of the Ohinemuri from its junction with the Waihou as river claims, some eight or ten of which these gentlemen now hold. A treatment plant has been erected near Waihi. It is proposed to treat the river deposit by raising it with a suction pump, and after treatment return it to the river again. It is anticipated that 10s. per ton will be the amount recovered, which it is said will leave a small margin of profit after paying expenses. Conditions have been imposed so as to guard against injury to the banks of the river, or to the riparian landowners, or to the public interests, the Warden reserving to himself the right from time to time to impose such conditions on the licensees as he may deem fit in the public interests. It is a new undertaking, which, if successful, will find employment for several men.

WATER-CONSERVATION.

Mr. T. Perham, A.M.Inst.C.E.

to the Under-Secretary for Mines, Wellington. Sir,— 4th June, 1903. I have the honour to forward my report for the financial year ending the 31st March, 1903.

Page 179

North Island.

No further action has yet been taken with the extension of the Mackaytown Golden Cross and Waikino domestic-water supplies.

Mention was made in my report for 1901 of certain complaints by the Maoris residing in the neighbourhoods of Paeroa and Te Aroha, on the banks of the Ohinemuri River, as to the impurity of the water by the discharge of the cyanide slime from the works at Waikino and Karangahake. It was represented at the time that the Natives had a strong claim for a water-supply, as previous to the introduction of mining the river-water was pure and in constant use by them. I then recommended that if it could be proved by analysis that the water had been fouled by the workings in connection with mining, a remedy might be obtained by drawing a supply from the Paeroa water system, and, if required, also from the Te Aroha water-works, both of which are fully equal to the demand if strict regulations can be enforced with regard to waste—a contingency likely to occur.

PUBLIC WORKS STATEMENT BY THE HON W. HALL-JONES, MINISTER FOR PUBLIC WORKS, 16th NOVEMBER, 1903.⁹⁵¹

Page iii

Paeroa-Waihi.

The combined railway and road bridge over the Ohinemuri River at Karangahake has been finished, and the section of the railway to Karangahake is just on the point of completion, and will be opened for goods traffic shortly. Beyond Karangahake work has almost been confined to the tunnel, which is now fully half done. Some proposals with the view of expediting the completion of this railway have lately been made by the Waihi Gold-mining Company, and are now under consideration by Parliament.

This must be the proposal to lend money to the Government to speed up the work.⁹⁵²

The expenditure on this line last year amounted to £13,688, and a vote of £10,000 is proposed for the current year. If, however, the proposals above referred to are approved, the further amount required will be provided in accordance therewith.

⁹⁵¹ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1903-I.2.2.2.1>

PUBLIC WORKS STATEMENT BY THE HON W. HALL-JONES, MINISTER FOR PUBLIC WORKS, 16th NOVEMBER, 1903., Appendix to the Journals of the House of Representatives, 1903 Session I, D-01

⁹⁵² http://www.nzlii.org/nz/legis/hist_act/pra19033ev1903n61291/

Paeroa-Waihi Railway Act 1903 (3 EDW VII 1903 No 61)

AN ACT to provide for the Speedy Construction of a Railway from Paeroa to Waihi, 20th November, 1903.

ANNUAL REPORT ON PUBLIC WORKS BY THE ENGINEER-IN-CHIEF.

The Engineer-in-Chief to the Hon. the Minister for Public Works. Public Works Office, Wellington, 1st July, 1903. I have the honour to submit the following report on the various works completed and in progress throughout the colony during the past year.

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RAILWAYS.

Paeroa-Waihi. Length, 12 miles 40 chains. —The line has been ballasted to the entrance to the Karangahake Station yard. The excavation of this yard is done. At the west end of the Karangahake Tunnel a length of 1,150 ft. has been driven, and the lining put in for a length of 972 ft. At the east end 826 ft. have been driven, and the lining is in for a length of 690ft. Some progress has been made with the cuttings from 5m. to 6m. 15 ch. It is expected that eighteen months will be required to finish the tunnel at the present rate of progress. Considerable progress has been made with the erection of the combined road and railway bridge over the Ohinemuri River at Karangahake.



Part of a stereo pair, Staples Collection. C. 1902.

The spoil on the right is from the railway tunnel excavation (eastern portal). The river will take this away and distribute it along the stream bed further downstream.

The Crown dam is the break of flow in the river in the foreground. It was only a low dam; the bed log and some planking remain to this day. At the extreme left of the dam a short tunnel takes the water, delivering it to a wooden flume which sat on a bench cut into the river bed. The entrance to the tunnel was protected by railway irons. These, and the cut bench, remain today. The flume is just visible on the left of the river in the distance.

1903

8 January

NEW ZEALAND CROWN MINES.

Last Wednesday, at 11, Cornhill, the annual meeting of the New Zealand Crown Mines was held, Sir Westby Perceval presiding...

In the last annual report it was stated that, in order to guard against all risk of a temporary shut down—through shortage of water-power in the summer months - a 180 horse-power steam engine, with the necessary boilers, had been despatched to the mine. These had been installed and formed the bulk of the sum of £5379 appearing on the credit side of the balance-sheet as new plant, acquired in 1901-1902 [this at the battery]...

The directors had been persistent in urging Mr. Daw, their mine manager, to push down the shaft and forward the development work as rapidly as possible. The rate of progress for the year was somewhat disappointing, but no blame attached to Mr. Daw in this respect, because for a part of the year the water supply was insufficient to work all the machinery and the sinking of the shaft was suspended for a time. In accordance with Mr. Daw's request the directors had ordered a boiler, which was to be installed to supplement the water-power which worked the compressor plant when the water failed or weakened, and, with this boiler, the sinking of the shaft would doubtless be continuous [this at the mine itself; this is achieved around the middle of the year].

The supplies of ore, the Chairman continued, were reported to be well in advance of milling requirements, but the Board were looking forward to the blocking out of a sufficient quantity of payable ore to justify adding to the stamping capacity of the mill, for, with their low grade ore, the only prospect of adding largely to their returns was to increase their output. During the year the chief feature of interest had been the erection of the steam plant at the reduction works; this was a very fine plant, and had cost the company during the year about £5000; that engine would ensure the constant working of the mill in dry seasons and when any accident occurred to the water-race...⁹⁵³

16 January

Karangahake Nightsoil Service proposed

On the motion of Crs. Graham and Marrinan it was decided to take the necessary steps to introduce a nightsoil service at Karangahake and Mackaytown and to call for tenders for the service.⁹⁵⁴

19 January

PAEROA-WAIHI RAILWAY. PAEROA this day.

⁹⁵³ <https://paperspast.natlib.govt.nz/newspapers/NZH19030108.2.74>

New Zealand Herald, Volume XL, Issue 12163, 8 January 1903, Page 6

⁹⁵⁴ <https://paperspast.natlib.govt.nz/newspapers/AS19030116.2.46.1>

Auckland Star, Volume XXXIV, Issue 14, 16 January 1903, Page 6

Fresh vigour is being shown on the Paeroa-Waihi railway construction works, a large number of additional men having been taken on. These are principally employed in preparing the station yards at Karangahake and in the tunnel, which practically been at a standstill during the past twelve months. The ballasting of the line from Paeroa to Karangahake is just about completed, and it is hoped that the Railway Department will take part of the line over and open it for traffic to Karangahake as soon as the station buildings etc., are completed. Mr Maher, who is in charge of the railway suspension bridge at Karangahake, has the work well in hand, and it will prove a very substantial structure.⁹⁵⁵

Railway suspension bridge? Presumably the double decker.

12 February

Operations at the Woodstock are proceeding satisfactorily...
...and a good supply of crushing material is being despatched to the mill for treatment. Boring operations have been commenced from the No. 5 level crosscut, and the work will be watched with the keenest interest. The plant arrived at the mine on Tuesday week last, and operations were commenced immediately, under the superintendence of Mr. Thompson.⁹⁵⁶

3 April

COUNTY COUNCIL. MONTHLY MEETING.

ISLANDS AT MACKAYTOWN

Miller and Porritt wrote stating that Edwin Edwards was prepared to sell the islands in the river at Mackaytown for £150.

The offer was declined.⁹⁵⁷

A bit of humor at the silting up of the river?

1 May

Paeroa-Waihi Railway.

It was thought by many, as soon as the Parliamentary election was over most of the co-operative work then in operation in the colony would be suspended. The Paeroa-Waihi railway many were inclined to believe was a foregone conclusion. The general opinion seemed to be that it would be hung up for years, like the Thames Paeroa sections to wither away with dry rot. Those however who held that opinion are very much mistaken indeed. The work of construction is now going on more vigorously than at any time since its commencement. There are several gangs of men employed both on the Paeroa and Waihi side of the tunnel, to say nothing of the tunnel work itself. In this there are two shifts at work, and we are informed on practical authority that if the present progress continues the tunnel will be through in about a year.

⁹⁵⁵ <https://paperspast.natlib.govt.nz/newspapers/AS19030119.2.44>

Auckland Star, Volume XXXIV, Issue 16, 19 January 1903, Page 4

⁹⁵⁶ <https://paperspast.natlib.govt.nz/newspapers/NZH19030212.2.95.3>

New Zealand Herald, Volume XL, Issue 12193, 12 February 1903, Page 1 (Supplement)

⁹⁵⁷ <https://paperspast.natlib.govt.nz/newspapers/OG19030403.2.7>

Ohinemuri Gazette, Volume XIII, Issue 1084, 3 April 1903, Page 2

A rumour was also adrift that no further work would be done beyond the tunnel till it was through. As a matter of fact there is over a mile formed and with the present staff it will not be as long as some imagine before Waihi is reached.

The station at Karangahake is just about finished and the railway bridge is well advanced; It is true there is a little delay just now on account of the non-arrival of girdes from Christchurch.

We are informed that there is no intention on the part of the Government to place a train on any section of the line till the whole is completed. While the Government recognise that the Paeroa-Waihi railway would prove a valuable contribution to their railway revenue, they are also aware that a train service between Paeroa and Karangahake would prove unproductive, on account of so much carting and handling of goods and produce being necessary.⁹⁵⁸

13 May

RAILWAY MATTERS.

Paeroa-Waihi line—? The line there would have been open to Karangahake but for the contractor's delay in building the bridge there. This section will shortly be ready for opening. Both ends of the Karangahake tunnel are fully manned, but the work is very awkward.⁹⁵⁹

16 May

Experiments continue to be the order of the day in the Woodstock. Ever since its inception this mine has always stood in the front rank as a theatre for the exploits of the "crank" and the "experimentalist." The latest fad brought into operation here is prospecting with the diamond drill. This, no doubt, is the correct thing to determine either the extent or value of a recognised average payable ore body, but in a "patchy" country like New Zealand, it is a procedure of very doubtful utility. A well-known axiom amongst gold miners is that one might as well be five miles away from a "shoot" of gold, as miss it by five inches. This is the rock upon which diamond drill prospecting will come to grief in the Hauraki goldfields.⁹⁶⁰

3 July

Karangahake Nightsoil Service.

The nightsoil service for Karangahake, so long spoken of, is now likely to come into operation. At the meeting of the County Council yesterday, the following tenders were received for supplying nightsoil pans...

There was only one tender for removal of nightsoil, etc., at Karangahake, that of H. Moore, and it was accepted at the following prices:— Emptying pans, 9d per week and 1s 3d per fortnight; removing rubbish, 1s 6d per yard; emptying

⁹⁵⁸ <https://paperspast.natlib.govt.nz/newspapers/OG19030501.2.14>

Ohinemuri Gazette, Volume XIII, Issue 1094, 1 May 1903, Page 3

⁹⁵⁹ <https://paperspast.natlib.govt.nz/newspapers/AS19030513.2.19>

Auckland Star, Volume XXXIV, Issue 113, 13 May 1903, Page 3

⁹⁶⁰ <https://paperspast.natlib.govt.nz/newspapers/TO19030516.2.30>

Observer, Volume XXIII, Issue 35, 16 May 1903, Page 20

cesspits, 1s per foot; providing pulverised earth, 1s per quarter over the cost price.⁹⁶¹

23 July

NEW ZEALAND CROWN MINES. IMPORTANT DEVELOPMENT WORKS.

...Consequent upon the continued lowlevel exploitations and the opening up of new blocks, it was found that the demand upon the motive power was too great to keep all the plant—such as pneumatic engines, Cameron pumps, and rock-drills— working continuously, and so the management decided to augment the power by an auxiliary steam plant. A large Babcock boiler was therefore installed at the mine. Provision has also been made in the boilerhouse for another boiler, which will probably be erected shortly. The company are doing much towards the solving of the deep level problem.⁹⁶²

The Crown have auxiliary steam plant at the mine

This is the concrete pillbox perched on the cliff beside the Waitawheta entrance to the mine. “Just at the mouth of the level is the boiler-house, a tall concrete building clinging in some wonderful manner to the side of the cliff. Its roof had to be built of iron girders and iron plates of unusual strength to protect the building from falling rocks, which at any time might descend from the heights above, and crash into the boilers”⁹⁶³

One eventually did.

⁹⁶¹ <https://paperspast.natlib.govt.nz/newspapers/OG19030703.2.12>

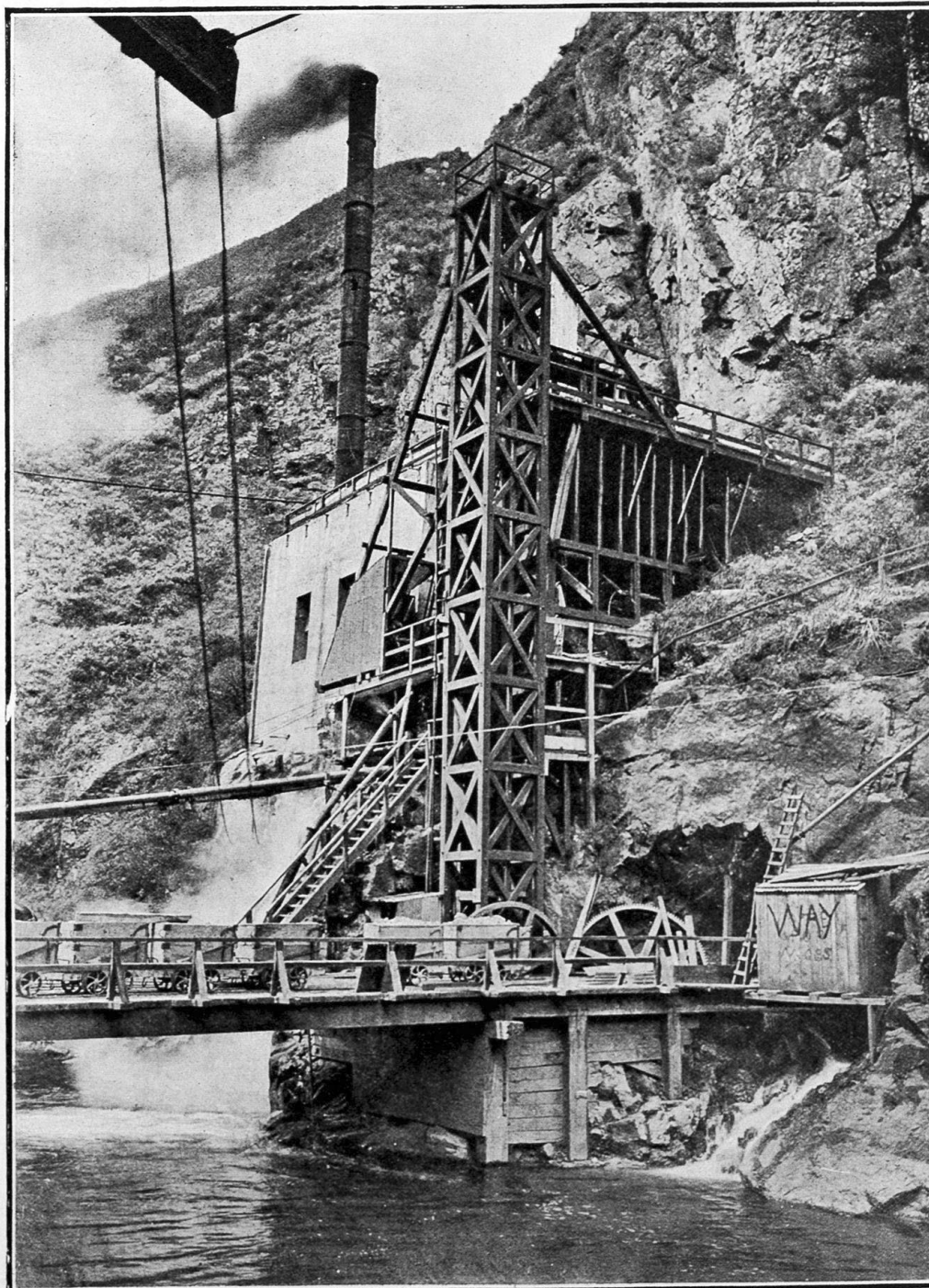
Ohinemuri Gazette, Volume XIII, Issue 1119, 3 July 1903, Page 2

⁹⁶² <https://paperspast.natlib.govt.nz/newspapers/NZH19030723.2.68>

New Zealand Herald, Volume XL, Issue 12330, 23 July 1903, Page 6

⁹⁶³ <https://paperspast.natlib.govt.nz/newspapers/NZH19051212.2.83>

New Zealand Herald, Volume XLII, Issue 13047, 12 December 1905, Page 6



AUCKLAND'S GREAT GOLD-MINING INDUSTRY: THE ENTRANCE TO No. 6 LEVEL OF THE CROWN MINE IN THE WAITAWHETA GORGE, AT KARANGAHAKE. Oliver and Walker, Photo.

This is the boiler house at the Crown mine No.6 Level entrance on the Waitawheta. This is a later image, 1909.

Coal was delivered in skips to the bottom of the lift, and delivered to the boilers from above. The mine entrance is just to the left of the shed "WAY". The steam engine(s) was in a chamber inside the adit.

Published by the Auckland Weekly News, 4 November 1909.

Auckland Libraries Heritage Collections AWNS-19091104-10-05 Oliver and Walker.

31 July

PAEROA, Thursday. Several of the Auckland directors of the Ohinemuri Light and Power Company were in Paeroa yesterday, and visited Karangahake and Waihi. I understand that as a result of their visit it has been decided to extend the gas mains to Karangahake in order to supply that township with gas.⁹⁶⁴

2 September

The attention of builders is directed to the fact that tenders will be received till 5 p.m. of Saturday, September 12th, for additions to the School of Mines buildings at Karangahake. Plans and specifications may be seen at Vinson's store at Karangahake.⁹⁶⁵

4 September**Engineer's Report**

Footpath—Railway Bridge to Karangahake.—The cost to construct this of timber will be £140. Instead of having this constructed, I would recommend that the main road, between the points named, be widened ten feet by cutting down the high side, and that during this process a path be formed along the low side. This work is greatly needed and will be found indispensable when the railway is opened to Karangahake, as the traffic between the township and bridge will be very great. The cost of this will be about £200, if let simply as excavation to be thrown to spoil, but considerably less if the contractor were permitted to save the stone and deliver it to the Council within certain limits at current rates...

Railway Tunnel.—I would recommend that if possible, the Railway Department be asked to divert their tip from its present position to one which would deliver the stone against the road side which the County recently protected with fascines. Such action would strengthen the road at this point, and save a continuation of the present work of deliberately obstructing the river, which if continued will surely give trouble in the immediate future...

GAS PIPES. Miller and Porritt, on behalf of the Ohinemuri Light and Power Company, gave notice of the intention of the company to lay down gas pipes to Karangahake.⁹⁶⁶

11 September**NEW ZEALAND CROWN MINES**

During the proceedings at the Warden's Court to-day the New Zealand Crown Mines applied for 12 months' protection...[see below]

The last protection was granted owing to there being insufficient water power in the Waitawheta River to enable the company to carry out the works

⁹⁶⁴ <https://paperspast.natlib.govt.nz/newspapers/AS19030731.2.67.2>

Auckland Star, Volume XXXIV, Issue 181, 31 July 1903, Page 6

⁹⁶⁵ <https://paperspast.natlib.govt.nz/newspapers/THS19030902.2.8>

Thames Star, Volume XXXI, Issue 10493, 2 September 1903, Page 2

⁹⁶⁶ <https://paperspast.natlib.govt.nz/newspapers/OG19030904.2.17>

Ohinemuri Gazette, Volume XIII, Issue 1146, 4 September 1903, Page 3

contemplated, and further powerful steam plant had been erected during the past six months' protection, for the purpose of providing increased power for pumping, winding, and the supply of fresh air to the workings...⁹⁶⁷

30 September

The New Zealand Crown Mines, Limited, made application at the last sitting of the Paeroa Warden's Court for 12 months' protection for the Hercules Extended, Mammoth, Warrior, Great British, Ravenswood Extended, and Victoria special claims. Mr. F R Daw, general manager, in support of the application, said that the properties referred to could only be advantageously worked from the Crown main incline shaft, where the new machinery and plant were installed, and it was their intention to continue driving the present 3B level from the shaft through these properties, in accordance with the plans and scheme laid before the Warden on the occasion of the hearing of the former application. This level was being driven 240 ft below the level of the Waitawheta, and would be continued through the Woodstock ground under the tunnel, thence under the Ohinemuri River, through the properties above named, and when completed it was the company's intention to develop the properties by means of that tunnel. The total proposed length of the tunnel is 11,000 ft [3,353 m], and as it was a difficult and expensive work, at which only a limited number of men could be employed, the protection was asked for to enable the company to keep the titles secure during the progress of development. The surface had been proved, and it was only by working at a depth that any reasonable prospect of success could be assured. The Warden said he would forward the application to the Minister...

The local representative of Messrs. Bewick, Moreing and Co. (Mr. H. D. Mitchell) recently returned from England. He only remains in Auckland for a short time, leaving to take charge of his firm's business in West Australia. Mr. Mitchell will be succeeded here as supervisor of the Talisman Consolidated Company by Mr. H. Stansfield, recently of West Australia.⁹⁶⁸

The Crown Company are proposing to tunnel from their main shaft under Taukani and then the Ohinemuri to their special claims as detailed above? Wow. Over 3.3km. Was this ever started?

21 October

The Ohinemuri Light and Power Company has erected an office and show room at Mackaytown in connection with the extension of the gas supply to Karangahake. We understand that the gas pipes between Paeroa and Karangahake will be laid down soon.⁹⁶⁹

17 November

GOLD MINES OF NEW ZEALAND.

⁹⁶⁷ <https://paperspast.natlib.govt.nz/newspapers/NZH19030911.2.68>

New Zealand Herald, Volume XL, Issue 12373, 11 September 1903, Page 6

⁹⁶⁸ <https://paperspast.natlib.govt.nz/newspapers/NZH19030930.2.65.11>

New Zealand Herald, Volume XL, Issue 12389, 30 September 1903, Page 2 (Supplement)

⁹⁶⁹ <https://paperspast.natlib.govt.nz/newspapers/OG19031021.2.6>

Ohinemuri Gazette, Issue 1165, 21 October 1903, Page 2

IMPORTANT ARTICLE IN THE ECONOMIST.

SOME VERY PLAIN SPEAKING London, October 17. In the Economist there appears an exceedingly interesting article by the "Special Mining Commissioner" of that important financial organ on the gold mines of New Zealand...

The Woodstock is a mine which ought to have some good ore in it; but perhaps the mine might be more cheaply worked as part of a bigger concern, and its happiest fate therefore may be absorption into either the adjoining Crown or Talisman.

The Crown mine is managed by a mechanical genius, and, I think, is likely to do moderately well for years to come. It has not turned out the success it was some years ago expected to be, but, for all that, has a fairly good record.

The Talisman is a mine which somehow never comes up to expectations. After going through its stopes, I formed quite a high opinion of it, as others have done from time to time. And yet its yield, when it crushes, never shows the expected recovery. I think the mine has suffered from too many managers. I believe if one cold-blooded manager were left in undisputed control for the next three years he would definitely set the mine on a paying basis, though, of course, it is handicapped by too big a capital.⁹⁷⁰

Public Works Statement.

PAEROA-WAIHI. The combined railway and road bridge over the Ohinemuri River at Karangahake has been finished [and?] the section of the railway to Karangahake is just on the point of completion and will be opened for goods traffic shortly. Beyond Karangahake work has almost been confined to the tunnel, which is now fully half done.

Some proposals with the view of expediting the completion of this railway have lately been made by the Waihi Goldmining Company and are now under consideration by Parliament.⁹⁷¹

This is "The Paeroa-Waihi Railway Act, 1903".⁹⁷² "AN ACT to provide for the Speedy Construction of a Railway from Paeroa to Waihi, 20th November, 1903."

7 December

See also Cemetery Headstones. Ohinemuri Regional History Journal 32, September 1988⁹⁷³

Death of Middleton and McColl

8 December

SHOCKING FATALITY. TWO MINERS KILLED.

⁹⁷⁰ <https://paperspast.natlib.govt.nz/newspapers/NZH19031117.2.12>

New Zealand Herald, Volume XL, Issue 12421, 17 November 1903, Page 3

⁹⁷¹ <https://paperspast.natlib.govt.nz/newspapers/AS19031117.2.21>

Auckland Star, Volume XXXIV, Issue 274, 17 November 1903, Page 3

⁹⁷² http://www.nzlii.org/nz/legis/hist_act/pr19033ev1903n61291/

Paeroa-Waihi Railway Act 1903 (3 EDW VII 1903 No 61)

⁹⁷³ <https://www.ohinemuri.org.nz/journals/journal-32-september-1988/cemetery-headstones>

Cemetery Headstones. Ohinemuri Regional History Journal 32, September 1988

CRUSHED TO DEATH BY A LOADED TRUCK.

(By Telegraph.—Own Correspondent) PAEROA, Monday.

A horrible accident took place this afternoon in the Crown Mine at Karangahake, resulting in the death of two young men named Middleton and McCole [McColl is shown on the headstone].

It appears that these unfortunate men were working at the bottom of the shaft when a truck full of quartz was dashed upon them from No. 3 level over 100 ft above, killing them instantly, splitting one man's head in two and separating the other man's head almost from his body and mangling both men most pitifully.

The cause of the accident seems to be that the men at No. 3 level had just removed an empty truck from the cage and were fixing a full one in the cage when, it is stated, someone gave the signal to hoist, and the man above started winding up the cage, with the result that the full truck capsized out of the cage and dashed to the bottom of the shaft, falling full upon the unfortunate men working below.

Middleton was a young man well known in football circles and universally popular, and it is understood he was at the time of his death taking the place of a mate who was at the Thames. Angus McCole, the other deceased, was also a young man, and was engaged to be married at Christmas.

(By Telegraph.—Own Correspondent.) PAEROA, this day.

Further particulars with regard to the Karangahake mining accident show that just as a full truck was being put on the cage, the latter was lifted, and the truck was pushed over into the shaft and precipitated upon the men below, a distance of 300 ft. The third man, named P. McSheen, had his shoulder dislocated and his arm severely torn.

Middleton was taking a shift for his mate, Jack Arns, who had gone to the Thames.

Karangahake is in a state of mourning, and work was suspended to-day in the Crown mine. The inquiry is now proceeding.⁹⁷⁴

With reference to the new coal field recently discovered at Dickey's Flat, Waitawheta Creek, Messrs. R. Montbomery [Montgomery?] and Marlow, of Waikino, the owners, have employed two men on to make further investigations. The Waihi Company's bush tramline runs near the claim, and if the field proves payable facilities for a local supply of coal to Waihi should prove of great value to the mining companies.⁹⁷⁵

10 December

THE KARANGAHAKE FATALITY.

CORONER'S INQUEST. (BY TELLEGRAH—PRESS ASSOCIATION)
Paeroa, Last Night.

⁹⁷⁴ <https://paperspast.natlib.govt.nz/newspapers/AS19031208.2.54>

Auckland Star, Volume XXXIV, Issue 292, 8 December 1903, Page 5

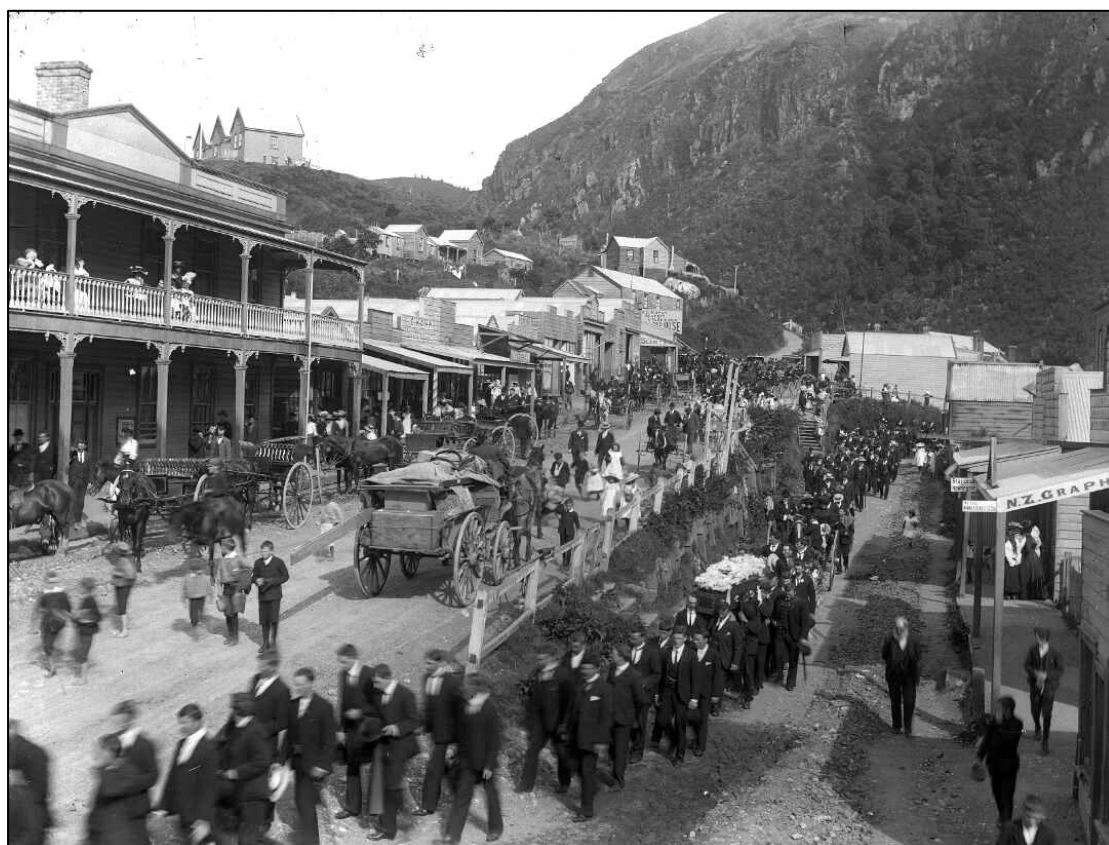
⁹⁷⁵ <https://paperspast.natlib.govt.nz/newspapers/AS19031208.2.30>

Auckland Star, Volume XXXIV, Issue 292, 8 December 1903, Page 3

An inquest touching the fatal accident which occurred in the Crown mines was commenced yesterday, and is still proceeding. Archibald McLoghley, assistant Mine manager, and L. Moore, chamberman, have been examined. The latter absolutely denied giving the signal to hoist the cage. Considerable stress is being laid on the point of some one signalling the cage up too soon, and thus causing the accident; but it is contended, on the other hand, that the real cause of the fatality was that the men at the bottom of the shaft were working with nothing to protect them from falling quartz, timber, or trucks, or whatever might come 300 feet down the shaft.

The funeral of the deceased took place this afternoon at the Paeroa cemetery.⁹⁷⁶

Funeral on 10 December?



The funeral of Tucker Middleton and Angus McColl.

National Library. 1/1-003812-G: Karangahake funeral⁹⁷⁷. Also published in the Auckland Weekly News: Auckland Libraries Heritage Collections AWNS-1903 12 24-02-03 Sherlock.

⁹⁷⁶ <https://paperspast.natlib.govt.nz/newspapers/WAIGUS19031210.2.19>

Waikato Argus, Volume XV, Issue 6112, 10 December 1903, Page

⁹⁷⁷

https://ndhadeliver.natlib.govt.nz/delivery/DeliveryManagerServlet?dps_pid=IE52803&dps_custom_at_t_1=emu



The funeral procession on way to cemetery, approaching Dougherty's Creek [modern spelling Doherty]. The procession stretches from the railway tunnel.

Staples Collection, photographer unknown. Photograph taken from high ground at the edge of Mackaytown.

11 December

THE MINING FATALITY.

(BY TELEGRAPH.—OWN correspondent.) Paeroa, Thursday.

...The funeral of the two victims took place yesterday afternoon, and was one of the largest funerals ever seen in Ohinemuri. All work in the mines was practically suspended, and the whole community took part in the solemn proceedings. The Waihi footballers joined the local footballers in the cortege, which included the Karangahake branch of the Oddfellows' Lodge. Hundreds joined the procession, and almost every wheeled vehicle in Paeroa and Karangahake was pressed into the service. The interment took place at the Paeroa Cemetery, the burial service being read by the Revs. McArthur (Presbyterian), Cowie (Anglican), and Brother Guthrie (Oddfellows).⁹⁷⁸

23 December

MIDDLETON.—On December 7, 1903, accidentally killed in Crown Mines. Karangahake, John Frederick Middleton, aged 23 years, youngest son of the

⁹⁷⁸ <https://paperspast.natlib.govt.nz/newspapers/NZH19031211.2.39>

New Zealand Herald, Volume XL, Issue 12442, 11 December 1903, Page 5

late Daniel Middleton, Kawakawa, Bay of Islands, and beloved brother of Mrs. Carlton Hill, Karangahake. Deeply regretted.

"To live in the hearts of those we leave behind is not to die."

McCOLE.— December 7, 1903, accidentally killed in Crown Mines, Karangahake. Angus McCole, fourth son of Kenneth McCole, Orbost. Victoria, aged 26 years. Deeply regretted.⁹⁷⁹

24 December

Street Lamps at Karangahake.—Mr Rabbidge, manager of the Ohinemuri Light and Power Co. wrote that his company were extending the gas mains to Karangahake, and were prepared to supply any number of street lamps.—The Council decided to ask for a quotation for different numbers of lamps.⁹⁸⁰

AJHR 1904

For the year 1903

MINES STATEMENT. BY THE HON. JAMES McGOWAN, MINISTER OF MINES.⁹⁸¹

At Karangahake, bullion to the value of £182,094 12s. 1d. was obtained during the year, the mines and mills providing employment for 452 persons. The New Zealand Crown Mines and the Talisman Consolidated mines are the only two properties at present working on a productive scale. The Woodstock Mine only worked during the early part of last year, and has not been so successful as anticipated, but may possibly pay in conjunction with one or two other of the adjoining mines.

THE GOLDFIELDS OF NEW ZEALAND: REPORT ON ROADS, WATER-RACES, MINING MACHINERY, AND OTHER WORKS IN CONNECTION WITH MINING.

Mr. John Hayes, F.S.C., Inspecting Engineer

to the Hon. James McGowan, Minister of Mines. Sir, — Mines Department, Wellington, 15th June, 1904. I have the honour to submit my report, together with those of Inspectors of Mines, Wardens, and other officers of this Department, for the year ending the 31st December, 1903.⁹⁸²

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At Karangahake the New Zealand Crown Mines and the Talisman Consolidated Mines have worked steadily throughout the year, and the

⁹⁷⁹ <https://paperspast.natlib.govt.nz/newspapers/NZH19031223.2.79.27.4>

New Zealand Herald, Volume XL, Issue 12452, 23 December 1903, Page 3 (Supplement)

⁹⁸⁰ <https://paperspast.natlib.govt.nz/newspapers/AS19031224.2.33>

Auckland Star, Volume XXXIV, Issue 306, 24 December 1903, Page 5

⁹⁸¹ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1904-I.2.1.4.2>

MINES STATEMENT. BY THE HON. JAMES McGOWAN, MINISTER OF MINES., Appendix to the Journals of the House of Representatives, 1904 Session I, C-02

⁹⁸² <https://paperspast.natlib.govt.nz/parliamentary/AJHR1904-I.2.1.4.3>

THE GOLDFIELDS OF NEW ZEALAND: REPORT ON ROADS, WATER-RACES, MINING MACHINERY, AND OTHER WORKS IN CONNECTION WITH MINING., Appendix to the Journals of the House of Representatives, 1904 Session I, C-03

Woodstock Mine during the early part of the year only. The value of bullion obtained and average number of persons employed is summarised as follows :—

Bullion-value. £ s. d.	Average Number of Persons employed.	New Zealand Crown Mines	78,279 12 1 242	Talisman Consolidated Mines	94,134 711 170	Woodstock Mine	9,680 12 1 40	Totals	£182,094 12 1 452

Extensions, having for their object the further opening-out of the reefs at the lower levels, have been undertaken in connection with the incline shaft at the New Zealand Crown Mines. A large area of ground is opened up in this property, but a considerable proportion of the ore mined and treated during the year was somewhat below the average value. Development-work has been pushed ahead at the Talisman Consolidated Mines, and successful returns obtained. Generally, the outlook for these properties may be said to be of an encouraging character. The Woodstock Mine does not stand in so favourable a light, the ore-values being considerably lower than those obtained at either of the adjoining mines. It is possible, however, that, worked in conjunction with and as a part of one of the adjoining properties, payable results may be obtained, when such might be out of the question by running this mine as an independent concern owing to the expenses necessarily incurred in working as a separate property.

Page 26

KARANGAHAKE SCHOOL OF MINES.

The Director, Mr. R. B. Macduff, reports as follows: —

I have the honour to furnish herewith the third annual report on the Karangahake School of Mines for the year ending the 31st December, 1903.

Attendance. —The attendance at the classes was not so good as was the case during last year. This was especially noticeable at the end of the year, but can be accounted for by the cessation of work at one of the mines and its battery, so that the average attendance was reduced to twenty three students, taking an average of slightly over three classes per student; but I hope the classes will be better attended next year. There is no lack of young men in the district who could avail themselves of this branch of education were they inclined to do so.

Examinations. —This year was the most successful we have had since the opening of the school. The results of the examinations held by the Mines Department at the end of the year 1902 show that the students have done excellent work, gaining certificates as follows: Eighteen first-class, eleven second-class, five third-class. At the examination for mine-managers and battery-superintendents, held in January, 1903, eight students sat, two for mine-managers and six for battery-superintendents, and all of these students succeeded in passing.

Syllabus. —This was similar to that of former years, but some students did a little advanced work in their respective classes, and with good results. Next year it is intended to add to the syllabus a class in metallurgical chemistry, which shall include qualitative and quantitative analysis of battery-products such as ore, slimes, concentrates, sands, amalgam, slags, &c, as well as the testing of ores for acidity, the causes of loss of KCy during treatment, assay of

KCy solutions for gold, silver, zinc, &c. This class should greatly benefit battery hands.

It is also intended to start a separate class in elementary arithmetic, so as to give any one willing a chance to work up enough arithmetic to follow the other classes intelligently.

New Building. —Thanks to a grant from the Government, the size of the school has been doubled, and now the school comprises a large lecture-room, a reading-room, chemical laboratory, balance-room, and office, and the whole school is soon to be lighted with gas, which will also be used for heating purposes in the laboratory.

Governing Body. —The following gentlemen held office during the year: Patron, Mr. E. G. B. Moss, M.H.R.; President, Mr. D. P. Mitchell, M.E.; Vice-presidents, Messrs. F. Rich, B.Sc, G. N. McGruer, and E. Cartwright; Council —Messrs. H. W. Guthrie (Chairman), C. Tresize, T. G. Vinson, G. A. Chappell, A. Tomlinson, T. P. Heron, and R. D. Jones (Secretary and Treasurer). This Council has worked untiringly in their efforts to push the school to the fore.

Library. —During the year the library has been added to, partly by the Council and partly by gentlemen outside the school. In this respect I must heartily thank the Very Rev. Dean Hackett for two standard works on geology and assaying, and Messrs. McGruer and Rich for several books and papers. My thanks must also be extended to the Mines Department for all Government publications.

Mineral Collection. —During last year a good number of mineral specimens and rocks were added to the collection, but want of space has prevented their being displayed; but this has now been overcome, and any gentleman wishing to donate specimens to the school collection will receive the thanks of the Council by forwarding them to the school.

Assays and Analyses. —During the year six assays for gold and silver and sixteen analyses of iron-ore were done, besides the identification of a number of minerals for prospectors. This latter is done free of charge.

In conclusion, I must thank the Council for their co-operation in all matters pertaining to the advancement of the school; likewise all gentlemen who have kindly given books, specimens, &c, and also Mr. V. C. Dette, my laboratory assistant.

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Crushing and Amalgamation in Modern Stamp Milling

A paper giving background information, and an understanding of these processes. Not included here.

Mr. James COUTTS, Inspector of Mines

Thames, to the Under-Secretary, Mines Department, Wellington. Sir, — Inspector of Mines Office, Thames, 14th March, 1904. I have the honour to furnish herewith the following report on the gold-mining industry in the Hauraki district for the year ended the 31st December, 1903.

Page 44

Karangahake.

Talisman Consolidated (Limited). —This company has vigorously carried on the work of opening up the mine, which has consisted in driving, sinking, rising, and stoping above the Nos. 8, 9, and 10 levels, and with a great amount of success. The quartz was mostly obtained from a rich shoot of ore that was followed down from No. 7 level, which produced 47,267 tons of quartz, and gave a return of 183,333 oz. of bullion, worth £94,134 7s. 11d., which no doubt left a good profit on the year's operations, but no dividends were paid in consequence of the company being in debt at the beginning of the year.

Driving south on the reef at No. 8 level has been carried on almost continuously without developing any new ore-shoots. The country in this section of the mine is considerably disturbed, and the values are low. This drive is now getting under what is known as the Bonanza section, and higher values are expected. At No. 9 level sufficient driving has been done to prove that the payable ore-shoots met with on No. 8 level go down. These are now being stoped. On No. 10 level driving south was stopped early in the year, awaiting the completion of incline shaft from No. 8 to this level. Since the shaft was finished, the reef north of same has been stripped, and the leading stope driven. Stripping of reef south of shaft is in progress, and the values met with are higher than those found in driving. From the face of Woodstock No. 5 level driving south along reef was commenced and continued to a point where incline shaft will come down. This will be known as No. 11 level. Between the Woodstock boundary and present face good values were found; further driving is suspended, awaiting the completion of incline shaft to this level. The incline shaft from No. 8 level has been finished to No. 10 level, and is in good working-order. From No. 11 level a rise is being put up to No. 10 level to connect with shaft. 170 men were employed.

New Zealand Crown Mines (Limited). —Operations in this mine during the year have again been carried on with satisfactory results, the value of bullion obtained during the period under review being £78,279 12s. 1d. (an increase of £3,515 7s. 11d. on the previous year) which has enabled the company to pay the usual dividend amounting to £15,000 for the year. In the mine the main incline shaft has been sunk from No. 4 level a depth of 120 ft. on the underlie, making the total depth 506 ft., and at present, preparations are being made to open out No. 5 level from the bottom of the shaft. Here it is intended to instal the second plunger lift, which it is considered will be sufficient to cope with any water met with when the lode is intersected at this level. The No. 2 level south was extended a distance of 30 ft. on a small leader but without satisfactory results; the course of the drive was then altered to a southeasterly direction, where the main part of the lode was again picked up after driving 27 ft. When the level was extended 48 ft. from the point of intersection, 15 tons of quartz was broken out, worth about £2 per ton; after a further extension of 170 ft., the drive was stopped and operations directed to driving north of the crosscut on the lode. In this direction it was driven on for a distance of 176 ft., the average thickness of the lode being about 2 ft; 153 tons of quartz was broken out here for a value of £255. About 480 ft. from the shaft a crosscut was driven in a south-easterly direction 54 ft. without intersecting anything of value. In No. 3 level north very little mining has been done north of the shaft below the Waitawheta tunnel during the year. The total length of this level is 409 ft. The No. 3 level south was extended and from this extension 401 tons of

quartz was obtained, worth £1,352. The average width of the reef was 4 ft. 8 in., and the total distance driven from the shaft is 1,945 ft. 9 in. A winze was sunk from No. 3 level, a distance of 91 ft. (the required depth for opening out No. 5 level), making its total depth 242 ft. A very large amount of driving has been done on the different levels during the year, and stopping operations carried on from No. 4 level below the Waitewheta main level to No. 3 level above that level. Owing to the gold not being evenly distributed through the quartz, the lode has been stoped out on the shoots of what was considered the payable ore, and the places where the lode is thin and poor were left in as pillars. This is a great support to the hanging-wall, but no doubt some of the pillars will be extracted, when the rich shoots of ore are worked out, in fact, some are being taken out now. An average of 242 men have been employed by this company during the year.

Comstock United. —This mine was under protection for a time. The main tunnel being driven over a distance of 1,700 ft. and no reef cut, the owner could not proceed any further without some assistance. He therefore applied to the Ohinemuri County Council and the Government for a subsidy to put in this tunnel a further distance of 600 ft.; this was granted, and the work is now in progress, and the drive extended 60 ft. Although a rubbly formation of quartz has been passed through, yet no defined reef has been met with. Three men are employed.

Woodstock Mine. —This property has been closed down for the greater part of the year. Although a considerable amount of money has been recently spent in prospecting and developing the mine and in alterations to the battery, the results obtained were not sufficient to meet the working-expenses, which were somewhat increased by having to pump the water and raise the ore, &c, broken out in the low level. The ore here was also of a less value than that obtained above the main adit level. I am informed there is every likelihood of the property going into liquidation or being merged into the adjoining properties. In the early part of the year while operations were carried on, 6,184 tons of quartz was treated for a return of 14,570 oz. 5 dwt. of bullion, value £9,680 12s. 1d. An average of forty men were employed during the year.

Several parties have been prospecting in the neighbourhood, but up to the present no new discoveries have been made.

Mr. Warden Bush

to the Under-Secretary for Mines, Wellington. Sir,— Warden's Office, Thames, 6th June, 1904.

Page 99

Karangahake.

New Zealand Crown Mines : This company has been prosecuting its mining operations with its usual vigour, employing a large staff of men in the mine and reduction-works. Some three hundred men find employment on its works besides those employed in providing timber for its use. The amount of timber required for this mine costs over £100 a month, which at 8s. per hundred represents a very large quantity of that material. This mine, however, for the past few months has been somewhat unfortunate in having to deal with rather a poor quality of ore which has caused a falling-off in the value of its monthly returns, but still the returns to hand are of sufficient value to give a small

margin of profit. This company has a large sum invested in machinery of every kind necessary to carry on its operations, and all that it requires is to discover a richer block of ore to enable it to make the good returns of last year, which I have no doubt it will again be doing ere long, as a vein assaying £2 per ton has been unearthed in No. 4 level, which however is described as irregular; but further development may lead to something better. A good body of ore has already been struck.

The Talisman Consolidated have had a much improved year, having secured gold to the value of £88,079, which shows an average yield per month of £7,340. This is an increase of £20,763 upon the previous twelve months' returns. The present position of this mine seems eminently satisfactory; let us hope the future will prove it to be one of our consistent gold-producers. During the year an average of 155 men have been employed upon its works. The incline shaft from No. 8 to No. 11 level has been completed, and is working well. A rise from No. 11 level connects with this shaft. A drive from the Woodstock No. 5 level along the face of the reef has been carried to a point where the shaft will come down. Altogether the present prospects of this mine are cheering.

The Woodstock Gold-mining Company have done little or nothing during the past year for want of funds. The company, it is stated, are liquidating, and it is rumoured that the property has been acquired by the Talisman Consolidated Company. The northern section of this property is almost entirely undeveloped, and is said to carry a larger reef-area than the southern portion, to which the whole attention of the old company was practically devoted.

These three properties are practically the only ones that can be termed mines, as no others have developed and proved to be auriferous. The Crown and Talisman especially have proved to be good payable mines. There are a few other special claims still in existence, notably, two called the Saxon Nos. 1 and 2, which a Sydney firm are endeavouring to float. They have some faith in the ground, as they are paying the rent, and prospecting the ground with two men.

Then there is the Comstock United, held by a very hopeful man, who for the last two or three years has just been on the point of cutting the reef; a reef which is to astonish [astonish] the world, and to excel anything ever met with in the Waihi Mine. This reef has not yet been discovered although the owner positively asserts it is there, and professes to be working hard to reach it.

PUBLIC WORKS STATEMENT BY THE HON. W. HALL-JONES, MINISTER FOR PUBLIC WORKS, 28th OCTOBER, 1904.⁹⁸³

Page ii

Paeroa-Waihi.

The section to Karangahake has been open for goods traffic since the beginning of the year, and considerable freight has been carried over it. Progress with rail-laying is blocked immediately beyond Karangahake by the long tunnel which occurs directly after crossing the Ohinemuri River just

⁹⁸³ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1904-I.2.2.2.1>

PUBLIC WORKS STATEMENT BY THE HON. W. HALL-JONES, MINISTER FOR PUBLIC WORKS, 28th OCTOBER, 1904., Appendix to the Journals of the House of Representatives, 1904 Session I, D-01

outside the Karangahake Station yard. Work in this tunnel is being carried on day and night, and satisfactory progress is being made with it. The heading is now right through, and the tunnel will probably be completely finished, including lining throughout, before the end of the year. Contracts have been let to Messrs. J. and A. Anderson, of Christchurch, for the steel superstructure of the bridges over the second and third crossings of the Ohinemuri River, the concrete piers and abutments having been constructed by the Department's own workmen. The latter are finished, and the former work is making good progress, some of the steelwork having been delivered, and being now in course of erection.

Tenders for the Waikino Station buildings are about to be invited, and the line to that point, three miles and a half from Karangahake, will probably be available for traffic by about May next. The amount spent on this line last year was £26,463. During the current year about £40,000 will be required. The expenditure on this line is now charged to a separate account established under the special legislation of last session.

The Engineer-in-Chief

to the Hon. the Minister for Public Works. Sir,— Public Works Office, Wellington, 1st July, 1904.

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Paeroa-Waihi.

Length, 12 miles 40 chains. —The line is finished up to the Karangahake Station, and goods traffic has been undertaken as required since the beginning of the year. The road and railway bridge over the first crossing of the Ohinemuri River was finished at the end of October last. The tunnel has been excavated for a length of 46 chains, leaving 8 chains to be done. The lining of the length excavated is nearly completed. A contract has been let for the erection of the steel superstructures of the bridges over the second and third Ohinemuri River crossings. The concrete work for these bridges is in progress. Some minor timber bridges have yet to be built. The earthworks between the tunnel and the termination of the line are well advanced. A contract has been let to build a stationmaster's house at Waihi. It is expected that the tunnel will be finished by the end of the year.

1904**8 January**

The Hon. James McGowan. VISIT TO PAEROA. CONFERENCE WITH THE COUNTY COUNCIL.

THE OHINEMURI RIVER.

Yesterday morning the Hon. James McGowan, Minister for Mines and Justice, accompanied by his private secretary (Mr Matthews), visited Paeroa for the purpose of conferring with the County Council regarding the state of the Ohinemuri River. By the deposit of mining and other debris in the river, the channel has been gradually filling up, and Mr McGowan's visit was for the purpose of seeing if something could be done to keep the river open for traffic.

The Minister was met at the Council Chambers by Mr H. Poland (County Chairman), Messrs Moore, Crosby, and Graham (County Councillors), Mr Tetley and Mr A. Cassrels.

The members of the County Council and Messrs Cassrels and Tetley laid before the Minister the position of affairs, stating that if something was not soon done the river would not be navigable. They asked the Government to assist them in this matter. Mr McGowan suggested that a meeting of the settlers be called, and that they be asked if they were willing for a harbour board or drainage board to be formed, with power to make rates and thus obtain some revenue. There would then be a recognised body with whom he could deal, and to whom Government could grant a subsidy. If the settlers would do something to help themselves probably the Government would be willing to help them.

He could not say what the Government would do if the settlers would not help themselves. It would not be practicable to revoke the proclamation making the river a sludge channel, because the claims for compensation from the mining companies would render such a proceeding very costly. In the event of the proclamation being revoked the mining companies would have the same claim for compensation as the settlers could have had when the river was proclaimed a sludge channel. It was no use the settlers saying that they had not sufficient notice when the river was proclaimed a sludge channel, as they had 90 days' notice. If they had then put in their claims for compensation, these claims would have been considered by Government, and if the Government had considered that the amount to be paid for compensation was too great, then possibly the river might not have been proclaimed a sludge channel. It was, however, too late now to talk of that matter. What he wanted to do was to help the settlers, and if the settlers would only help themselves a little, he was prepared to bear a little odium so as to assist them. He was not likely to take any of the gold duty away to help the settlers if they would not do something to help themselves, but he was prepared to say that he would see that they were helped if they only assisted themselves. If they would not agree to this, he could not say what would be done. He did not think they would be sorry if they formed a drainage board, and by the exercise of prudence they would be nearer a solution of the river difficulty than they had been before. They had

better communicate with him about the matter later on when the County Clerk returned.

GOVERNMENT GRANTS. KARANGAHAKE HILL TRACK.

Mr Graham (one of the Karangahake members on the County Council) asked Mr McGowan, if he would give a small grant for the Karangahake Hill Track—say about £100. Last year £200 was granted for this road, and the money had been spent. The road in question was an important one, as by it there was a large amount of traffic to the Talisman Mine...⁹⁸⁴

12 January

N.Z. CROWN MINES

LONDON, December 4. The seventh annual meeting of shareholders in the N.Z. Crown Hines Co., Ltd., was held on Wednesday last at Cornhill, London, Sir Westby Perceval presiding...

They were now down to the fifth level below the river, the sinking during the year having been slow, owing to the abnormally scanty water supply in the Waitawheta river. They had guarded against a recurrence of the failure of the water power by erecting a boiler at considerable cost. The values below the river level were higher than those above the river level. From the former they had mined 11,872 tons, worth about £3 19/5 per ton, and from the latter 23,082 tons, worth £1 18/ per ton, and altogether he thought the results of the year were distinctly encouraging, the total output of bullion being higher than in any previous year.⁹⁸⁵

13 January

At Karangahake the Talisman Consolidated Gold Mining Company have met with a fair measure of success. The opening up of the low level has been carried on economically from the Woodstock low level...

The Woodstock mine has been shut down since the early part of the year.⁹⁸⁶

15 January

The monthly meeting of the Ohinemuri County Council was held yesterday afternoon...

FOOTPATH AT KARANGAHAKE. The Engineer suggested forming a wooden footpath from the railway bridge at Karangahake to the Wesleyan Church [Church on highway]. Cr Marrinan thought the path should be partly gravel and partly wooden...⁹⁸⁷

⁹⁸⁴ <https://paperspast.natlib.govt.nz/newspapers/OG19040108.2.9>

Ohinemuri Gazette, Issue 1192, 8 January 1904, Page 2

⁹⁸⁵ <https://paperspast.natlib.govt.nz/newspapers/AS19040112.2.10>

Auckland Star, Volume XXXV, Issue 10, 12 January 1904, Page 2

⁹⁸⁶ <https://paperspast.natlib.govt.nz/newspapers/NZH19040113.2.77.16>

New Zealand Herald, Volume XLI, Issue 12469, 13 January 1904, Page 2 (Supplement)

⁹⁸⁷ <https://paperspast.natlib.govt.nz/newspapers/OG19040115.2.13>

Ohinemuri Gazette, Volume XIV, Issue 1195, 15 January 1904, Page 3

Footpath from railway bridge to be constructed**26 January****COAL AT WAIKINO.**

(By Telegraph.—Own Correspondent.) WAIHI, this day.

The men engaged on Montgomery's and Marlow's coal find at Dickey's flat, Waitawheta creek, near Waikino, are now down 80ft with the shaft. Hard coal of excellent quality is reported to have been met with, some of which is now on view at Waikino. It is hoped this find may develop into an important coal field, which will prove of great value to mining operations, etc.. at Waihi. I understand that the coal can be brought out at little cost, as the Waihi Company's bush tramline runs near the field. Tests made are stated to have proved the coal of good quality over an area of 200 acres.⁹⁸⁸

The shaft can still be viewed today.

29 January**MOTOR CARS.**

(To the Editor) Sir.—I find that many persons here (both male and female), who formerly were in the habit of either riding or driving from Paeroa to Waihi, or vice versa, now object to travelling on the main road either on horseback or in vehicles for fear of encountering motor-cars in the journey. I am not aware of there being any law in force by which the owners of motor cars can be prevented from travelling in such vehicles along the public high road. There is, however, power to regulate the speed at which persons are allowed to travel in dangerous places. I take it that from the post office at Karangahake and extending five chains beyond the eastern end of the railway tunnel is a dangerous piece of road on which to meet an approaching motor car and a very serious accident might happen if a car running at high speed were to suddenly dash round a sharp turn in front of a coach loaded with passengers. If the horses became frightened, swerved to one side, or backed over the bank into the river bed some twenty feet below, the consequences would be highly disastrous and would end in loss, serious injuries to life and limb, and like the recent electric tram collision at Auckland, would cause consternation, grief and sorrow to the whole community.

If the owners of the motor cars are so indifferent to the safety of others, and so selfish as to carry on a system of traffic which is dangerous to the general public, it appears to me that it is the duty of the County Council to enact a bye-law compelling the owners or drivers, of motor cars to travel slowly, say at not more than four miles per hour, over the portion of road above indicated...

...In the Karangahake gorge there is in several places a wall of rock on the one hand and a precipitous descent into a rocky river bed on the other. Under such circumstances it does not appear to be right to drive motor cars otherwise than in a very careful manner, I also think they should not be allowed to run from half an hour after sunset until half an hour before sunrise next day in any case

⁹⁸⁸ <https://paperspast.natlib.govt.nz/newspapers/AS19040126.2.41>

Auckland Star, Volume XXXV, Issue 22, 26 January 1904, Page 5

whatever.—Prevention is better than accidents.—I am, etc., James Mackay.
Paeroa, 27.1.04.⁹⁸⁹

3 February

Woodstock for sale

Amongst mining properties that are now offered for sale are the Woodstock Gold Mining Company's (Karangahake).⁹⁹⁰

8 February

On Saturday afternoon a tennis match was played at Mackaytown between teams from Karangahake and Paeroa, the Karangahake team winning by six games to three. Afternoon tea was provided by the ladies of the Karangahake Tennis Club.⁹⁹¹

16 February

PAEROA-WAIHI RAILWAY.

GOOD progress is being made with the formation works on the Paeroa-Waihi line of railway, a large number of gangs of men being engaged between Karangahake and Waikino. The railway tunnel at Karangahake is making good headway, and a number of men are engaged preparing the formation and the foundations for the bridge over the Ohinemuri River at the eastern end of the tunnel, the contract for the bridge having been recently let to Messrs F. and A. Anderson, of Christchurch. The goods shed and station office at Karangahake, just completed, have been built without regard for the requirements of the town or the convenience of the public. The station house, consisting of office and waiting-rooms, has a total length of 21 feet by 9 feet in width, and is the usual size of a private person's wash-house. The goods shed is 30 x 134, and these buildings are supposed to satisfy the requirements of a township with a population of about 2000 people.⁹⁹²

17 February

A large number of men are engaged at Karangahake laying gas mains for the Ohinemuri Light and Power Company. It is intended to connect the gasworks at Paeroa with a large receiver, to be erected at Karangahake, and the gas will be forced by means of a pump into the receiver.⁹⁹³

23 February

WOODSTOCK GM. CO. Waihi, Monday.

⁹⁸⁹ <https://paperspast.natlib.govt.nz/newspapers/OG19040129.2.9.1>

Ohinemuri Gazette, Volume XIV, Issue 1201, 29 January 1904, Page 2

⁹⁹⁰ <https://paperspast.natlib.govt.nz/newspapers/NZH19040203.2.82.14>

New Zealand Herald, Volume XLI, Issue 12487, 3 February 1904, Page 2 (Supplement)

⁹⁹¹ <https://paperspast.natlib.govt.nz/newspapers/OG19040208.2.5>

Ohinemuri Gazette, Volume XIV, Issue 1205, 8 February 1904, Page 2

⁹⁹² <https://paperspast.natlib.govt.nz/newspapers/WAIGUS19040216.2.21>

Waikato Argus, Volume XVI, Issue 6166, 16 February 1904, Page 2

⁹⁹³ <https://paperspast.natlib.govt.nz/newspapers/NZH19040217.2.19>

New Zealand Herald, Volume XLI, Issue 12499, 17 February 1904, Page 7

Mr. F. Rich, attorney for the Woodstock Gold Mining Company, has received several tenders for the purchase of the Woodstock property, including the mine and battery, etc., at Karangahake. It is rumoured that the property will most likely be taken over by either the Crown or the Talisman Consolidated. The renewal of an active policy of work in the Woodstock would give an impetus to mining at Karangahake. The northern section is almost entirely undeveloped, and at the same time carries a greater extent of reef area than the southern portion, to which the entire attention of the present company was practically devoted. This northern section of ground takes in the Taukani Hill, which rises to a height of about 700 ft above the river level, and contains some rich ore chutes. This was proved by the value of bullion recovered from ore obtained down to the 500 ft level, something like 5000 tons of quartz having been treated for a yield of bullion valued at £30,000. Therefore, all below the 500 ft level is hitherto unexplored country.⁹⁹⁴

1 March

THE TALISMAN CONSOLIDATED

...crushing was resumed with 30 heads of stamps on October 20, 1902, the full battery of 50 stamps being brought into operation in April, 1903.⁹⁹⁵

4 March

NEW ZEALAND CROWN MINES. (BY TELEGRAPH,—OWN CORRESPONDENT.) Paeroa Thursday.

As stated, a number of miners have been discharged from the New Zealand Crown Mines at Karangahake, the reason being that Mr. Daw, the general manager, is anxious to cut down expenses. Mr. J. Napier, metallurgist, has also severed his connection with the company. Mr. Napier has been with the Crown Company for many years, and was one of the first in New Zealand to apply cyanide in the extraction of the precious metal.

THE OHINEMURI GOLDFIELD.)BY TELEGRAPH.—OWN CORRESPONDENT.) Paeroa., Thursday.

To-day was the anniversary of the opening of the Ohinemuri district for gold mining, and there are many old identities who remember with interest the big race for miners' rights which took place at Mackaytown just 29 years ago to-day.

TALISMAN CONSOLIDATED COMPANY. RECONSTRUCTION AGREED TO.

...A special meeting then took place, at which formal resolutions were passed for winding up the company voluntarily and registering a new company, to be called the Talisman Consolidated (1904), Limited.⁹⁹⁶

⁹⁹⁴ <https://paperspast.natlib.govt.nz/newspapers/NZH19040223.2.62>

New Zealand Herald, Volume XLI, Issue 12504, 23 February 1904, Page 6

⁹⁹⁵ <https://paperspast.natlib.govt.nz/newspapers/NZH19040301.2.62>

New Zealand Herald, Volume XLI, Issue 12510, 1 March 1904, Page 6

⁹⁹⁶ <https://paperspast.natlib.govt.nz/newspapers/NZH19040304.2.51>

New Zealand Herald, Volume XLI, Issue 12513, 4 March 1904, Page 6

25 March

Ohinemuri Light and Power Coy.

During the year the directors resolved upon extending the supply of gas to Mackaytown and Karangahake. Pipes for this were now being laid. In a few weeks the reticulation would be completed and gas supplied. From the present indications a greater number of consumers would be obtained than at first estimated. This besides being a payable extension through the larger output, would relieve the cost of producing to Paeroa by the plant being more fully occupied. The position of the gas works site at Paeroa placed the company in a position to take in coal at the cheapest rate. And this, with proper reticulation of mains, would enable the company to manufacture gas from this centre for the whole district, cheaper and more satisfactorily than could be supplied in any other way.⁹⁹⁷

Gas to arrive at Karangahake**11 April****Fatality in the Karangahake tunnel.**

Paeroa, Saturday. — David Deans, employed in the railway tunnel at Karangahake, had his spine injured yesterday by a large stone falling on him. He was removed to the Karangahake hotel, where Dr Craig attended to him. Deans was very popular in Karangahake and a general regret is felt at the accident.

Later.— David Deans, the man injured in the Karangahake railway tunnel yesterday died last night. The funeral takes place at Pokeno on Monday.⁹⁹⁸

More details are here:

<https://paperspast.natlib.govt.nz/newspapers/NZH19040412.2.22>

INTERESTING COMPARISON. The "N.Z. Mines Record" has the following paragraph: "The New Zealand Crown Mines (Limited), Karangahake, employed an average of 242 men during the past year, and in the Talisman Consolidated property 170 men were employed. From the Crown mine bullion to the value of £75,280 was obtained, and from the Talisman mine 47,207 tons were crushed for 183,333ozs of bullion, valued at £94,134."⁹⁹⁹

2 May

The work of laying the gas pipes between Paeroa and Karangahake was completed a few days ago, and Karangahake will now be supplied with gas from the works in Paeroa.¹⁰⁰⁰

⁹⁹⁷ <https://paperspast.natlib.govt.nz/newspapers/OG19040325.2.10>

Ohinemuri Gazette, Volume XIV, Issue 1098, 25 March 1904, Page 2

⁹⁹⁸ <https://paperspast.natlib.govt.nz/newspapers/BOPT19040411.2.9.4>

Bay of Plenty Times, Volume XXXI, Issue 4584, 11 April 1904, Page 2

⁹⁹⁹ <https://paperspast.natlib.govt.nz/newspapers/AS19040411.2.8>

Auckland Star, Volume XXXV, Issue 86, 11 April 1904, Page 2

¹⁰⁰⁰ <https://paperspast.natlib.govt.nz/newspapers/NZH19040502.2.101>

New Zealand Herald, Volume XLI, Issue 12562, 2 May 1904, Page 10

9 May

A start has been made on the Karangahake bowling green, and there is every probability of it being ready for playing on in October...

At Karangahake this evening the Waihi Dramatic Students will give a performance of the well-known comedy, "Felix's Dilemma." We understand that the proceeds of the entertainment will go towards the fund for having a tombstone erected over Messrs Middleton and McColl, the victims of the recent mining accident at, Karangahake.¹⁰⁰¹

The Karangahake bowling green mentioned here appears to be at Mackaytown. See entry for 24 November 1905. The Karangahake greens open in late 1909.

A substantial monument is erected to Middleton and McColl.

21 May

THE HON. JAMES MCGOWAN.

VISIT TO OHINIMURI. PAEROA-WAIHI RAILWAY

The Hon. Jas. McGowan, Minister for Mines and Justice, and Acting-Minister for Public Works, to-day visited a section of the Paeroa-Waihi railway workings. The party left Paeroa in the early morning by special train, and were taken over the new line as far as the first bridge at Karangahake. Messrs. Hay (engineer in charge of the works), Vickerman (district engineer), Blow (Under-Secretary for Public Works), Matthews (private secretary), E. G. B. Moss (M.H.R. for the district), H. Poland (chairman of the Ohinemuri County Council), and a Herald representative, accompanied the party.

THE RAILWAY WORKS. The railway has certainly made, and is still making good progress, and from what was seen to-day it is evident that those who prophesy the opening of the line of communication between Paeroa and Waihi in about eighteen months will not be far out. There are about 250 men employed on the different sections, some 50 being engaged at the Karangahake tunnel, and others at the two bridges in course of construction, some at blasting work, or in the several cuttings, and a few at clearing work along the line of survey.

We got a very good idea of the character of the work done so far, in the run down from Paeroa. The line branches off from the Paeroa-Te Aroha branch about half-a-mile beyond Paeroa, and runs for some distance through native-owned land of good description, right through to Karangahake; the grades are easy, and the curves are for the most part of a lengthy sweeping character.

Our little train (we only had one compartment) ran delightfully smooth along the four miles and a half to Karangahake. On arrival there we left the carriage and crossed by means of a fine, substantial bridge, leading directly across the river and road into the tunnel. The bridge in question has been built on the double-deck principle, the road and foot traffic going by the lower deck, the railway running overhead. We found the Karangahake end of the tunnel completed for about 25 chains, the brick work and concrete running pretty well into the face. We were run right into the face by a horse drawn truck, finding here some dozen men engaged. Three pairs of them were drilling in

¹⁰⁰¹ <https://paperspast.natlib.govt.nz/newspapers/OG19040509.2.5>

Ohinemuri Gazette, Volume XIV, Issue 1117, 9 May 1904, Page 2

the face, the others trucking and picking away the rock on the floor level. We did not see any of the reefs that have been cut in the process of driving the tunnel, but in places the presence of water indicated where ore-bodies existed. The tunnel is being carried through in a very workmanlike way, and the distance between the Karangahake and Waikino ends is now only about 600 ft, about 19 chains having been driven at the latter end. We did not visit this part of the working, as for a fortnight or so operations have been suspended owing to the volume of water struck necessitating pumping operations, which have not yet got rid of the trouble. It appears that the grade is upward from Karangahake and downward from the other end, and that the latter has been something like a well for the past two weeks, making work impossible.

For all practical purposes the section of the line is completed to the entrance of the tunnel at Karangahake, and though it is not open, nor will be for some time, to passengers, coal now used at the Waikino battery is carried out by rail to the bridge formerly referred to. Here, by a convenient hopper arrangement, the waggons can be loaded in the road section of the bridge.

Beyond Karangahake I came upon the railway works again at the exit from the tunnel which goes straight on to a bridge (No. 2), now being erected at an angle across the river. This will be of one span only, and will not carry ordinary traffic. At Waikino the line formation leads across the river and road again to the site for the railway station. This third bridge is well under way, the piers being at present in hand. From here for some two miles towards Waihi the railway skirts the left-hand side of the road, and we saw several gangs of men at work. The line takes a cut through several of the soft sandstone cliffs of the gorge country. About three miles from Waihi the line will cross the road overhead, and the approaches for the requisite bridge are in active formation. From this point we lost sight of the line formation, which takes a course leading into the back part of the Waihi township.¹⁰⁰²

3 June

The Talisman Mine

A 20 minutes' climb up the hillside from the township leads to the entrance to the main tunnel (No. 8 level). By means of this level all the ore is conveyed in horse trucks to the exterior hoppers, from whence it is carried down across a very deep gully by aerial tram to the battery, its transport costing but 1d per ton. No. 8 level is lit with electricity. It is a good distance in to the shaft, which is now practically down to No. 11 level. The shaft is sunk on an incline slightly differing from the underlie of the reef, and is down on quartz all the way. By an ingenious device, the ore at the different levels is shot into the "skips" by means of passes leading into the shaft, and so hauled up to No. 8, where the "skips" automatically tip their loads into hoppers, from whence the trucks are loaded at the level...

The news of the acquisition of the Woodstock mine, battery, etc., by the Talisman Company for £7000 was definitely confirmed by Mr. Stanfield. No scheme has been decided upon so far as to the use to be made of the

¹⁰⁰² <https://paperspast.natlib.govt.nz/newspapers/NZH19040521.2.6>

New Zealand Herald, Volume XLI, Issue 12579, 21 May 1904, Page 3

Woodstock area, but it will serve for the opening up of No. 12 level from the north end, though for no level below that.¹⁰⁰³

Talisman buy Woodstock for £7000

30 July

THOSE who remember John McCombie's connection with the Woodstock mine, his plucky fight against unprofitable conditions, and his displacement as manager at a time when he was doing his level best for the British owners of the property, and when he had nearly all he possessed invested in the Woodstock, will be interested to learn that the underground operations in that property will again be under his management. In other words, he has accepted a responsible position with the Talisman Company, which recently purchased the Woodstock mine. Also, he will again occupy the residence at Mackaytown which was built for him as manager of the Woodstock. It is the opinion of old Karangahake miners, who are the authorities most qualified to speak, that if any man in Auckland can bring the Woodstock out on top that man is John McCombie. Of course, his duties also include the work in the Talisman mine itself.¹⁰⁰⁴

18 October

Second death at Karangahake rail tunnel

COLLAPSE OF A WALL. TWO MEN INJURED— ONE FATALLY

An accident occurred in the Karangahake tunnel of the Waihi-Paeroa railway. A portion of the side of a wall slipped, falling on two men named Walter Ings and Fredk. Thomas Shaw. The former had both his legs broken, and succumbed to his injuries an hour later. Shaw had one leg broken and was considerably bruised.¹⁰⁰⁵

More details here:

<https://paperspast.natlib.govt.nz/newspapers/OG19041019.2.12>

<https://paperspast.natlib.govt.nz/newspapers/NZH19041020.2.21>

29 October

Paeroa-Waihi Railway.—

A vote of £10,000 is asked for the Paeroa-Waihi line. The section to Karangahake has been open for goods traffic since the beginning of the year, and considerable freight carried over it. Progress with rail laying is blocked immediately beyond Karangahake by a long tunnel, which occurs directly after crossing the Ohinemuri River, just opposite the Karangahake station. The work in the tunnel is carried on day and night, and satisfactory progress is

¹⁰⁰³ <https://paperspast.natlib.govt.nz/newspapers/NZH19040603.2.64>

New Zealand Herald, Volume XLI, Issue 12590, 3 June 1904, Page 6

¹⁰⁰⁴ <https://paperspast.natlib.govt.nz/newspapers/TO19040730.2.10>

Observer, Volume XXIV, Issue 46, 30 July 1904, Page 4

¹⁰⁰⁵ <https://paperspast.natlib.govt.nz/newspapers/EP19041018.2.27>

Evening Post, Volume LXVIII, Issue 94, 18 October 1904, Page 5

being made with it. The heading is now right through, and the tunnel will probably be finished before the end of the year.¹⁰⁰⁶

7 November

Third death at Karangahake rail tunnel

THE KARANGAHAKE TUNNEL ACCIDENT.

A FATAL RESULT

Mr. F. Shaw, the young man who was recently injured in the tunnel accident; at Karangahake, expired at about four a.m. yesterday at the Thames Hospital. The death was sudden, and unexpected, as the young man was considered to be making satisfactory progress towards recovery up to yesterday...¹⁰⁰⁷

More at: <https://paperspast.natlib.govt.nz/newspapers/AS19041107.2.31>

12 December

The Ohinemuri Light and Power Company has just established a new system upon which it will instal gas into private houses. The company supplies all the necessary fittings, burners, rings etc, and for which, it only charges a nominal rent. When the hire paid amounts to the cost of the fittings, etc., supplied they become the property of the hirer. The manager informs us that he has already installed gas into about twenty houses on this basis.¹⁰⁰⁸

AJHR 1905

For the year 1904

MINES STATEMENT. BY THE HON. JAMES McGOWAN, MINISTER OF MINES.¹⁰⁰⁹

Page 2

Mining at Karangahake is now carried on by the New Zealand Crown Mines (Limited) and the Talisman Consolidated (Limited), the latter company having taken over the Woodstock Mine at which active operations by the former proprietary ceased early last year. The acquisition of the Woodstock property will facilitate very materially the working of the Talisman Mine at lower levels. Some 430 persons are employed by the named, and bullion to the value of £137,468 was obtained during the year.

¹⁰⁰⁶ <https://paperspast.natlib.govt.nz/newspapers/THS19041029.2.2>

Thames Star, Volume XXXI, Issue 10452, 29 October 1904, Page 1

¹⁰⁰⁷ <https://paperspast.natlib.govt.nz/newspapers/NZH19041107.2.34>

New Zealand Herald, Volume XLI, Issue 12705, 7 November 1904, Page 5

¹⁰⁰⁸ <https://paperspast.natlib.govt.nz/newspapers/OG19041212.2.7>

Ohinemuri Gazette, Issue 1178, 12 December 1904, Page 2

¹⁰⁰⁹ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1905-I.2.1.4.2>

MINES STATEMENT. BY THE HON. JAMES McGOWAN, MINISTER OF MINES., Appendix to the Journals of the House of Representatives, 1905 Session I, C-02

THE GOLDFIELDS OF NEW ZEALAND: REPORT ON ROADS, WATER-RACES, MINING MACHINERY, AND OTHER WORKS IN CONNECTION WITH MINING.

Mr. John Hayes, F.S.Sc, Inspecting Engineer

to the Hon. James McGowan, Minister of Mines. Sir,— Mines Department, Wellington, 22nd May, 1905. I have the honour to submit my annual report, together with those of other departmental officers, Inspectors of Mines, Wardens, managers of water-races, &c, for the year ending the 31st December, 1904.¹⁰¹⁰

Page 4

Mining at Karangahake is represented by two companies—viz., the New Zealand Crown Mines Company (Limited) and the Talisman Consolidated Company (Limited). Since my last report the Woodstock Mine and property have been taken over by the Talisman Consolidated Company. Operations at the Crown Mines have not been so successful during the year as was the case for some years previously, a result attributed to the decreased value of the ore worked—viz., an average of £1 19s. 8¾d. per ton, as against £2 12s. 0½d. for the previous year, and also to the conditions met with in the lower levels. The ore-bodies have not been found so good or continuous as was expected in the shaft workings, the reef system being, to a certain extent, disturbed by faults. It is understood that a scheme for the further development of the property will be carried out, and hopes are entertained that the mines will shortly be in a position to maintain their former prestige.

At the Talisman Mine operations have been very steady throughout the year, and a considerable amount of development-work carried out, resulting in the opening-up of considerable areas of quartz. The acquisition of the Woodstock Mine is of considerable benefit in the working-arrangements of the Talisman Mine, providing, as it does, an outlet at a lower level and increased facilities for ventilation. Generally speaking, the outlook for the present year is regarded as good, the operations of last year showing that the Talisman reef maintains its size and value as it goes down. The average value obtained from the ore treated during the year was £1 17s. 9½d. per ton.

Some two or three claims are held in this locality, upon which little has been done during the year beyond what comes within the definition of prospecting, and three others are under protection.

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KARANGAHAKE SCHOOL OF MINES.

The Council has pleasure in presenting this (the sixth annual) report on the work done and results obtained by the school for the year ended the 31st December, 1904.

¹⁰¹⁰ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1905-I.2.1.4.3>

THE GOLDFIELDS OF NEW ZEALAND: REPORT ON ROADS, WATER-RACES, MINING MACHINERY, AND OTHER WORKS IN CONNECTION WITH MINING., Appendix to the Journals of the House of Representatives, 1905 Session I, C-03

Attendance. The attendance for the year has been slightly below that of the former one, an average of twenty students taking forty-five subjects, or a little over two classes per student.

Examinations. At the annual class examinations 11 students sat for 26 subjects, from which were obtained 10 first-class, 8 second, and 7 third-class certificates, only one paper failing to obtain a certificate, whilst no failures were recorded. In five subjects students were first in New Zealand—viz., mining, wet and dry assaying (senior), mineralogy, and junior theoretical chemistry. The average number of marks of all the papers sent in by members of the local school was 64.3 per cent, nearly—a much higher percentage than any other school in the colony.

President's Medal. Mr. Charles Harsant obtains the President's gold medal, with an average of 74.2 per cent, in five subjects. He was first in the colony in four out of five subjects. The medal was to be gained by the student who obtained the greatest number of marks when his aggregate was multiplied by his average.

Positions held by Present and Past Students. By attending the school quite a number of students have been enabled to obtain good positions in various parts of the world: the undernoted are a few of them: (1) Mr. E. A. Barry [son of H.P. Barry?], battery-superintendent, Pilgrim's Rest, South Africa; (2) Mr. G. A. Chappell, chief assayer, Talisman Consolidated, Karangahake; (3) Mr. C. Ansley, member, Bewick, Moreing's staff, Avoca, Victoria; (4) Mr. D. Sheehan, mine-manager, Tairua Broken Hills Gold-mining Company (Limited); (5) Mr. J. C. Maynard, assistant engineer, irrigation-works, Johannesburg; (6) Mr. Tasman Hogg, battery-superintendent, Gladstone Gold-mining Company (Limited), Waihi; (7) Mr. Bain Hogg, battery-superintendent, Mildura, Western Australia; (8) Mr. Frederick Cordes, sampler and assayer, Western Africa; (9) Mr. John Christie, assistant assayer, Talisman Consolidated, Karangahake.

In the four years that the school has been in operation 106 class certificates in all have been awarded, and in the first three years, eighteen first-class mine and battery-superintendents' certificates have been obtained; two other students have to pass in one subject only. There have been no failures in the mine-managers, and but two in the battery-superintendents' examinations. Added to which, one student has been successful in obtaining His Majesty's Customs Certificate in bullion-assaying, and another has been granted a second-class stationary-engine driver's certificate.

Electrical Classes. By the kindness of the Thames and Waihi Schools of Mines we were fortunate enough to obtain the services of Mr. Wright as instructor, and the class opened with thirteen students. The balance of electrical appliances ordered from Home should shortly arrive and be the means of adding to the interest already shown.

Auckland School of Mines. The Council notes with pleasure that a school has been formed in Auckland, which should be of great benefit to students at this end of the Island, and hopes to see the day when entrance to the course in mining engineering may also be obtained through the schools of mines, without having first of all to pass a Matriculation Examination.

Conference of Directors. Several suggestions have been forwarded to the Government by the respective directors of schools in this district, amongst

them being a recommendation to reduce the number of marks to 70 per cent. in each, or an average of 75 per cent, in all subjects for a scholarship examination; and, secondly, that each school should teach from the same text-books, so as to arrive at a uniform syllabus. The Government adopted the local school's standard in marking for class certificates—viz., 70 per cent, or over for first-class, 55 per cent, or over for second-class, and 40 per cent, or over for third-class.

Installation of Gas. During the year gas has been installed throughout the school, making a great improvement.

In conclusion, the Council feels that too much cannot be said in favour of the work of the Director, Mr. Macduff, and the members feel that much of the success that has been obtained is due to the individual interest he takes in each student.

Mr. James Coutts, Inspector of Mines

Thames, to the Under-Secretary for Mines, Wellington. Sir, — Office of Inspector of Mines, Thames, 18th February, 1905. I have the honour to furnish herewith the following report on the gold-mining industry in the Hauraki District for the year ended the 31st December, 1904.

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Karangahake.

The New Zealand Crown Mines (Limited).—The result of operations carried on in this mine for the past year has not, I am sorry to state, so far proved to be of as satisfactory a nature as might be desired. The returns for the period under review show a considerable falling-off on the previous year's output. This is accounted for by the disappointing nature of the developments in the lower levels and a general falling-off in ore-values throughout the mine, which necessitates reducing the crushing-capacity of the battery and the discharge of a number of employees in the mine. The main incline shaft (which is down a depth of 506 ft. below the Waitewheta Tunnel) has been at a standstill during the year, and although a large Worthington pump has been fitted up at the No. 4 level to assist the 12 in. plunger lift, it has not been considered advisable by the management to open out the No. 5 level from the bottom of the shaft, or to sink the shaft to a greater depth. The present pumping plant is considered insufficient to cope with the large influx of water; but this question is, I am informed, at present engaging the attention of the company, the erection of a more powerful pumping plant being proposed. If this proposal is carried out the prospecting and development of the property at deeper levels can be undertaken. On the success of this work the permanence of the mine in a great measure depends. No doubt the cost of winning the ore from deeper levels (should this work be undertaken) will be materially increased by the extra expense of pumping and winding to the Waitewheta (or output) level in comparison with the expense previously existing in winning the ore, a greater portion of which was obtained from the higher levels water-free. One of the principal works in hand at present is the opening-up and prospecting a block of ground (a considerable distance south of the main incline shaft) from the bottom of a winze which was sunk from the No. 3 level to a depth of 242 ft., and on which a small winding and pumping plant driven by compressed air has been erected. This is opened out on the same level as the No. 5 of the

incline shaft, which at some future time will be connected; then the trucking will be done at this level and raised up the main incline shaft, instead of up the present winze. From the bottom of this winze the reef (which varies from 3 ft. to 9 ft. in width) was driven on in a southerly direction for a distance of 217 ft., when the great fault was met with which practically cut out all the quartz. The level was continued on the course of a small formation through the fault and disturbed country for a distance of 506 ft., when the main reef was again picked up, with slightly better values. At present a connection is being made by rising and sinking on the reef to the No. 3 level a height of about 240 ft., which will enable the value of the ore between these levels to be ascertained, and also be the means of ventilating these workings. No. 3 level south: This level has been extended 330 ft., making the total distance from the shaft 2,276 ft., the average width of the reef being 3 ft., from which 477 tons of quartz was obtained, yielding bullion to the value of about £1,124. At the close of the previous year a fault was intersected in the level about 2,043 ft. south of the shaft; up to this point the value of the ore varied from £3 to £4 per ton. When the reef was again found on the western side of the fault the value of the ore had fallen to about £1 per ton, and no improvement took place in values until June, when good ore was cut into. This proved to be a rich patch giving an average value for the month of about £5 per ton. In July the value of the ore dropped to 18s. 6d. per ton and the following month to 15s. per ton. The average gross value of all the ore mined during the company's financial year was £1 19s. 8¾d. per ton or 12s. 3¾d. per ton less than the previous year. In the higher levels above Waitewheta tunnel a few parties of tributers are employed working on some of the smaller reefs and leaders, some of whom have obtained payable returns from crushings which were treated at the company's battery. Two hundred and four men have been employed during the year.

The Talisman Consolidated (Limited). —This company purchased the Woodstock Gold-mining Company's property, and now hold an area of 506 acres. This has given excellent facilities for opening up both sections, and the ground can be worked to better advantage than hitherto. In the Talisman section a large amount of driving and stoping has been done during the year, and with excellent results. The No. 8 level was extended to a point 1,010 ft. south of the shaft, where the ore-shoot in the Bonanza section was intersected early in the year, and considerable development-work has since been done here, with favourable results. No. 10 level: The main drive has been extended to a point 701 ft. south of shaft. This level also has intersected the Bonanza ore-shoot, the reef being larger than in the upper levels and giving payable results. The west crosscut from No. 10 level towards the Talisman Extended ground is now in 638 ft. without cutting anything of value. No. 11 level: The north drive has been driven 145 ft. from shaft and has reached the boundary of ore-shoot worked in the upper levels. The south drive measures 289 ft. from shaft. It has reached the boundary of ore-shoot and is being continued until it gets into the Bonanza section.

Shaft: the shaft is now 183 ft. below river level (Woodstock No. 5), having been sunk and timbered from No. 10 level (350 ft.) during the year. Work for 1905: It is intended to continue driving No. 8 level until it reaches the Dubbo section. No. 10 level will be advanced until it reaches south boundary of Bonanza ore-shoot. In shaft a station has been cut for No. 12 level, 178 ft.

below river level and driving north and south from same will shortly be in progress. As soon as drives on No. 12 level are fairly away from shaft, sinking will be again resumed. The general outlook for next year's work is much more favourable than it was a year ago. During the year 1904 the mill crushed 44,888 tons of ore yielding bullion valued at £84,826 10s. 6d. During the year 225 men have been employed.

Comstock Claim. —This ground is situated on the western side of the Talisman and is held by W. Tregoweth, who has been employed with two other men in extending the low level. A body of quartz has been intersected which is underlying very flat and carrying a good deal of mineral, although no rich assays have yet been obtained. It is a good locality, and a shoot of payable ore may be found in driving. Three men were employed.

Shotover Claim. —This ground is worked by C. Miller and party, who have been employed for some time in following up a trail of loose gold with the expectation of locating the reef from which it was shed, but so far have not been successful. A little loose gold is obtained by means of a rocker and ripples, which they have fitted up, but nothing payable so far has been obtained.

Mr. Warden Bush, Thames

to the Under-Secretary for Mines, Wellington. Sir,— Warden's Office, Thames, 5th May, 1905. I have the honour to transmit herewith the usual annual report on mining matters within the Hauraki Mining District for the year ending the 31st December, 1904.

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Karangahake. —The New Zealand Crown Mines Company (Limited): The bullion returns of this company have decreased very much, I am sorry to say, during the past year, mainly due to the disappointing nature of the developments in the lowest levels, and the general falling-off in ore-values throughout the mine. The amount realised was £52,642, as against £80,468 the previous year. In consequence of this a thorough examination of the mine, on the lines suggested by the general manager at Karangahake, has been made by a mining engineer expressly sent for the purpose of reporting upon those suggestions, and to furnish other information as might be deemed of advantage. After examining the whole mine this gentleman in the main concurred in the recommendations and suggestions of the general manager, with the result that instructions have been received to vigorously carry out the exploratory works suggested, and that is now being done. So far, the indications of the new works are very promising, some fairly good ore having been met with, and should this prove to be of any considerable extent, the mine will probably be as successful very shortly as it was in former years. It was at one time thought that the crushing plant would have to be shut down, but so far the necessity for doing this has not arisen, although the shortage of water in the Ohinemuri River—caused by the very long spell of dry weather—prevents the mill from working to its full capacity, indeed, seldom can it use more than thirty stamps, instead of the full complement of sixty. The directors of the company consider the situation critical, and do not in any way desire to minimise the gravity of the position. The work directed to be undertaken was immediately put in hand, and is being prosecuted as rapidly as possible, and

the discoveries already made are most encouraging; the ore met with is of good value, the quantity of it has, however, yet to be ascertained. At this stage it is difficult to make any prediction as to what will be the result of the work now in progress, but so far as it has proceeded it is very promising. The manner in which the ore-values in both the upper and lower levels of this mine simultaneously fell off in value is another instance of the disappointments of mining. In country such as that worked by this company, where faults and dislocations in the reef system are so common, there would be nothing surprising to find values making again after the barren zone had been passed through. This temporary misfortune which has overtaken the mining operations of this company has, of course, had the effect of reducing the number of employees, a little over a hundred men only being employed at present; but should the present explorations turn out as anticipated, and circumstances warrant it, the number will soon reach that formerly engaged on this property. I hope ere making my next annual report this mine will not only have regained its former prosperous position but will have surpassed it.

The Talisman Consolidated Company (Limited): This company carries on operations at Karangahake, and have acquired the whole of the property of the Woodstock Company (also at Karangahake), it being intended to work the two properties together. During the year No. 8 level was driven to a point 1,010 ft. south of the shaft. The ore-sheet in the Bonanza section was intersected early in the year by this level, and considerable development-work has since been done on the same, with favourable results. On No. 10 level main drive, the drive has been extended to a point 701 ft. south of the shaft. This level has also intersected the Bonanza ore-shoot, showing a larger reef, with payable values. The west crosscut from No. 10 level (toward the Talisman Extended ground) is now in 638 ft. without cutting anything of value. On No. 11 level, the north drive has been pushed forward 145 ft. from the shaft, and has reached the boundary of the ore-shoot worked in the upper levels. The south drive, which is 289 ft. from the shaft, has reached the boundary of the ore-shoot, and is being continued until it gets into the Bonanza Section. The shaft is now down 183 ft. below river-level, having been sunk and timbered from No. 10 level, a distance of 350 ft., during the year. It is intended to continue driving No. 8 level until it reaches the Dobb [Dubbo] Section. No. 10 level will be advanced until it touches the south boundary of the Bonanza ore-shoot. In the shaft a station has been cut for No. 12 level 178 ft. below river - level, and driving north and south from same will shortly be in progress. As soon as the drives on No. 12 level are fairly away from the shaft, sinking will be resumed. The general outlook for the current year's work is much more favourable than it was a year ago. During the year 1904 the mill crushed 44,888 tons of ore, yielding bullion valued at £84,826 10s. 6d.

The Comstock United: This property is in the same condition as it was this time last year. The owner is still hopeful of unearthing something payable, which he says is there. Only about two men have been employed at work on this property during the year.

The Shotover Special Claim: This claim has again been taken up by Messrs. Miller and Dilamore, who have been prospecting the ground with some success.

PUBLIC WORKS STATEMENT. BY THE HON. W. HALL-JONES, MINISTER FOR PUBLIC WORKS, 29th AUGUST, 1905.¹⁰¹¹

Page iv

Paeroa-Waihi.

Satisfactory progress has been made with the works on this line during the past year. Coal traffic is now being carried on as far as the Waihi Goldmining Company's battery at Waikino. The formation is finished to Waihi; rail-laying on the last section is well in hand, and the erection of the station buildings is in progress. As gravel is not available, all the ballast on this line has to be crushed, and the rate of progress is therefore slower than would otherwise obtain. The railway will be completed to Waihi and handed over to the Railway Department for regular traffic at an early date. The expenditure on this railway last year amounted to £39,676, all of which was charged to the special account established for this line. At the close of the financial year a balance of £8,861 remained at the credit of this account, but as some additional works are necessary that sum will not quite meet the cost of completing the line, and it is proposed to take a vote of £6,000 to close accounts in connection with it.

The Engineer-in-chief

to the Hon. the Minister for Public Works. Public Works Office, Wellington, 1st July, 1905.

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Paeroa - Waihi.

Length, 12 miles 40 chains. —Good progress has been made during the year with all the works on this line. The headings in the Karangahake tunnel met in the beginning of September last, and the tunnel was completed by the end of January. The bridges over the second and third crossings of the Ohinemuri River have been finished, and the remaining small bridges on the line have just been completed. The rails are laid up to 9m. 50 ch., and this part of the work will be finished to Waihi in about two months. As broken stone for ballast has to be provided, it will take longer than this to finish the ballasting. A contract for station buildings at Waikino has been finished, and a contract for the station buildings at Waihi is about half finished. The coal required by the Waihi mine has been carried by the railway since the 3rd April last.

¹⁰¹¹ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1905-I.2.3.2.1>

PUBLIC WORKS STATEMENT. BY THE HON. W. HALL-JONES, MINISTER FOR PUBLIC WORKS, 29th AUGUST, 1905., Appendix to the Journals of the House of Representatives, 1905 Session I, D-01

1905

12 January

REMARKABLE FALL DOWN A SHAFT. (By Telegraph.—Own Correspondent.) WAIHI, this day.

A serious accident occurred this morning in the Talisman mine at Karangahake, where a miner named Child fell down the pass, a drop of 50 feet. He had a miraculous escape from instant death. As it was he only received a severe shaking and injuries to the head. Dr. Craig called and stitched up a wound which was four inches long.

A MINER'S RIBS' BROKEN. WAIHI, this day.

An accident occurred in the. Crown mine yesterday. A miner named Hungerford was hit by a fall of country, and had three ribs fractured.¹⁰¹²

16 January

The official opening day of the Karangahake Bowling Club has been fixed for Thursday afternoon next, when it is anticipated that a large number of enthusiasts will be present on the Mackaytown green. The Karangahake Brass Band is to be in attendance, and will play a choice programme of music throughout the afternoon. Afternoon tea will be provided by the Ladies of Karangahake. In the evening the club intend holding a smoke concert in the Mackaytown Hotel.¹⁰¹³

The Karangahake greens open late 1909.

25 January

THE OHINEMURI DISTRICT

At Karangahake the Talisman Consolidated Company have met with encouragement in the course of low level development, and the gold returns have maintained the previous year's average. Present prospects are healthy, as a good class of ore is being mined, and a comparatively new lode system is in hand. It would not be surprising to note an increase in the mine's output as the result of this year's operations.

The Crown Mine has proved more disappointing than in former years, the returns latterly having fallen off. The Woodstock no longer exists save as part of the Talisman area.¹⁰¹⁴

27 January

Crown mine considers closing

CROWN MINES. (By Telegraph.—Own Correspondent.) PAEROA, this day.

¹⁰¹² <https://paperspast.natlib.govt.nz/newspapers/AS19050112.2.65>

Auckland Star, Volume XXXVI, Issue 10, 12 January 1905, Page 5

¹⁰¹³ <https://paperspast.natlib.govt.nz/newspapers/OG19050116.2.5>

Ohinemuri Gazette, Issue 1188, 16 January 1905, Page 2

¹⁰¹⁴ <https://paperspast.natlib.govt.nz/newspapers/NZH19050125.2.77.15>

New Zealand Herald, Volume XLII, Issue 12773, 25 January 1905, Page 2 (Supplement)

Reports are current that the Crown mine, at Karangahake, intends closing down on the 6th prox. The battery is now only working day shift.

In connection with this rumour it will be remembered that at the annual meeting of shareholders in London reference was made to the unsatisfactory results of the past year's operations, and the advisability of undertaking prospecting work with a view to picking up other payable lodes.¹⁰¹⁵

29 March

Higher grade ore has been coming to hand from the Crown Mines at Karangahake, of late. At the lower workings, no sooner was the lode recovered than another fault came in and heaved the reef out of its course...

...The battery is at present only working one shift per day, but it is expected that it will be crushing full time about May. The last return was £3957 from 2198 tons. Great trouble is being experienced owing to the low state of the river.

A vigorous policy has been adopted in connection with the Talisman Consolidated Company's operations at Karangahake, and since the acquirement of the Woodstock mine and plant every effort has been put forth to open up the lower areas of the company's property as quickly as possible. With that object in view the sinking of the main shaft has been steadily carried on with the, result that a depth of over 230 ft below the No. 5 level of the Woodstock has been attained. The pump cistern has also been put in the chamber cut out at No. 12 level station...¹⁰¹⁶

21 July

The south end [Waihi end] of the railway tunnel at Karangahake abuts on the main traffic road, the line crossing to the bridge on the opposite side. Owing to the engine coming out quickly, several narrow escapes have taken place, as drivers of waggons cannot hear the approaching train in consequence of the noise made by the vehicles. The great danger to which traffic is exposed has been represented to the Public Works Department. Mr. Vickerman writes as follows: — "I am aware that there is danger at the south entrance of the Karangahake tunnel, and my train crew are specially instructed to go quite slow there, so as to have the train in hand; also to whistle when in the tunnel, which can be easily heard outside. You stated that there had been narrow escapes, but on inquiry I could find none that could be tested. If coach-drivers and others go recklessly along there it may lead to an accident, but if care is taken I don't think there is likely to be one. Before opening for passenger traffic some permanent arrangement will probably be made."¹⁰¹⁷

8 September

KARANGAHAKE RAILWAY CROSSING.

¹⁰¹⁵ <https://paperspast.natlib.govt.nz/newspapers/AS19050127.2.6>

Auckland Star, Volume XXXVI, Issue 23, 27 January 1905, Page 2

¹⁰¹⁶ <https://paperspast.natlib.govt.nz/newspapers/NZH19050329.2.97.22>

New Zealand Herald, Volume XLII, Issue 12827, 29 March 1905, Page 2 (Supplement)

¹⁰¹⁷ <https://paperspast.natlib.govt.nz/newspapers/NZH19050721.2.23>

New Zealand Herald, Volume XLII, Issue 12924, 21 July 1905, Page 4

THE OVERHEAD ROAD.

The road being made by the Public Works Department over the tunnel at Karangahake was reported upon yesterday to the Ohinemuri County Council by its engineer (Mr C. Bray). Mr Bray's report was as follows :—"I asked the Government engineer for particulars of the work, and he informed me that the grade on each side would be one in 15, and the formation 14 feet wide. I would recommend that the department be urged to have the formation made 16 feet wide and metalled with hard blue stone. The question of maintenance will probably be an important one, and I think this matter should be pointed out to Government."

Mr Crosby thought it would be better to have a flag man at the railway tunnel instead of making a road over the tunnel.

On being asked his opinion, the engineer said he considered the over-head line would be safer for the general public.

Marrinan suggested that the new road should be fenced...¹⁰¹⁸

Presumably the road over the tunnel mouth was completed shortly after this date.

16 September**Public Works Statement**

PAEROA-WAIHI Satisfactory progress has been made with the works on this line during the past year. Coal traffic is now being carried on as far as the Waihi Gold Mining Company's battery at Waikino. The formation is finished to Waihi. Rail-laying on the last section is well in hand, and the erection of the station buildings is in progress. The railway will be completed to Waihi and handed over to the Railway Department for regular traffic at an early date...¹⁰¹⁹

4 October

It is, however, at Karangahake that the most noteworthy developments have taken place. In the Talisman Consolidated mine rich ore is being obtained, and the crushing this month promises to be a record one in consequence. One result of the improved condition of affairs has been a steady advance in the price of shares until 15/ was reached, whereas a few months back 8/ was about the ruling price.

In the New Zealand Crown Mines developments have occurred which resulted in shares which were offered at 2/9 advancing to 8/. Although no official information has been received regarding the exact nature of the discovery, it is known that a lode has been cut in the low level, which is entirely distinct from the Crown reefs, and that therefore it is intact to the surface, a distance of between 700 and 800 feet. The reef in some parts is 5ft in width, and is at present producing ore of good value. In addition to this a decided improvement has taken place in the ore won from the No. 4 level, where the reef is 5ft wide, and produces quartz worth £3 to £4 per ton at the present time.

¹⁰¹⁸ <https://paperspast.natlib.govt.nz/newspapers/OG19050908.2.7>

Ohinemuri Gazette, Issue 1289, 8 September 1905, Page 2

¹⁰¹⁹ <https://paperspast.natlib.govt.nz/newspapers/NZH19050916.2.57>

New Zealand Herald, Volume XLII, Issue 12973, 16 September 1905, Page 6

In the upper levels also a good chute of ore has been met with at the back of No. 5 level above the Waitawheta tunnel. It is therefore safe to assume that the Crown mine has a bright outlook for the future. The improved quality of the ore met with has been manifested in the increased returns from the last two crushings.¹⁰²⁰

24 November

The Karangahake bowling green at Mackaytown was opened last week.¹⁰²¹

5 December

AUCKLAND'S GOLD MINING INDUSTRY.

THE KARANGAHAKE FIELD.

THIS TALISMAN CONSOLIDATED. The first mine I visited at Karangahake was the Talisman Consolidated, which at the present time is the greatest bullion producer in the district. The claim is an aggregation of holdings, including the Imperial, Adeline Reefs, Victor Waihou, and Woodstock, and several others. The employment of complicated chemical processes and costly machinery makes large holdings necessary, for no one would be insane enough to invest hundreds of thousands of pounds in plant to work a very small area of ground.

The Talisman is well off in this respect, for it holds now 565 acres. The country in which the mine is situated recalls one of Bret Harte's descriptions of Colorado or Nevada. It consists of high ridges and deep canyons, precipitous bluffs, and steep spurs. The mill is situated near the junction of the Waitawheta and Ohinemuri Gorges, whose sides raise their bold rock faces nearly 2000 ft above the rushing rivers at their base. The country is so rugged and steep as to be utterly unfit for anything but mining purposes. Its very ruggedness, however, has one advantage, it permits mining to be-carried on very largely without sinking. On one reef in this mine the quartz has been worked for a height of 1400ft above river levels by means of levels alone, and the same advantage will apply to other reefs on the property when they come to be worked. (To continued.)¹⁰²²

12 December

THE CROWN MINE. EXTENSIVE WORKINGS. THE LOWER LEVELS. (BY OUR MINING COMMISSIONER.) No. VII.

The Crown mine at Karangahake is one of the best-known properties on the Auckland goldfields. It has been a consistent producer of bullion for many years. It has built up a large and expensive plant out of its revenues, and it has paid large sums in dividends. Its total yield of bullion to the end of November, 1905, is £618,584. Much of this bullion has been obtained during the last nine years, for the value of bullion produced before 1896 was only £138,104.

¹⁰²⁰ <https://paperspast.natlib.govt.nz/newspapers/AS19051004.2.77>

Auckland Star, Volume XXXVI, Issue 237, 4 October 1905, Page 6

¹⁰²¹ <https://paperspast.natlib.govt.nz/newspapers/THS19051124.2.8>

Thames Star, Volume XLII, Issue 10752, 24 November 1905, Page 2

¹⁰²² <https://paperspast.natlib.govt.nz/newspapers/NZH19051205.2.68>

New Zealand Herald, Volume XLII, Issue 13041, 5 December 1905, Page 7

The Crown is decidedly an interesting mine. Its ground lies on each side of the Waitawheta River, the bulk of it being on the southern side. The Waitawheta Gorge, which forms the real entrance to the mine, is simply a narrow deep gorge, most impressive in its precipitous grandeur. In places this gorge is only about 30ft wide, while its rocky walls rise sheer from the rushing river for hundreds of feet, and then lift scarcely less steep to heights of nearly 2000 ft. It can be imagined how the rugged nature of the country has hampered the development of the mine and taxed the ingenuity of its managers. There is not enough flat ground in the gorge to carry the foundations of a decent-sized hut, the road which gives access to the workings has had to be blasted out of perpendicular cliffs, the water-power houses and engine-rooms have been excavated out of the solid rock. The crushing mills are not on the claim itself, but on the banks of the Ohinemuri River, about a mile away, and the quartz is drawn from the main drive of the mine along a horse tramway.

Years ago, when the first dam was placed across the Waitawheta River and banked the water back for nearly a mile, I rowed up this gorge in a small punt, and saw it in all its primeval nakedness. I saw the reefs outcropping in the rocky walls, and wondered then if ever it would be possible to work them. The men who have engineered the Crown have satisfied all doubts in that respect. They have overcome the natural obstacles in a marvellous way, turned some of them to account, and have avoided others, and for years have stoped and driven, until the workings in the mine extend for miles in the very heart of the mighty hills.

The main drive, or the Waitawheta level, as it is called, enters the hill about 30ft above river flood mark. The old workings on the Crown reef rise in level after level to a height of nearly 1200ft above the Waitawheta, the newer workings descend in level below level to a depth of 506 ft on the incline of the reef below the Waitawheta.

When I visited this mine I did so in the company of Mr. F. R. W. Daw, the general manager, and Mr. G. W. McGruer, the mine manager. They were carrying out their usual routine of inspection, and were quite willing to show me what I wished to see, which were, of course, the lower workings, for from these, and these alone, was it possible to gain any practical idea as to the future of the mine, so far as the Crown reef is concerned.

THE WAITAWHETA LEVEL. We entered the Waitawheta level, and I saw something of the tremendous difficulties which the precipitous nature of the gorge has entailed. Just at the mouth of the level is the boiler-house, a tall concrete building clinging in some wonderful manner to the side of the cliff. Its roof had to be built of iron girders and iron plates of unusual strength to protect the building from falling rocks, which at any time might descend from the heights above, and crash into the boilers. Just inside the drive are rock chambers—great artificial caverns, cut out to serve as enginerooms for steam and water power. It seems curious to see so much machinery underground, but, apart from the initial outlay, everything goes on just the same as it does in an ordinary building.

The Waitawheta level pierces the hill in a south-east direction for a distance of 2800ft, and an examination shows that the officials of this mine have had other difficulties to contend with besides those presented by the Waitawheta Gorge. Two faults are exposed, showing that the whole country rock has been

disturbed at one time. One fault, heaves the reef nearly 100 ft westward, and changes its strike and underlie completely. By those who know anything about mining, the amount of work and trouble caused by these faults may be realised, but certainly could not be understood by the average shareholder or the general public...¹⁰²³

AJHR 1906

For the year 1905

MINES STATEMENT. BY THE HON. JAMES McGOWAN, MINISTER OF MINES.¹⁰²⁴

Page 3

Mining at Karangahake is extensively carried on by the New Zealand Crown Mines (Limited) and the Talisman Consolidated (Limited). Some 359 persons have been employed by these two mines. The output from the Talisman Mine was 44,725 tons of quartz for a value of £129,088 8s. 10d., averaging £2 17s. 8.4d. per ton. £30,000 was paid in dividends during the year, and other dividends have since been declared. The Crown Mines treated 17,541 tons of ore for a value of £36,516 8s., or an average of £2 1s. 7.6 d. per ton. The value of the ore from the Talisman Mine has shown a considerable increase, and that from the Crown Mine a moderate increase.

THE GOLDFIELDS OF NEW ZEALAND: REPORT ON ROADS, WATER-RACES, MINING MACHINERY, AND OTHER WORKS IN CONNECTION WITH MINING.

Mr. John Hayes, F.S.Sc, Inspecting Engineer

to the Hon. James McGowan, Minister of Mines. Sir,— Mines Department, Wellington, 21st May, 1906. I have the honour to submit my annual report, together with those of other departmental officers, Inspectors of Mines, Wardens, Managers of Water-races, &c, for the year ending the 31st December, 1905.¹⁰²⁵

Page 4

Mining operations at Karangahake are carried on by the New Zealand Crown Mines (limited) and the Talisman Consolidated Company (Limited), the latter company's mine having been the principal producer for the year. The output of the Talisman Mine was 44,725 tons of quartz, which gave a return of £129,088 8s. 10d., or equal to an average of £2 17s. 8.4d. per ton. The sum of £30,000 was paid in dividends for the year, this being the first distribution of profits which shareholders have received. The increased value of the ore per ton is worthy of note: the average value of the ore mined during 1904 was only £1

¹⁰²³ <https://paperspast.natlib.govt.nz/newspapers/NZH19051212.2.83>

New Zealand Herald, Volume XLII, Issue 13047, 12 December 1905, Page 6

¹⁰²⁴ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1906-II.2.1.4.4>

MINES STATEMENT. BY THE HON. JAMES McGOWAN, MINISTER OF MINES., Appendix to the Journals of the House of Representatives, 1906 Session II, C-02

¹⁰²⁵ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1906-II.2.1.4.5>

THE GOLDFIELDS OF NEW ZEALAND: REPORT ON ROADS, WATER-RACES, MINING MACHINERY, AND OTHER WORKS IN CONNECTION WITH MINING., Appendix to the Journals of the House of Representatives, 1906 Session II, C-03

17s. 9.5d. per ton, whilst that won and treated during 1905 is 19s. 10.9d. per ton in excess of that of the previous year. A considerable amount of development-work was carried out during the past year; this places a large body of stone available for stoping out, and it appears to be the policy of the management to keep the mine opened up well in advance of present requirements. The prospects for the future are reported to be of an encouraging character. At the Crown Mine work has been carried on under difficulties, but the ore mined shows a slightly better average value than that won during the previous year. 17,541 tons of quartz yielded a bullion-value of £36,516 8s., this being an average of £2 1s. 7.6d. per ton (as against the average value for 1904 of £1 19s. 8.75d.) or an increase of 1s. 10.85d. per ton in comparison with the year preceding. The two companies named provided employment for an average of 359 men during the year.

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KARANGAHAKE SCHOOL OF MINES.

The Director, Mr. R. B. McDuff, reports as follows : — I have the honour of submitting the following report on the Karangahake School for the year ending the 31st March, 1906.

Attendance. During the year a marked increase took place in the number of students, the average number being thirty-eight registered students. But in the last term, 1905, forty-eight students were on the roll. This attendance is being maintained.

Examinations. At the annual examinations held in December last sixteen first-class, fourteen second-class, and three third-class certificates were obtained by students of this school. In all, thirty-four papers were handed in, and the average marks per paper were 67.76 per cent., or only 2.25 per cent. below first class. This average is the highest on record.

Laboratory. A fair amount of public assays and analyses were carried out during the year, they being chiefly for gold and silver; but some were for iron, phosphorus, and zinc. Some coal and oil-shale were also analysed.

Extension Classes. In July last year I commenced giving a lecture on metallurgy and on mathematics once a week at Waikino. These classes were so well patronised that the Council asked the Hon. the Minister of Mines to grant a subsidy for the erection of a school at Waikino. The Hon. the Minister, ever ready to assist an educational movement, at once granted the request, and I am pleased to state that the school will be ready to commence operations at the beginning of our third term — 9th September, 1906. It is intended to depart from the ordinary course at Waikino and offer a two-years' course in mathematics, assaying, chemistry, mechanical drawing, metallurgy of gold, silver, copper, lead and zinc (including electro-metallurgy), and electricity. It is believed that such a course, assisted by the excellent environment, will enable the school to turn out students capable of upholding the good record of New Zealand metallurgists and the fame of the renowned Waihi Gold-mining Company, whose reduction-works are situated at Waikino.

Syllabus. The syllabus has been somewhat extended to meet the needs of advanced students, and comprises instruction in mining, mathematics,

surveying, assaying, chemistry, mechanical drawing, survey map-drawing, geology, mineralogy, metallurgy, metallurgical chemistry, and electricity...

...The annual meeting of subscribers was held on the 12th March, 1906, when the following committee was elected for the ensuing year: Patron, Hugh Poland, M.H.R.; President, H. E. Phillips, Esq.; Vice-presidents, C. H. Tresize, Esq., G. N. McGruer, Esq., H. Croucher, Esq. Council—Messrs. H. W. Guthrie, R. Inglis, J. Nodwell, G. A. Chappell, H. Rochfort, J. Rawlinson, H. Macdonald, and R. R. Lloyd (Secretary). In conclusion, I must heartily thank all gentlemen who were so kind as to donate books, papers, and specimens to the school; and to the Council for their hearty co-operation in all movements for the welfare of the school.

REPORTS OF INSPECTORS OF MINES.

Mr. James Coutts, Inspector of Mines

Thames, to the Under-Secretary, Mines Department, Wellington. Sir,—
Inspector of Mines' Office, Thames, 31st March, 1906. I have the honour to furnish herewith the returns and report on the gold-mining industry in the Hauraki District for the year ended the 31st December, 1905.

Page 39

Karangahake.

Talisman Consolidated (Limited). —This company's operations have proved a great success during the year. The work has been directed to driving and developing on the reef between the No. 8 and No. 13 levels; the reef has varied from 10 ft. to 25 ft. in width, the whole of which was broken out in places and sent to the mill, and from 44,725 tons of ore treated 290,786 oz. 14 dwt. of bullion was obtained, for a total value of £129,088 8s. 10d, which enabled the directors to pay dividends amounting to £30,000 during the year. As these are the first dividends paid since operations were commenced in the mine, the management and shareholders may be congratulated on the success that has crowned their efforts in making the mine a payable concern, and as the prospects for the year entered into are of a most promising nature, it may fairly be expected the shareholders will receive numerous dividends to recoup them for their former outlay. The following is a summary of the work done in the mine during the year: The incline shaft was extended until it reached a point 445 ft. below the river-level (Woodstock No. 5). At 180 ft. below river-level a station was cut for No. 12 level, from which a drive has been driven north 534 ft. and south 318 ft, and I am informed that the ore-shoot in the Talisman section maintains at this level the size and values met with in the level above. At 200 ft. below No. 12 level, No. 13 level was started, and reached the reef just before the Christmas holidays, therefore I cannot say much about it except that it is said to carry payable values. On No. 11 level the south drive has got into the Bonanza section, showing that the high-grade ore found above No. 10 level continues down to the level of No. 11. On No. 10 level the south drive is now in 1,425 ft. from the shaft; this drive is being driven for the Dubbo ore-shoot, and should get under the Dubbo workings in another 250 ft. The development-work for the year has considerably increased the ore-reserves, and the output shows that the values have also increased over those of the previous year. I am informed that the same vigorous development

policy will be continued during the ensuing year, and the south drive at No. 12 level will be extended until it gets into the Bonanza section (probably 250 ft. from present face), and the No. 13 level will open up the Talisman ore-shoot. 230 men have been employed during the year.

New Zealand Crown Mines (limited).— This company's operations have not during the past year been productive of as good results as could be desired, although some good ore has been obtained from a block of ground opened up above what may be termed No. 5 or lower level. This has been worked at a great disadvantage: the block of ground being about 1,350 ft. from the No. 1 main underlie shaft, and the No. 5 level not being connected with the inside workings, the ore had to be pulled up a winze with buckets to No. 3 level by means of a small engine, where it was tipped into a hopper and then trucked out of that level and sent up the No. 1 main shaft, thus adding considerably to the cost of the ore mined. The reef here is from 12 ft. to 15 ft. in width.

Another large block has been opened up on Lloyd's (or New) Reef, which was intersected in a crosscut driven from the Waitewheta main level; the reef is about 8 ft. in width, and I am informed produces good payable ore. Other blocks of ground on the main lode have been operated on, and the ore treated from the various parts of the mine shows it to be of fairly high grade; 17,541 tons of ore was treated for a value of £36,516 8s. 10d. In a large mine of this kind considerable expenditure is necessarily incurred in keeping everything in proper repair, and this year the trestles and fluming which carry the water-supply over the Waitewheta Stream have shown signs of decay, and necessitated the erection of new fluming, &c, estimated to cost £800. No new or important discoveries have been made in the mine during the year. An average of 129 men have been employed.

Comstock Claim. —The owner, Mr. W. Tregoweth, has not discovered anything of importance during the year. He has continued the driving of the 600 ft. on which he had a subsidy of 3s. per foot from the Ohinemuri County Council and the Government. The work has proved rather disappointing, as several reefs were expected to be intersected within the distance named. Two men were employed during the year.

Mr. Warden Bush, Thames

to the Under-Secretary, Mines Department, Wellington. Warden's Office, Thames, 22nd May, 1906. Sir — I have the honour to forward herewith the Warden's annual report on this field for the year ending the 31st December, 1905.

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Karangahake. Talisman. —The Talisman Consolidated may be said to have proved itself the premier producer of gold during the past year in this locality, having treated 44,725 tons of ore, the bullion from which was worth £129,088, which gave the company an opportunity to pay £30,000 in dividends. This is the first dividend paid since operations commenced. The mine is working well at present, and it is said the recent returns will continue for a while. This company purchased the Woodstock Company's properties, but so far have discovered nothing upon them of a payable nature. A great deal of work is being carried on by this company, which is employing 230 men.

New Zealand Crown Mines (Limited). —The operations of this company during the past year have not resulted in the same output of gold, although some fairly rich ore was handled, 17,541 tons yielding £36,516. Development-works on a fairly large scale are being carried on, and it is hoped will ere long lead to fresh discoveries of ore rich enough to put through the battery to pay something beyond expenses of mining. 129 men have been employed.

Comstock United. —This claim has been worked by the owner with more or less help from the County Council, which has given monetary assistance as well as foregone the rent. According to the owner, this mine only requires development to prove a veritable bonanza. The discoveries in the Talisman property have enabled him to dispose of the claim to a company, and it is expected that with the capital secured development-works will be more actively carried on. Two men employed.

PUBLIC WORKS STATEMENT. BY THE HON. W. HALL-JONES, MINISTER FOR PUBLIC WORKS, 19th OCTOBER, 1906.¹⁰²⁶

Page iii

Paeroa-Waihi. This railway was completed and opened for traffic on the 9th November last. In addition to using up the balance of £8,862 remaining to the credit of the special account established for this line, a sum of £7,326 was expended out of the vote for railway construction. A few small items still remained to be dealt with at the close of the financial year, and a vote of £2,000 is provided to cover these.

¹⁰²⁶ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1906-II.2.2.2.1>

PUBLIC WORKS STATEMENT. BY THE HON. W. HALL-JONES, MINISTER FOR PUBLIC WORKS, 19th OCTOBER, 1906., Appendix to the Journals of the House of Representatives, 1906 Session II, D-01

1906

17 January

KARANGAHAKE. Interest mainly centres at present in the Talisman Consolidated mine at Karangahake. The developments in this property during the past year have been most satisfactory, the returns rising from £4394 in January, 1905, to £20,408 in November, with the gratifying result that £30,000 was paid in dividends, and there seems every probability that amount will be doubled during the ensuing year, as the ore from the lower levels is turning out highly payable. These results are all the more satisfactory because just before the present manager took charge, the prospects of the Talisman Consolidated property looked somewhat gloomy, and even early in 1905 the shares could be got for six or seven shillings, which are now worth about 30/. The New Zealand Crown Mine also looks better now than it did at the commencement of 1905, and the returns have shown improvement latterly. It will be therefore seen that there is every reason to claim that the outlook for the mining industry for the present year is really very good, and that there is every reason to expect that the returns will show a still further increase during the ensuing twelve months. The following are the returns from the four leading mines in

Ohinemuri County:—	1905. £	Total. £
Waihi	712,056	4,549,334
Talisman Consolidated	129,088	446,875
N.Z. Crown	38,639	620,710
Komata Reefs	43,136	183,289 ¹⁰²⁷

19 January

It was decided to erect a footbridge over the river at Mackaytown so as to connect the township with the railway, provided the Railway Department places a flag station there.¹⁰²⁸

2 March

MACKAYTOWN FLAG STATION.

A letter was received from Mackaytown residents, stating that at a public meeting at Mackaytown it was decided that the best place to erect a bridge over the Ohinemuri River was at a place one mile five chains from the Karangahake railway station. The land for a road to the bridge would be given by Hancock and Co. Mr Cochrane urged that the Railway Department be asked for a flag station to be made on the railway opposite Mackaytown, but it was eventually decided to postpone consideration of this matter.¹⁰²⁹

¹⁰²⁷ <https://paperspast.natlib.govt.nz/newspapers/AS19060117.2.55>

Auckland Star, Volume XXXVII, Issue 15, 17 January 1906, Page 9

¹⁰²⁸ <https://paperspast.natlib.govt.nz/newspapers/NZH19060119.2.87>

New Zealand Herald, Volume XLIII, Issue 13079, 19 January 1906, Page 7

¹⁰²⁹ <https://paperspast.natlib.govt.nz/newspapers/OG19060302.2.8>

Ohinemuri Gazette, Volume XVI, Issue 1284, 2 March 1906, Page 2

3 April**CROWN MINES**

The company are now constructing a large water-race, with the view of assisting a large steam plant, which may later on be erected near the battery site for the generation of electricity, to be utilised for the development of the mine to a greater depth, and to save expense in the way of consumption of fuel. The large bridge to carry the race is of the Platt type, and is being constructed in two spans of 82ft. This should be completed by the end of the month, after which Mr. F. R. W. Daw, the company's superintendent, is to leave for the Old Country on a holiday visit. Mr. Daw has now had charge of the Crown works for an unbroken period of 10 years and a-half.¹⁰³⁰



“The large bridge to carry the race is of the Platt type” can be seen bottom right, this side of the original Crown flume.

The steam plant, engine and compressors are added to the Woodstock battery, the higher portion of the building is extended to the right (on the left when looking from the highway) to accommodate them. The engine mount is accessible today (upstream end of battery site) but boiler and chimney mounts, if they remain, are hidden in thick scrub.

More/larger buildings have progressively been added behind the stamper section of the battery. A tramway enters the lean-to building; is this the battery ore hopper mentioned below?

3 August

TALISMAN CONSOLIDATED. TEMPORARY SUSPENSION OF WORK AT No. 13 LEVEL. Waihi, Thursday.

¹⁰³⁰ <https://paperspast.natlib.govt.nz/newspapers/NZH19060403.2.8>

New Zealand Herald, Volume XLIII, Issue 13142, 3 April 1906, Page 3

Operations have been suspended at No. 13 level of the Talisman Consolidated mine, pending the installation of the new air-compressor [in the old Woodstock battery (1907 AJHR¹⁰³¹)], which was recently ordered from Home. This step has been rendered necessary in consequence of the flow of water at the low level, and the demand for power for rock-drills, pumping, etc., in other parts of the mine. The present air-compressor, though a powerful one of its class, is not quite powerful enough to do the pumping and keep the rock-drills, etc., working in the various faces, so that if the No. 13 level had been kept going the work generally would have suffered...¹⁰³²

16 September

The next event I'll never forget took place on 16 September 1906. I was having a drink at the bar with a couple of mates after a hard day up at the mine when, at 9.30, suddenly one of the maids rushed into the bar screaming, "Fire! Fire! The kitchen's on fire!" We shot out into the back of the building, only to retreat before a wall of flames as the fire took hold on the building. Everyone got out and the fire brigade soon arrived, only to find the water mains turned off. Then, when the water was turned on, the hose repeatedly burst. It had not been renewed since the Brigade was formed in 1898 and had perished. By now the old wooden building was a raging inferno which spread to the adjacent Volunteer ("Crosby's") Hall [Lyceum Hall built 1897¹⁰³³] and Billiard Room nearby. These were destroyed as well as the hotel. Nothing was saved. Next day a temporary bar was rigged up (necessary to preserve the licence). I had to move temporarily into the boarding house above Scotchmans Gully but it was not long before a new hotel was built as the building had been insured.¹⁰³⁴

17 September

Fire at Karangahake. Tramway hotel destroyed.

TRAMWAY HOTEL DESTROYED

A serious fire occurred at Karangahake last night by which the Tramway Hotel, which is situated on the east side of the river, was destroyed. The hotel, which is the property of Mr Montgomery, was a substantial two-storeyed building and was well furnished throughout. The fire was at its height about ten o'clock last night, and Thames residents observed the bright glare in the sky. The whole of the hotel was completely destroyed and the bulk of the furniture, while the hall which adjoined was also burnt. Willing hands were soon at work, an attempt was made to save the billiard table, and efforts in this direction met with partial success.

¹⁰³¹ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1907-I.2.2.2.7>

THE GOLDFIELDS OF NEW ZEALAND: REPORT ON MINES, ROADS, WATER-RACES, AND OTHER WORKS IN CONNECTION WITH METALLIFEROUS MINING., Appendix to the Journals of the House of Representatives, 1907 Session I, C-03

¹⁰³² <https://paperspast.natlib.govt.nz/newspapers/NZH19060803.2.8>

New Zealand Herald, Volume XLIII, Issue 13246, 3 August 1906, Page 3

¹⁰³³ <https://paperspast.natlib.govt.nz/newspapers/OG18971117.2.3>

Ohinemuri Gazette, Volume VII, Issue 443, 17 November 1897, Page 2

¹⁰³⁴ <https://www.ohinemuri.org.nz/journals/journal-32-september-1988/tramway-hotel-karangahake>

Ohinemuri Regional History Journal 32, September 1988, Tramway Hotel, Karangahake

The present occupier of the Tramway Hotel is Mr Crosbie, a relative of Mr George Crosbie, of Paeroa. It is stated that had the water supply been available the building would have been saved, but that as the reservoir was being cleaned out the necessary pressure of water was absent. It is stated that some of the occupiers lost their belongings. The insurances were not available, though we entered into communication with Karangahake on the subject. The cause of the fire is not stated.¹⁰³⁵

19 September

INTERPROVINCIAL.

(BY TELEGRAPH —PRESS ASSOCIATION).

FIRE AT KARANGAHAKE. Paeroa, Last Night.

A fire occurred at Karangahake about half-past nine o'clock last night, and totally destroyed the Tramway Hotel and the hall and billiard-room next to it. The fire started in the hotel, and as there was nobody about at the time it had a good hold before it was discovered. When the fire brigade arrived there was some delay in getting the water, and when the water was available the efforts of the brigade were useless, as the hose was perished and burst in several places. The fire burned so fiercely that practically nothing was saved in the hotel. The hall and billiard-room, which were alongside, soon caught fire, and were also soon completely destroyed. Had the fire brigade's gear been in good order the billiard-room and hotel would probably have been saved. The origin of the fire is unknown, but it started somewhere at the back of the hotel and near the pantry. The buildings were owned by Mrs W. Montgomery, sen., and were leased by Mr P. Crosby, the licensee of the hotel.

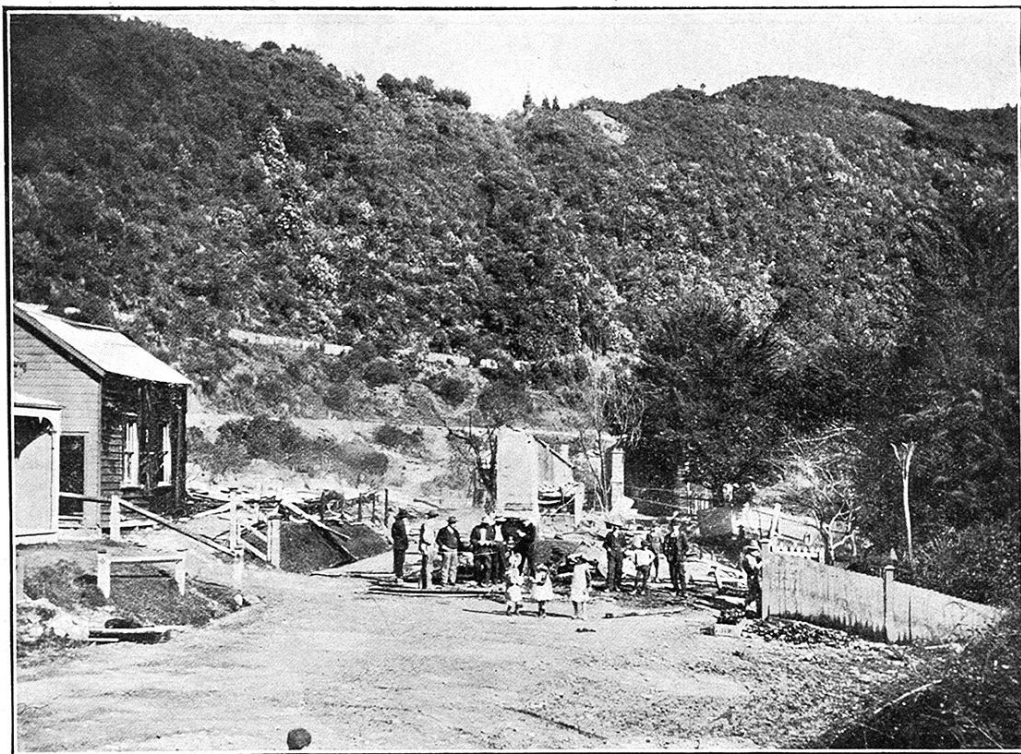
The hotel building was insured for £1200 in the New Zealand Company, £300 being retained, and the balance reinsured. The stock, furniture, billiard tables and pianos were insured for £850 in the name of Mrs K. Crosby, £150 being held by the New Zealand Company, and the remainder reinsured. The hall was also insured in the New Zealand Office for £250, of which £75 was retained by the company, and the remainder reinsured.¹⁰³⁶

¹⁰³⁵ <https://paperspast.natlib.govt.nz/newspapers/THS19060917.2.22>

Thames Star, Volume XLIII, Issue 10597, 17 September 1906, Page 2

¹⁰³⁶ <https://paperspast.natlib.govt.nz/newspapers/WAIGUS19060919.2.20>

Waikato Argus, Volume XXI, Issue 3288, 19 September 1906, Page 2



DESTRUCTIVE FIRE AT KARANGAHAKE, AUCKLAND: A VIEW OF THE RUINS.

The fire, which occurred on September 16, completely destroyed the Tramway Hotel, and the hall and billiard-room next to it. The insurances amounted to £2300. D. Shaw, Photo.

Destructive fire at Karangahake. Published in the Auckland Weekly News 27 September 1906.

Auckland Libraries Heritage Collections AWNS-19060927-10-03 D Shaw.

27 September

WAIHI NEWS.

A flag station has now been opened at Owcharoa, about five miles from Waihi, on the Waihi-Paeroa railway. A flag station is also to be opened at Mackaytown, between Paeroa and Karangahake.¹⁰³⁷

5 October

The bridge across the Ohinemuri River at Mackaytown, to give access to the flag station, is now completed.¹⁰³⁸

This bridge will be swept away in January, 1907.

24 November

Waihi Train Sensation

Stuck Up in the Tunnell

Driver and Fireman Asphyxiated. Both Fall off the Engine. Narrow Escape from Death

¹⁰³⁷ <https://paperspast.natlib.govt.nz/newspapers/NZH19060927.2.77>

New Zealand Herald, Volume XLIII, Issue 13293, 27 September 1906, Page 6

¹⁰³⁸ <https://paperspast.natlib.govt.nz/newspapers/NZH19061005.2.77>

New Zealand Herald, Volume XLIII, Issue 13300, 5 October 1906, Page 6

From the time that the railway between Paeroa and Waihi was first opened, the tunnel on the eastern side of Karangahake has always been looked upon as a source of danger to the engineering staff of the train, and it has been frequently prophesied that something would happen before the line had been long in existence. Immunity from accident has, however, attended the past twelve months' running, and though occasionally a fireman has fainted owing to the intense heat from the engine, nothing of any serious moment occurred until yesterday afternoon, when two men had a miraculous escape from death, and as the engineers and firemen working on the locomotives are subject to the unpleasant conditions each time they penetrate the tunnel, it behoves the Railway Department to make immediate and searching investigation in order to prevent a recurrence, if possible, of yesterday afternoon's mishap.

HEAVY COAL SUPPLIES

As already mentioned in the Daily Telegraph, the mine companies are laying in coal reserves for the Christmas holidays, and day and night trains are running to cope with the supplies arriving at Paeroa. Scarcely a passenger train leaves Paeroa without a large number of coal trucks being attached, and yesterday, when the four o'clock train was leaving Paeroa with the Auckland passengers, a very heavy freight was included.

Two engines were provided to draw the load, both being coupled together, and all went well until after the Karangahake station was passed.

A TERRIBLE STRUGGLE

Then a terrible struggle commenced on the up-hill grade, and it was at once apparent to the passengers that a much longer time was going to be spent in the tunnel than usual. Under ordinary conditions the tunnel is negotiated in from five to seven minutes' travelling, but yesterday it took fully nine minutes to accomplish the first half of the distance.

The engines laboured on with their heavy load, and almost every second the train would give a quiver and apparently stop, but there seemed to be sufficient power still left for another spurt, and it crawled a few yards further and repeated the experiences of the previous moment, until finally there was a dead stoppage.

A RACE BACK TO KARANGAHAKE

A second passed, and the whole train began to reverse, and in a moment it was traveling back at a terrific pace - the time was taken by a passenger. Whereas the forward movement took nine minutes to accomplish from the time the tunnel was entered until the stoppage, it only took one minute to get back to the Karangahake yards.

DRIVER AND FIREMAN MISSING

Anxiety was written on the face of every passenger, for they know not what was going to happen; but the feelings of Engineer Howatson of one engine and fireman Sterling of the other, on discovering when they reached daylight again that their comrades had fallen off their respective engines in the effort to negotiate the tunnel, may be imagined. The two men had been overcome with the intense heat and smoke from the engines, and had quietly fallen over the side, though luckily clear of the track. Otherwise it would have been our painful duty to have chronicled a shocking disaster, for the train had apparently passed and re passed them without striking either.

THE SEARCH

Immediately the train was brought to a standstill Driver Howatson, who was almost overcome also, but still sensible to his responsible position, reported the matter to the guard and stationmaster, and no time was lost in a search party making an entry of the tunnel to the fate of the two missing men.

Owing to the intense darkness caused by the dense smoke in the tunnel progress was very slow, but a short distance in Driver Hatchett was found, and a little farther in Firemen Claney. Both men had regained consciousness, but were hardly able to realise what had occurred. However, they were soon conveyed out again, and after being refreshed by a little stimulant, which Mr Lawlor, who was a passenger by the train, had thoughtfully procured, they took their places on the engines again, none the worse apparently for their unpleasant experience, though Fireman Claney was suffering somewhat from a bruise he had received on the shoulder. A large crowd had by this time gathered round, and it was an intense relief to find that a serious catastrophe had by good luck been averted.

The officials had now recognised that the load was too heavy for the drawing capabilities of the engines, and as it was necessary for one locomotive to return to Paeroa again, to bring out the evening train, nearly the whole of the coal—somewhere about 180 tons—was shunted off, and the remainder of the train despatched through, after about an hours' delay.

ANOTHER UNSUCCESSFUL ATTEMPT.

Once again the darkness of the tunnel was pierced, and by the speed of the engine no further trouble was anticipated. The load, however, was still too great, and gradually the speed decreased until a stopping point was again reached. For the second time the train had to back out, and the load further reduced until there was nothing left but the passenger cars. For the third time the train was started off on its journey to Waihi, and, to the great relief of all, the other side of the tunnel was reached, a record run being made, and Waihi station was reached over an hour and a half behind time.

A good deal of excitement prevailed at Waikino owing to exaggerated reports, or the rumour being that one of the men had been cut to pieces on the line. The arrival of the train allayed all fears, and people left the station thankful that the reports were unfounded.

AN INVESTIGATION NECESSARY

According to all accounts the fainting of the engineering staff on the Paeroa-Waihi section of railway is nothing new, for we have been informed that though men have never yet fallen from the engines, there have been cases where the men have been overcome by the heat and have fallen on the floor of engine, and revived when the surface was regained. If such is the case the Railway Department deserve to be severely handled, and it is to be hoped that something will be done in the way of placing bars at the side of the engines to prevent a recurrence of yesterday's unfortunate affair.¹⁰³⁹

¹⁰³⁹ <https://paperspast.natlib.govt.nz/newspapers/WHDT19061124.2.30>

Waihi Daily Telegraph, Volume VI, Issue 1797, 24 November 1906, Page 2

17 December

The Waihi petition to be sent through Mr W. H. Herries, member for the Bay of Plenty, to the Hon. the Minister for Railways, in reference to the Karangahake railway tunnel, has been signed by 670 residents. In connection with this matter Mr Herries wired the Minister stating that the petition was being sent, and hoping that the Minister would do something to meet the prayer of the petitioners. The following is the Minister's reply: — "Received your telegram re Karangahake tunnel and shall be glad to give consideration to the matter on receipt of petitions." Petitions are also being sent from Waikino and Karangahake through Mr H. Poland, member for Ohinemuri.¹⁰⁴⁰

24 December

CROWN MINES. (From Our Own correspondent.) PAEROA, this day.

The New Zealand Crown Mine operations were suspended on Saturday for the Christmas holidays, and they could not have stopped at a more interesting stage. A reef was cut within the middle of last week, and a great deal of excitement was caused in consequence of the reported breaking-out of stone, showing coarse gold freely distributed through it. The management were very reticent, but now full official information is available, and there is no doubt that the Crown Company has received a valuable Christmas-box. The reef was not within the extreme southern working of the mine at the lowest level, and this enhances the value of the discovery, because hitherto unexplored country was being opened up. The reef is fully five feet wide, and is carrying a lead six inches wide of rich ore on the footwall side, whilst the remaining portion of the reef is composed of ore of very good average grade. The development is of the greatest importance. The discovery means a great deal for the future of Karangahake, for the Crown Mines has now probably entered upon a fresh lease of life.¹⁰⁴¹

AJHR 1907

For the year 1906

MINES STATEMENT. BY THE HON. JAMES MCGOWAN, MINISTER OF MINES.¹⁰⁴²

Page 2

On the Karangahake Goldfield the Talisman Consolidated Mine has developed into a profitable concern, having declared during the year £60,000 in dividends as a result of treating 49,573 tons of ore for a return of £152,011.

¹⁰⁴⁰ <https://paperspast.natlib.govt.nz/newspapers/OG19061217.2.7>

Ohinemuri Gazette, Volume XVI, Issue 2143, 17 December 1906, Page 2

¹⁰⁴¹ <https://paperspast.natlib.govt.nz/newspapers/AS19061224.2.51>

Auckland Star, Volume XXXVII, Issue 300, 24 December 1906, Page 6

¹⁰⁴² <https://paperspast.natlib.govt.nz/parliamentary/AJHR1907-I.2.2.2.6>

MINES STATEMENT. BY THE HON. JAMES MCGOWAN, MINISTER OF MINES., Appendix to the Journals of the House of Representatives, 1907 Session I, C-02

THE GOLDFIELDS OF NEW ZEALAND: REPORT ON MINES, ROADS, WATER-RACES, AND OTHER WORKS IN CONNECTION WITH METALLIFEROUS MINING.

Mr. Frank Reed, M.Inst. M.E., Lic. Surveyor, Inspecting Engineer of Mines

to the Hon. James McGowan, Minister of Mines. Sir, — Mines Department, Wellington, 24th April, 1907. I have the honour to submit the annual reports of inspection, together with those of Wardens and other officers, accompanied by statistical information in regard to the goldfields and metalliferous mines of the colony, for the year ended 31st December, 1906.¹⁰⁴³

Page 5

The Talisman Consolidated Mine has shown a marked increase in production, and the amount of dividends paid during 1906 amounted to £60,000, being double those paid the previous year. Developments during the year have proved considerable ore-reserves, and 5,920 ft. have been driven, risen, and sunk at this mine.

REPORTS OF INSPECTORS OF MINES.

Mr. James Coutts, Inspector of Mines

Thames, to the Under-Secretary, Mines Department, Wellington. Sir,— Inspector of Mines' Office, Thames, 6th April, 1907. I have the honour to furnish herewith the returns and report on the gold-mining industry in the Hauraki District for the year ended the 31st December, 1906.

Page 13

Karangahake. Talisman Consolidated (Limited). —The work in this company's mine has been directed to driving and stoping between Nos. 8 and 13 levels. The No. 10 level south has been extended to a point 2,106 ft. from the main underlie shaft, which has proved the Dubbo rich ore-shoot continues to carry payable values down to this level. On No. 11 level in the Bonanza section a branch reef has been driven on for a distance of 300 ft., which has proved highly payable, and rising and sinking on this reef confirms the results found in driving, therefore this work has opened up large blocks of remunerative ore. At No. 12 level the south drive reached the rich ore-shoot in the Bonanza section of the mine early in the year, where it was found that the high values found in Nos. 10 and 11 levels were fully maintained at this level; in consequence, a large reserve of payable ore has been opened up. The No. 13 level was pushed ahead during the first part of the year; but owing to a larger quantity of water being met with than the pumping machinery could cope with, this drive had to be stopped until additional power was procured, which has now been done by a new Ingersoll Sergeant compound air-compressor having been installed at the Woodstock Battery to meet the requirement, and has done so admirably. The water was at once pumped out and the extension of the drive resumed. The country at this level has been more broken than at the other levels above, but no doubt as the work proceeds the country will

¹⁰⁴³ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1907-I.2.2.2.7>

THE GOLDFIELDS OF NEW ZEALAND: REPORT ON MINES, ROADS, WATER-RACES, AND OTHER WORKS IN CONNECTION WITH METALLIFEROUS MINING., Appendix to the Journals of the House of Representatives, 1907 Session I, C-03

improve. The following figures will show the development-work done during the year: Driving, 3,025 ft.; rising, 1,241 ft.; sinking winzes on reef, 302 ft.; crosscutting, 1,352 ft. This company is to be congratulated on the success met with during the year, having treated 49,573 tons of ore for £152,011, which, after all expenses were paid, enabled the directors to pay to the shareholders the handsome sum of £60,000 in dividends. An average of 275 men were employed.

New Zealand Crown Mines (Limited).— During the year the development-work undertaken at the mines consisted of the sinking of the main incline shaft, and a contract was let for sinking another 100 ft., and when completed the shaft will be 600 ft. below the Waitawheta tunnel level. This shaft is sunk in the foot-wall of the reefs, and at each level a crosscut has to be driven to intersect the lode. The shaft was sunk on the reef to a considerable depth, but as the reef took a different underlie it was deemed advisable not to follow it with the shaft, but to continue on the same grade as it had been carried down to No. 4 level, and in consequence the reef is a few feet in the hanging of the winze at the bottom. This with the sinking of the shaft is in a measure hindering the opening-up of the mine, as the development work (sinking, &c.) on the reef is ahead of the shaft, which must add considerably to the cost of the ore produced. The work of opening up the mine on the reefs has been vigorously pushed on, and a contract has been let to sink a winze on the reef 240 ft. below the No. 5 level (No. 5 level is at present the deepest level). In this section of the mine at No. 4 level the reef has been driven on for some length, and the width of the reef and its values ascertained. Towards the end of the year an important discovery was made in the cutting of a reef in the southern extension of No. 5 level, which has proved to be over 5 ft. wide and highly payable. This is supposed to be the old Welcome reef worked on at and above No. 4 level, but enough work has not been done to prove this definitely. The New reef section (above the Waitawheta level): The No. 1 rise has been extended in the reef to a height of 475 ft.; the reef is only 1 ft. wide, with a value of £1 9s. 4d. per ton. No. 1 level has been driven north and south of the No. 1 rise, making a total length on the line of reef of 723 ft., with an average width of about 2 ft. and a value of £1 10s. per ton. Early in the year some difficulty was experienced in getting sufficient ore from the mine to keep the mill going full time, but in the upper levels a little prospecting was done, with the result that several small ore-bodies were discovered of good values, and this with the ore from the other parts of the mine has kept the mill fully employed.

The company's water-race on the Ohinemuri River has for some time been leaking and in much need of repairs. During the year a new bridge at the junction of the Ohinemuri and Waitawheta Rivers has been erected to carry the race over; this is a good piece of work, and when the race along the banks of the Ohinemuri River, recently destroyed by the heavy floods, is restored and other sections repaired, the water-supply from this race will be available for use at the company's mill. During the year 22,000 tons of ore was treated for a return of £40,735. An average of 142 men were employed. The mine when last inspected was in good order.

Comstock United Gold-mining Company.—In the early part of the year a company was formed to raise capital to carry on further development-work,

and to enable this to be done a larger supply of fresh air had to be forced into the face of the low level, and to do this a small dam was constructed some distance up the small creek adjacent to the mine, and from the dam water-pipes were laid down to the mouth of the level, which conveys sufficient water to be used for a water-blast to force the quantity of air required through an 8 in galvanised pipe, there being now abundance of air in the drive. The work carried on is chiefly development-work, and although it is said several reefs have been met carrying gold, yet no large parcels of ore have been treated at the mill, and as the mine has been working for a number of years it is reasonable to expect some of the ore should be treated to prove its value. An average of seven men were employed.

Mr. Warden Bush, Thames

to the Under-Secretary, Mines Department, Wellington. Warden's Office, Thames, 17th April, 1907. Sir — I have the honour herewith to forward the usual annual report on mining matters in the district under my control.

Page 48

At Karangahake discoveries of cinnabar have been made, and several mineral leases applied for. It is stated that this mineral is easily procurable there; if this proves to be correct, a new industry will be established in that locality also.

Page 49

Karangahake.

The New Zealand Crown Mines Company, as usual, has been actively engaged in working its property, which consists of about 400 acres.

The Talisman Consolidated. —The property owned by this company consists of 507 acres, upon which 275 men have been employed during the past year, whose labours have resulted in the output of 49,573 tons of quartz, which yielded 292,419 oz. of bullion, valued at £152,011. The total value of the bullion produced by this mine to date is £598,886, out of which £90,000 has been returned to the shareholders in dividends.

Several applications are pending in the Warden's Court at Paeroa for prospecting licenses for cinnabar, a commodity which it is alleged exists in fair quantities about Karangahake, not far distant from the railway-tunnel there. It is proposed to grant these, having in view the juxtaposition of the ground to the Crown and Talisman Mines and other auriferous lands, for so long only as the applicants shall also be holders of the areas as special quartz claims, thus obviating the clashing of gold-mining with that for any other mineral or metal, and giving gold-mining the first position. I do not know how many of these applications will be continued for granting, but according to report cinnabar is plentiful in the locality pegged out; that being so, it is only natural to anticipate that some of the applications will reach the license stage.

Page 64

Mr. R. B. Macduff, Director of the Karangahake School of Mines

to the Under-Secretary, Mines Department, Wellington. Sir, — Karangahake. I have the honour to report as follows on the work done at the Karangahake School of Mines for the year 1906 :—

Attendance. It gives me great pleasure to report that the attendance has improved considerably during the year, averaging forty-two students, and having fifty-nine students on the roll during the second term. This is the highest average attendance yet reached for this school.

Examinations. At the annual examinations, held in January and December last, students of this school secured one first-class mine-manager's certificate, one battery-superintendent's certificate, and sixteen first-class certificates in the class examinations. Beside the above, four students passed the examination for engine-drivers' certificates for winding, while another student passed the first-class stationary-engine-driver's examination.

Laboratory. Owing to the Council's decision to do free assays for prospectors, no less than 196 assays were made during the year, in addition to a number of assays which were paid for. While the free assays are a boon to prospectors, some scheme of restricting the assays to such will have to be evolved, as I have had samples of South Island quartz handed in by prospectors as being obtained in the Ohinemuri County. Again, the prospectors themselves are often very inconsiderate, and send samples in by tens. Under the above conditions the teaching of assaying to the students must be materially affected; one cannot do assays and teach at the same time.

Improvements. During the year a storeroom 16 ft. by 12 ft. has been erected, a Y level ordered, also a staff, and an experimental dynamo is now about to be installed. These latter items were obtained mainly from a special grant of £2 for £1 from the Hon. the Minister of Mines, to whom the Council extend their best thanks.

Waikino School of Mines. The branch school at Waikino is completed, and is ready to open at the beginning of 1907. In this school it is intended to devote the time chiefly to the study of assaying, chemistry, mathematics, and metallurgy, especially with a view to training students for the battery-superintendents' examination. The school will be kept open full time.

Assistant. The work of teaching so many different subjects last year became too much for me, and the Council appointed one of my students—Mr. C. Harsant—to act as temporary assistant. In December this appointment was made permanent, and the two schools will be now kept open full time.

Conclusion. In conclusion, I extend my thanks to the Hon. the Minister of Mines, and to the Secretary, Mining Bureau, for numerous periodicals relating to mining and metallurgy, and also to all gentlemen who have given papers and specimens to the institution.

R. B. Macduff, Director.

The Under-Secretary, Mines Department, Wellington.

GOLDFIELDS AND MINES COMMITTEE: REPORTS ON PETITIONS RELATING TO THE SILTING OF THE OHINEMURI AND WAIHOU RIVERS; TOGETHER WITH MINUTES OF EVIDENCE. (Mr. POLAND, Chairman.)

APPENDIX TO THE JOURNALS OF THE HOUSE OF REPRESENTATIVES, 1907 SESSION I, I-04A¹⁰⁴⁴

¹⁰⁴⁴ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1907-I.2.5.2.5>

REPORTS.

Nos. 277, 287, 278, 552, and 681 —Petitions of Terua Tihangi and others, S. J. Laughlin and others, W Scott and others, B. W. Bignall and others, T. B. Hewitson and others, complainants; and Nos. 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 386—Petitions of E. Biffen and others, C. Brown and others, C. Butler and others, D. Donaldson and others, T. Dunn and others, E. Ettringham and others, J. Hind and others, J. McCombie and others, G. Rothwell and others, W. Steer and others, C. Symes and others, N. J. Truscott and others, A. P. Wylde and others, E. Potter and others, respondents.

The Goldfields and Mines Committee have the honour to report on the above-mentioned (complainants') petition that in their judgment any expenditure on any scheme that may be devised for arresting the silting of the Ohinemuri and the Waihou Rivers should be on a contributory basis, the local bodies whose districts are affected by the silting providing their quota towards the cost. Subject to this proviso, the Committee recommend that the petitions be referred to the Government for favourable consideration. Parliament Buildings, 13th November, 1907. H. Poland, Chairman.

The Goldfields and Mines Committee, having already dealt with the matters involved in the abovementioned (respondents') petitions, have the honour to report that they have no recommendation to make. Parliament Buildings, 20th November, 1907. H. Poland, Chairman.

The report is not included here.

THE GENERAL ELECTION, 1905: VOTES CAST AT LOCAL-OPTION POLL AT EACH POLLING-PLACE.

APPENDIX TO THE JOURNALS OF THE HOUSE OF REPRESENTATIVES, 1907 SESSION I, H-25¹⁰⁴⁵

Polling places	Continuance	Reduction	No License
Karangahake	353	189	313
Mackaytown	39	28	34
Total: 956			

GOLDFIELDS AND MINES COMMITTEE: REPORTS ON PETITIONS RELATING TO THE SILTING OF THE OHINEMURI AND WAIHOU RIVERS; TOGETHER WITH MINUTES OF EVIDENCE. (Mr. POLAND, Chairman.), Appendix to the Journals of the House of Representatives, 1907 Session I, I-04a

¹⁰⁴⁵ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1907-I.2.4.2.39>

THE GENERAL ELECTION, 1905: VOTES CAST AT LOCAL-OPTION POLL AT EACH POLLING-PLACE., Appendix to the Journals of the House of Representatives, 1907 Session I, H-25

1907

9 January

Owing to the greatly improved prospects of mining in Australia, large numbers of Australians who were engaged in mining on the Ohinemuri field were attracted homewards, and just before Christmas there was a very large exodus. In addition to this a great number of those who left for a holiday have decided not to return. The scarcity of miners is considerably hampering the industry. At the Crown mines the men who are working will not take the night shift, and consequently the management have to be content with two shifts. The Talisman and other companies operating in the district are also keenly feeling the scarcity. Unless there is an influx of miners before long the exploitation of the new developments in the district will be retarded.¹⁰⁴⁶

11 January

THE MINING INDUSTRY.

The year opens with a very satisfactory outlook for mining at Karangahake, as the returns from the Talisman Consolidated have increased, while within the last month most important developments have taken place in the New Zealand Crown mines, really good ore having been met with at the No. 5 level. The reef is 5ft wide, and some of the stone shows free gold, a somewhat unusual thing for the Karangahake district. More work will require to be done to prove whether or not this is an entirely new reef, but should such prove to be the case the discovery will be of still greater importance, as it may be picked up in the levels above. During the year the New Zealand Crown mines produced £40,821, and it is probable that there is a final clean-up yet to come in. The total output from the property has now reached £661,531, out of which £70,000 has been paid in dividends. The Talisman Consolidated mine produced £ 152,010 3s 7d during the year, the total output now being £598,885 9s 9d, and the total dividends paid £90,000. This mine is reported to be opening up well, and in a week or two work should be resumed at the No. 13, or lowest level.¹⁰⁴⁷

14 January

The heavy rains that have obtained during the past couple of days...

The footbridge at Mackaytown, over the Ohinemuri River, has also been carried away by the water.¹⁰⁴⁸

22 January

LATEST MINING NEWS.

CROWN MINES (KARANGAHAKE)

¹⁰⁴⁶ <https://paperspast.natlib.govt.nz/newspapers/AS19070109.2.42>

Auckland Star, Volume XXXVIII, Issue 8, 9 January 1907, Page 4

¹⁰⁴⁷ <https://paperspast.natlib.govt.nz/newspapers/AS19070111.2.36>

Auckland Star, Volume XXXVIII, Issue 10, 11 January 1907, Page 3

¹⁰⁴⁸ <https://paperspast.natlib.govt.nz/newspapers/OG19070114.2.17>

Ohinemuri Gazette, Volume XVII, Issue 2150, 14 January 1907, Page 2

The recent flood carried away a considerable length of this company's old water race, and in consequence of this crushing operations have been somewhat delayed—not for the actual want of water, for they have ample boiler power to operate with steam, if the railway were again in working order. It is thought that the line will be in readiness to make a start to-day. If so, crushing operations will be resumed on behalf of the company without any farther delay...¹⁰⁴⁹

31 January

...the Talisman and Crown Mines at Karangahake give strong indications of becoming richer in the precious metal with depth. In the Talisman high grade ore is being met with in the Bonanza stopes, and generally speaking the prospects of this property never looked brighter than at the present time, while only a few days before the mines closed down for the Christmas and New Year holidays a valuable discovery was made in the Crown Mines, a reef being met with at the No. 5 level, a band of which carries quartz which might almost be classed as specimen stone, while for the full width the ore values are highly satisfactory and better than those in the upper workings. This discovery, as far as can be seen, will greatly extend the life of the property as a gold producer.¹⁰⁵⁰

1 February

Railway Tunnel Incident

Mid-Day Train Stuck Up Twice. Very Unpleasant Experience¹⁰⁵¹

More drama in the tunnel.

8 February

Regarding the damage done by the recent flood Mr G. Bray (engineer) reported to the Ohinemuri County Council yesterday as follows:—"The recent heavy rains did a large amount of damage throughout the County...

...the Mackaytown footbridge washed out at one end...

"Mackaytown Footbridge—The timber of this bridge has been saved and will be available for the re-erection of the bridge. I would recommend that the bridge be made at least eight feet higher and 60 feet longer. The estimated cost of the work is £90."¹⁰⁵²

¹⁰⁴⁹ <https://paperspast.natlib.govt.nz/newspapers/WHDT19070122.2.29>

Waihi Daily Telegraph, Volume VI, Issue 1845, 22 January 1907, Page 3

¹⁰⁵⁰ <https://paperspast.natlib.govt.nz/newspapers/NZH19070131.2.113>

New Zealand Herald, Volume XLIV, Issue 13400, 31 January 1907, Page 8

¹⁰⁵¹ <https://paperspast.natlib.govt.nz/newspapers/WHDT19070201.2.12>

Waihi Daily Telegraph, Volume VI, Issue 1854, 1 February 1907, Page 2

¹⁰⁵² <https://paperspast.natlib.govt.nz/newspapers/OG19070208.2.12>

Ohinemuri Gazette, Volume XVII, Issue 2161, 8 February 1907, Page 2

11 February

Fatal accident in the Talisman mine at Karangahake, a miner named McAree being severely injured by a fall of rock and dying just as he reached the Thames hospital. The funeral took place at Thames this afternoon.¹⁰⁵³

16 February**R. K. Davis post-postscript**

The Lamont furnace fiasco at the Thames and Ohinemuri was brought to mind last week by the meeting of creditors in the twenty-year-old bankrupt estate of R. K. Davis, to receive the cheerful announcement of a long-deferred dividend of 1s 5d in the £. About 1885 a party of smart Yankees came to Auckland to boom a new-fangled water-jacket furnace that was going to save every pennyweight of precious metal — silver and the baser metals included — in the goldfields ore. An Auckland syndicate put several thousands pounds into the enterprise, and erected one of the furnaces on the beach at the Thames, at the foot of the Moanatairi Creek. Hopes ran high with regard to the new notion during the erection process, but after the furnace had been working a few weeks, and had produced little else than a tremendous heap of bottle-glass-like slag, it suddenly closed down, and was never heard of again. The Lamont process had been a ghastly failure so far as New Zealand was concerned.

At that time R. K. Davis was a well-known citizen of Auckland. He became dazzled by the new scheme, and being interested in the Woodstock mine at Karangahake — now part of the Talisman — he conceived the idea of erecting a Lamont furnace for the Woodstock company. Mr Davis spent all the money at his command upon the furnace, which, however, did no better in Ohinemuri than at the Thames. The result was that he shortly afterwards became bankrupt, with liabilities to the amount of £10,496. For twenty years the estate has been hung up, and Mr Davis drifted away long ago to Sydney, where he still lives, in feeble health.

Not long ago a proposal was made to annul the bankruptcy on payment of 3d in the £, and but for a discovery made by the Official Assignee it would have been agreed to. This vigilant official discovered that Mr Davis will become entitled to a legacy of several thousand pounds on the death of a relative now well advanced in years, and took pains to secure on behalf of the estate the bankrupt's rights in the matter. It is the sale of this reversionary interest for £844 that enables the payment of the present dividend. Its amount, by the way, would have been larger, only that the creditors gave practical proof of their sympathy with Mrs Davis, who still lives in Auckland, by agreeing that she should rank equally with themselves in respect of £650 that she had lent to her husband prior to his bankruptcy.¹⁰⁵⁴

¹⁰⁵³ <https://paperspast.natlib.govt.nz/newspapers/THS19070211.2.11>

Thames Star, Volume XLIV, Issue 10220, 11 February 1907, Page 2

¹⁰⁵⁴ <https://paperspast.natlib.govt.nz/newspapers/TO19070216.2.6>

Observer, Volume XXVII, Issue 22, 16 February 1907, Page 4

22 March

At Karangahake also there are the same gratifying signs that the goldbearing lodes increase in value as the workings go down...

In the N.Z. Crown mines also it is at the lowest level that highly payable ore has been met with, which has practically given a new lease of life to that company. The Lloyd lode is intact below the Waetawheta level, and above where it has been met with there exists an immense strata of unexplored country. This lode is now considered the most important in the Crown mines.¹⁰⁵⁵

27 March**WARDEN'S COURT.**

The application by the New Zealand Crown Mines Co, Ltd, (Mr Porritt) for protection for six months for two water races at Karangahake was recommended to the Minister. A declaration from the general manager of the company, Mr Daw, stated that the races had been damaged by the recent flood, and the work of reconstruction would cost about £6000 and occupy 14 months.

The New Zealand Crown Mines Co, Ltd, applied for a license for a water race at Karangahake to carry 55 sluice heads of water. Mr Porritt appeared for the applicant, and Mr Moresby appeared for the objector, the Talisman Consolidated, Ltd. After argument, the application was granted, the New Zealand Crown Mines Coy. to have 55 heads of water, to go through the new race proposed to be constructed in place of the old race; that portion affecting the Talisman Coy's battery to be constructed so as to ensure the smallest risk of damage, and if possible to be constructed to the approval of Mr Stansfield, the Talisman Coy's attorney.¹⁰⁵⁶

28 March

At the Warden's Court to-day, before Mr. R. S. Bush, Warden, the following applications were granted :—...

The application by the New Zealand Crown Mines Company, Limited (Mr. Porritt), for protection for six months for two water-races at Karangahake was recommended to the Minister. A declaration from the general manager of the company (Mr. Daw) stated that the races had been damaged by the recent flood and the work of reconstruction would cost about £6000 and occupy 14 months.

The New Zealand Crown Mines Company, Limited, applied for a license for a water-race at Karangahake to carry 55 sluice heads of water. Mr. Porritt appeared for the applicants, and Mr. Moresby for the objectors, the Talisman Consolidated, Limited. After argument the application was granted, the Crown Mines Company to have 55 heads of water to go through the new race proposed to be constructed in place of the old race, that portion affecting the

¹⁰⁵⁵ <https://paperspast.natlib.govt.nz/newspapers/AS19070322.2.25>

Auckland Star, Volume XXXVIII, Issue 70, 22 March 1907, Page 3

¹⁰⁵⁶ <https://paperspast.natlib.govt.nz/newspapers/OG19070327.2.11>

Ohinemuri Gazette, Volume XVII, Issue 2180, 27 March 1907, Page 2

Talisman Company's battery [special site, Battery Flat? Old Woodstock battery?] to be constructed so as to ensure the smallest risk of damage, and, if possible, to be constructed to the approval of Mr. Stansfield, the Talisman Company's attorney.¹⁰⁵⁷

Crown water race largely replaced at this time.

Do we see this in the photographs? Is it still a flume?

The bridge across the Waitawheta shows in photographs (up till at least 1911), but beyond that it is very hard to see in photographs.

4 May

HON. J. A. MILLAR.

THE GOLDFIELDS TOUR.

RIVER SILTING QUESTION. (by TELEGRAPH. Own CORRESPONDENT.) Paeroa, Friday.

The Hon. J. A. Millar, Minister for Marine and Labour, accompanied by the Hon. W. J. Beehan, M.L.C., Messrs. H. Poland and F. Lawry, M.H.R.'s, and party, drove to Paeroa from Waihi this morning, arriving here about midday.

At Karangahake the Minister was waited on by a deputation, consisting of Messrs. Heron, Tyreman, and Montgomery, who asked for information regarding the necessary steps to be taken to form a borough at Karangahake.

The Minister pointed out that the necessary steps were laid down in the Municipal Corporations Act and other Acts, and said if the conditions were complied with he knew of no reason why objection should be taken to the formation of the borough.

The deputation then asked if, in the event of the borough being formed, it would receive the gold revenue accruing in Karangahake. To this the Minister gave a noncommittal reply...

It was pointed out to the Minister that the position of the mines and batteries rendered the suggestion to put the tailings back into the stopes impracticable...

THE MINISTER'S REPLY. Mr. Millar, in reply, said that there was no doubt that if the silt was raising the bed of the river it was practically lowering the banks of the river, with the inevitable result that floods would take place. The raising of the bed of the river would also affect the drainage of the river, and would render valueless land that was now valuable. No Government would permit anything to go on that was going to ruin the land, but mining was an important industry, and they must not do anything that would injure it to any extent. He had perused the report submitted to the Government by Mr. Perham, and also the report by Mr. Reed. Mr. Reed's report stated distinctly that no harm was being caused by the silting up of the river. When he read Mr. Reed's report he thought there could not be much wrong. As the reports showed there was not much to complain of, they could not blame the Ministry for nothing being done, as the Ministry was to a great extent dependent on the reports of its officers. If they found they had officers who did not give a true and faithful report they would have to consider whether those officers were

¹⁰⁵⁷ <https://paperspast.natlib.govt.nz/newspapers/NZH19070328.2.6>

New Zealand Herald, Volume XLIV, Issue 13448, 28 March 1907, Page 3

worth employing. It was quite as important to keep open a navigable river as it was to keep open a road. There were four or five proposals as to the manner of dealing with this subject, and Cabinet would have to go carefully into these and see what was best to be done. He would go carefully into the the matter and see if something could be arrived at so as to do justice to all sections of the community. In the afternoon the Minister and party journeyed down the river from the railway wharf at Paeroa as far as Komata to have a look at the river and left by the afternoon train for Thames.¹⁰⁵⁸

7 June

COUNTY COUNCIL. MONTHLY MEETING.

FOOTPATH AT KARANGAHAKE. Mr Cochrane moved that a footpath from the railway station at Karangahake to Irishtown be made. The Council decided to instruct the engineer to attend to the matter...

Scotchman's gully. On the motion of Messrs Trezise and Cochrane, the engineer was authorised to have men put on to repair a road at Scotchman's Gully, Karangahake.¹⁰⁵⁹

Scotchman's Gully was the common spelling used in similar reports.

28 June

GALE IN OHINEMURI. BRIDGE AT MACKAYTOWN BLOWN OVER.

The high wind during the past few days has occasioned a considerable amount of damage in the district, mostly in the way of fences and tin chimneys blown down. The most serious damage reported is to the Mackaytown footbridge, which was blown over. The erection of the bridge had been just about completed by the contractors, Messrs White and Law, and. it had not been handed over to the County Council.¹⁰⁶⁰

8 July

MACKAYTOWN FOOTBRIDGE. COST OF RENEWING THE BRIDGE.

Concerning the footbridge at Mackaytown that was blown over during the recent gale, the engineer reported to the Ohinemuri County Council at its meeting yesterday as follows:—"I have to report that during the extremely heavy south-westerly gale which blew on the 26th of last month, the partially constructed suspension bridge at Mackaytown was blown down. In its descent the bridge caused an undue strain of a twisting nature upon the hooks of the union screws where they hung to the anchor rods, and when finally getting under the influence of the strong river current, the bridge tore open these hooks..."¹⁰⁶¹

¹⁰⁵⁸ <https://paperspast.natlib.govt.nz/newspapers/NZH19070504.2.54>

New Zealand Herald, Volume XLIV, Issue 13479, 4 May 1907, Page 6

¹⁰⁵⁹ <https://paperspast.natlib.govt.nz/newspapers/OG19070607.2.16>

Ohinemuri Gazette, Volume XVII, Issue 2209, 7 June 1907, Page 3

¹⁰⁶⁰ <https://paperspast.natlib.govt.nz/newspapers/OG19070628.2.22>

Ohinemuri Gazette, Volume XVII, Issue 2218, 28 June 1907, Page 3

¹⁰⁶¹ <https://paperspast.natlib.govt.nz/newspapers/OG19070708.2.14>

Ohinemuri Gazette, Volume XVII, Issue 2222, 8 July 1907, Page 3

There was some dispute about responsibility for the disaster, but it appears that the bridge was rebuilt. It lasted till damaged by floods 1936.¹⁰⁶²

23 July

The Tamaki Sawmill Company, who were the successful tenderers for supplying the necessary timber to the New Zealand Crown Mines, Limited, water race at Karangahake, delivered the first load to-day. The Tamaki Company, in the contract, engages to supply in all about a half-million feet of heart of kauri within seven months.¹⁰⁶³

This must mean that a wooden flume is to be built. It should show in photographs!

24 July

N.Z. CROWN" MINES. VERY ENCOURAGING DEVELOPMENTS.

(By Telegraph.—Own Correspondent.)

KARANGAHAKE, this day.

The prospects at the N.Z. Crown Company's mine, Karangahake, continue to steadily improve, and some fine blocks of ground are now being opened up. The main lode has been recovered south of the fault, and proves to be a strong body of ore of good value. The drift, going forward on its southerly trend, is penetrating a new and untried area. The new reef development has fully 11,000 tons of ore ready for stoping, and, taking the mine on the whole, it has increased very much in value. This has been brought about principally lately, owing to the discovery of two new lodes. The discovery of one of the new lodes was made in the crosscut projected in a westerly direction from the main adit, known as the Waitawheta main haulage way. At a point 300 feet west, the ore body was pierced in a splendid class of country, and proved to be a strong vein, measuring between 4 to 5 feet wide, carrying values from £2 to £3 10/ per ton. This lode is intact from end to end of the mine, and has a large area of country standing intact overhead. The discovery is looked upon as a very valuable acquisition, and opens up a new mine, in addition to what the company has already developed.

Another new lode which the company discovered some time ago traverses country lying towards the east of the lode, known as the new reef. This is also a very fine lode, and contains payable ore of very good grade. The main uprise, which has attained a height of between 500 to 600 feet above the Waitawheta level, will reach the required height in another 130 feet of rising. It is the intention of the management to commence operations upon this new lode as soon as the uprise is through.¹⁰⁶⁴

NEW ZEALAND CROWN MINES. IMPORTANT DEVELOPMENTS AT LOW LEVELS. ELECTRIC POWER TO BE INSTALLED

¹⁰⁶² <https://www.ohinemuri.org.nz/journals/journal-44-september-2000/karangahake-roads-and-bridges>

Karangahake Roads and Bridges. Ohinemuri Regional History Journal 44, September 2000

¹⁰⁶³ <https://paperspast.natlib.govt.nz/newspapers/WHDT19070723.2.7>

Waihi Daily Telegraph, Volume VII, Issue 1998, 23 July 1907, Page 2

¹⁰⁶⁴ <https://paperspast.natlib.govt.nz/newspapers/AS19070724.2.13>

Auckland Star, Volume XXXVIII, Issue 175, 24 July 1907, Page 3

The construction of a new water-race, in place of the one swept away by the floods in January last, is now being proceeded with at a cost of about £5500. The requirements of the mine in the matter of power have been well thought out by the management, and the water is to be utilised to develop electrical power, and generate it on to the mine to operate two or three throw pumps of the ram type, which will be installed in the main shaft. These pumps will be capable of lifting upwards of 1000 gallons of water per minute from a depth of 1000 ft. The water will be available for at least 200 days in the year, and will be delivered at a site near the mill, where powerful Pelton wheels will be installed, capable of developing 363 effective horse-power. In addition to the water power, the management intend erecting a steam engine to do the work in the dry season, when the water is not available. The steam power already at the mine will be devoted to the haulage of ore, etc. The electrical scheme referred to is at present under consideration by the London directors of the company, and, it is expected that a move will be made in the matter of construction at an early date.¹⁰⁶⁵

This is the powerhouse at the Crown battery, completed late 1909.

The water race construction underway. Why don't we see it in photographs?

28 August

KARANGAHAKE. The flotation of the Karangahake Gold Mining Company, formed to work the Great Fingall mine, between the Talisman and Crown mines, at Karangahake, has been accomplished, the shares offered to the public having been over-subscribed. The company is to be registered in a few days, and it is expected that work in the mine will be commenced in about a week or ten days.¹⁰⁶⁶

6 September

COUNTY COUNCIL. MONTHLY MEETING.

The report of the engineer was read as follows: — "Karangahake Fire Brigade Appliances.—I have made enquiries regarding the state and quantity of hose now in possession of the brigade, and find that they have now in hand 1000 feet of good hose. I would suggest that the County Council supply Karangahake with a firebell and stand. The approximate cost would be £30.

"Karangahake Railway and Traffic Bridge—With reference to the application from the Railway Department, asking the Council to pay half the cost of painting this bridge, the whole coat would be about £40. Seeing that the bridge is used greatly as a traffic bridge, I think it only fair that the County should bear half the expense of having it painted.

"Washout on Main Road, near Doherty's Creek — There is great danger of the road being carried away for the whole width at this point during a flood. It would recommend that piles be driven along the river side and sheeted, the piles to be tied back to anchor logs let into the ground on the inner side of the

¹⁰⁶⁵ <https://paperspast.natlib.govt.nz/newspapers/NZH19070724.2.21>

New Zealand Herald, Volume XLIV, Issue 13498, 24 July 1907, Page 5

¹⁰⁶⁶ <https://paperspast.natlib.govt.nz/newspapers/NZH19070828.2.22>

New Zealand Herald, Volume XLIV, Issue 13528, 28 August 1907, Page 5

road by iron rods. The cost would be upwards of £40.” [we see this work in some photographs]

...ROAD TO TALISMAN MINE.

The superintendent of the Talisman Consolidated complained of the bad state of the road to the mine at Karangahake. Mr Marrinan said that the road was in a very bad state. He moved that the engineer be instructed to deal with the matter at once. This was seconded by Mr Trezise and was carried...

FOOTPATHS. Mr Crosby moved that the engineer invite tenders for tarring and sanding and kerbing and channelling the footpath in Paeroa on the west side of main street from the railway crossing to the Criterion Hotel. The motion was seconded by Mr Cochrane, and was carried. Mr Marrinan moved that the Karangahake footpaths be treated in the same way as those in Paeroa. The motion was carried.¹⁰⁶⁷

The first mention of a firebell at Karangahake.

23 September

The Karangahake Advocate states that Mr A. Montgomery has sold out of the Karangahake Hotel.¹⁰⁶⁸

24 September

THE GOLDFIELDS.

KARANGAHAKE MINING. At no period in the history of the Hauraki goldfields has the outlook for the Karangahake section looked so bright as at the present time. The bullion returns from the two leading mines, their satisfactory developments, and the prospecting at present being undertaken, have all been conducive to this era of prosperity and in the near future a further improvement may be looked for.

The pride of position is held by the Talisman Consolidated Company, and as development work proceeds, the various chutes of ore are opening up well; and when it is stated that the lowest levels are producing the best ore values, the future looks indeed rosy. It is currently reported that the management intend to sink their main shaft and open up two more levels, and this new development work will be eagerly watched by all interested.

Development work at the New Zealand Crown mines are also proceeding satisfactorily, the principal works in hand being the extension of Nos. 5 and 6 levels. From No 5 level a crosscut is being driven to intersect what is known as the new reef. A distance of 150 ft has already been driven out of the 600 estimated. This reef when intersected will give a block some 450 to 500 ft in height, and will greatly add to the improved prospects of the mine. No. 6 level is now entering upon a good chute of ore identical with that mined in No. 5. Operations on the new water race are in full swing, and here also satisfactory progress is being made.

¹⁰⁶⁷ <https://paperspast.natlib.govt.nz/newspapers/OG19070906.2.19>

Ohinemuri Gazette, Volume XVII, Issue 2249, 6 September 1907, Page 3

¹⁰⁶⁸ <https://paperspast.natlib.govt.nz/newspapers/OG19070923.2.7>

Ohinemuri Gazette, Volume XVII, Issue 2256, 23 September 1907, Page 2

At the Comstock United the low level is now in 2300ft, and penetrating a class of country conducive to carrying gold-bearing lodes.

At the newly-formed Karangahake mine Mr. Chas. Manuel has been appointed supervisor, and a start has been made to intersect the Woodstock main lode. It is estimated that in 200 ft of driving it will be to hand. All the preliminary works are now well in hand, and good progress is being made.

Another property which will shortly attract attention is the Crown North, and as the Sir Walter Scott lode traverses the Ivanhoe section of this claim, interesting developments may be looked for. At the New Shotover, which a local syndicate has taken up, it is their intention to erect a small battery for the purpose of testing and treating the ore available.¹⁰⁶⁹

4 October

COUNTY COUNCIL. MONTHLY MEETING.

The Karangahake Tennis Club wrote offering to purchase three barrels of tar from the County Council for the purpose of tarring the courts. The matter was left to the engineer with power to sell the tar at cost price.¹⁰⁷⁰

This is likely to be at Mackaytown.

8 November

STREET LIGHTING.

The manager of the Ohinemuri Light and Power Company wrote protesting against the Council's action in deducting 20 per cent from the account for street lighting at Karangahake, owing to defective lighting.¹⁰⁷¹

16 November

Our Karangahake correspondent writes: "The Sir Colin Campbell claim which adjoins the Talisman mine, is to be placed on the market at an early date. An assay of samples realised £1 10s per ton. A discovery of good loose gold has been found in a gully on the claim."¹⁰⁷²

10 December

KARANGAHAKE.

(By Telegraph.—Own Correspondent.) WAIHI, this day.

This mine [Karangahake], which is situated in Karangahake district, adjoins the Talisman Consolidated on its north and east boundary and extends westward to the boundary of Comstock G.M. Co.'s area. The area held by the Karangahake Company embraces the Taukane Hill, and extends north to the Ravenswood area held by the New Zealand Crown Co. The position of the

¹⁰⁶⁹ <https://paperspast.natlib.govt.nz/newspapers/AS19070924.2.19>

Auckland Star, Volume XXXVIII, Issue 228, 24 September 1907, Page 3

¹⁰⁷⁰ <https://paperspast.natlib.govt.nz/newspapers/OG19071004.2.22>

Ohinemuri Gazette, Volume XVII, Issue 2260, 4 October 1907, Page 3

¹⁰⁷¹ <https://paperspast.natlib.govt.nz/newspapers/OG19071108.2.20>

Ohinemuri Gazette, Volume XVII, Issue 2275, 8 November 1907, Page 3

¹⁰⁷² <https://paperspast.natlib.govt.nz/newspapers/THS19071116.2.13>

Thames Star, Volume XLIV, Issue 10403, 16 November 1907, Page 2

mine is immediately upon the auriferous belt wherein the Talisman and Crown, companies are obtaining their rich ores. This rich belt of country traverses a south-east by north-west strike, and in both the big mines the values have been found quite parallel to each other. It may be mentioned that the famous Woodstock lode has an underlie to the west of quite one foot in one, and pitches strongly into the area held by the Karangahake Coy. The lode is one of the master series, being strong and well defined, measuring several feet in thickness. The underlie of this lode should carry it into the area held by the Karangahake Coy. The company are now driving upon a fine looking ore body. There are other parallel veins west of the present section now under development wholly unexplored.¹⁰⁷³

13 December

The Karangahake Borough agitators are beginning to find out that they will not be allowed to collar all the gold duty for a small favoured locality without a fight. To those who know anything about the matter it is evident that it is not home rule the Karangahake people want; but they desire to spend the gold duty accruing from the Talisman and Crown- mines on public luxuries round about the township, while the outlying portions of the district starve. There may be no objection to the Karangahake people having the borough provided they don't get the gold duty; but they have clearly shown by the manner in which they have arranged their proposed district that it is the gold duty they are after. Possibly some people forget that the tracks and roads to the gold bearing area were constructed before much gold was obtained, and that, if the present paying mines should run out, the ratepayer will still be called upon to pay for the necessary public works. If Karangahake was formed into a borough, and the mines stopped—and gold mining, as we all know, is a big gamble— what a pitiable plight the place would be in. The rates would not pay office expenses.¹⁰⁷⁴

18 December

KARANGAHAKE.

Considerable attention has been paid during this week to shares in the Karangahake mine, which adjoins the Talisman Consolidated Company's property... Last night the manager brought to town samples of the stone... The stone is of excellent class and shows good dabs of coarse gold in white veins, which in some of the pieces go right through. This lode is practically a new find, and its size cannot be determined until more work has been done...¹⁰⁷⁵

30 December

CROWN MINES.

¹⁰⁷³ <https://paperspast.natlib.govt.nz/newspapers/AS19071210.2.6>

Auckland Star, Volume XXXVIII, Issue 294, 10 December 1907, Page 2

¹⁰⁷⁴ <https://paperspast.natlib.govt.nz/newspapers/OG19071213.2.16>

Ohinemuri Gazette, Volume XVII, Issue 2290, 13 December 1907, Page 2

¹⁰⁷⁵ <https://paperspast.natlib.govt.nz/newspapers/AS19071218.2.68>

Auckland Star, Volume XXXVIII, Issue 301, 18 December 1907, Page 7

It is expected that the new electrical plant will be put in hand shortly. The construction of the new water race through which the supply is to be drawn to operate the pumping plant is now well forward, and should be completed about April or May, of 1908.¹⁰⁷⁶

AJHR 1908

For the year 1907

MINES STATEMENT BY THE HON. JAMES McGOWAN, MINISTER OF MINES.¹⁰⁷⁷

Page 3

On the Karangahake Goldfield, the Talisman Consolidated Mine has been most successful, the production for the year constituting a record for this goldfield; £184,446 was obtained from 46,025 tons treated, at the high average value of £4 0s. 2d. per ton, and £75,000 was declared in dividends.

The features of the year on the Ohinemuri Goldfield have been the steadily, increasing bullion-producing powers of the Waihi and Talisman Mines, the result of enhanced ore values obtained from the development of the deepest levels, together with more complete extraction of the precious metals.

THE GOLDFIELDS OF NEW ZEALAND. (REPORT ON)

Mr. Frank Reed, M.Inst. M.E., Lic. Surveyor, Inspecting Engineer of Mines

to the Hon. James McGowan, Minister of Mines. Sir, — Mines Department, Wellington, 24th April, 1908. I have the honour to submit the annual reports of inspection, together with those of Wardens and other officers, accompanied by statistical information in regard to the goldfields and metalliferous mines of the Dominion, for the year ended 31st December, 1907.¹⁰⁷⁸

Page 5

The Talisman Consolidated (Limited) Mine is now the leading bullion-producing mine on the Karangahake Goldfield, and ranks second only to the Waihi Mine in this Dominion. A plan and section of this mine which accompany this report will serve to illustrate the magnitude of mining operations, and the engineering skill by which several small mines, which formerly were unsuccessfully worked as separate concerns, have now been consolidated and worked most profitably as one mine. The foregoing statistical tables show that during the past year there has been a substantial increase in production and value per ton of ore treated, likewise in dividends paid by this company. The feature of the year has been the exceptional richness of the ore in the lowest levels: at levels Nos. 11 and 12, Bonanza

¹⁰⁷⁶ <https://paperspast.natlib.govt.nz/newspapers/THS19071230.2.8.3>

Thames Star, Volume XLIV, Issue 10164, 30 December 1907, Page 1

¹⁰⁷⁷ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1908-I.2.2.2.4>

MINES STATEMENT BY THE HON. JAMES McGOWAN, MINISTER OF MINES., Appendix to the Journals of the House of Representatives, 1908 Session I, C-02

¹⁰⁷⁸ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1908-I.2.2.2.5>

THE GOLDFIELDS OF NEW ZEALAND. (REPORT ON), Appendix to the Journals of the House of Representatives, 1908 Session I, C-03

section, the rich sulphide-ore chute has been proved to extend much further southward than in the upper levels, where from a seam 2 in. or 3 in. in width it has strengthened rapidly in width and values; and in the No. 12 level it has been driven along for some hundreds of feet; at the No. 13 level, at a vertical depth of 1,700 ft. from the apex of the vein, this ore-shoot continues to be of exceptional richness, and a considerable quantity of it has been exported for special treatment on account of its refractory character. To enable the management to handle the increasing output from this mine, additional installations are being made to the power and treatment plant.

REPORTS OF INSPECTORS OF MINES.

Mr. Boyd Bennie, Inspector of Mines

Thames, to the Under-Secretary, Mines Department, Wellington. Sir,—
Inspector of Mines' Office, Thames, 28th March, 1908. I have the honour to furnish herewith my report on the gold-mining industry in the Hauraki Mining District, together with statistics, for the year ended the 31st December, 1907.

Page 16

Ohinemuri.

Talisman Consolidated (Limited). —In the mine at Nos. 11 (river-level) and 12 levels (200 ft.) the payable ore in the Bonanza section has been found to extend much further south than it did in the upper workings, and the values have also shown an improvement. In the bottom level, No. 13 (400 ft.), in the Southern section, ore of a very high grade has been met with, the richer portion of which is being bagged for shipment. During the coming year it is intended to continue vigorous development southward on Nos. 11, 12, and 13 levels, and as soon as the new power plant is available shaft-sinking will be resumed. A new power plant will also be installed, having sufficient capacity to supply all probable requirements. The past year has been the most profitable one the company has experienced, and the general appearance of the mine indicates that the present year should show equally favourable results. I regret to announce that one fatal accident happened at this mine, but through no carelessness or lack of precaution on the part of the management. For the year, 46,025 tons of ore were treated, for a value of £184,445, being a decrease in tonnage and an increase of £32,434. An average of 320 men were employed.

New Zealand Crown Mines (Limited). —The main shaft has been sunk a depth of 10 ft. only, making a depth of 46 ft. below No. 5 level (481 ft.) and 526 ft. below the Waitawheta Tunnel. On the No. 5 level a winze was sunk to a depth of 234 ft., when a stream of water was struck, which absorbed the surplus pumping-power, and sinking had to be suspended. The water flowing from the winze gave off a small volume of sulphuretted-hydrogen gas. The sinking of the main shaft was suspended pending the erection of machinery of efficient pumping capacity. No. 5 level (481 ft.), south of the main-incline shaft, has been extended a distance of 229 ft., making a total distance of 2,094 ft. driven from the shaft. During the extension of the drive a shoot of ore, 5 ft. in width and 120 ft. in length, was met with, carrying an assay-value of £6 per ton. A crosscut has been started from No. 5 level for the purpose of cutting the new reef, which is situated about 480 ft. east of the Crown lode. A distance of 128 ft. has been driven. In the upper workings the new reef yielded good

values, and should it make good values down below the Waitawheta level the crosscut will open up a large area of ground for stoping.

The New Reef section, Waitawheta level (river-level), south of the south-east crosscut, has been extended 405 ft., making the total distance driven from the crosscut 717 ft. 10 in. The average width of the reef was 1 ft. 1 in., and the average value of the ore £1 4s. 9d. per ton. No. 1 level (86 ft.), No. 2 level (155 ft.), No. 3 level (226 ft.), and No. 4 level (340 ft.), above the Waitawheta level, were extended for about the same distance (400 ft.), and the values ranged from £2 to £4 per ton. No. 1 rise has been extended, making a total height of 678 ft. above the Waitawheta level, and connected by a drive from the side of the Karangahake Mountain, considerably improving the ventilation in the New Reef section.

The company's water-race on the Ohinemuri River, which was destroyed in the early part of the year, is now being reconstructed, and the milling plant has been worked by steam. The mine was inspected on several occasions, and found to be in good order. An average of 160 men were employed. At the company's mill 22 072 tons of ore were treated, for a value of £57,242, showing a substantial increase over the previous year.

Comstock United. —This mine has not yet emerged from the prospecting stage. Early in the year a company was formed, and their attention has been directed to driving on a lode of considerable width, and, from samples of ore taken, it is said that there are sections carrying fair values. Considering the length of the drive, the ventilation, caused by a line of pipes and a water-tromp on the exhaust system, is very good. For upwards of thirteen years Mr. Tregoweth has held to the mine, spending an amount of capital and carrying out a great amount of prospecting. The mine, when inspected, was found in good order. An average of five men were employed.

Karangahake Gold-mining Company. —This company opened up a claim early in the year, and carried on mining operations most vigorously. Two levels were driven into the hill, with a view of cutting the Woodstock reef. When No. 1 level (70 ft. deep) had been driven a distance of 25 ft., a new leader was cut, and samples taken. Prospecting on the outcrop of the leader revealed some very rich specimens. A winze was then sunk for 15 ft. on the leader, at which depth stone showing gold freely was found. A low level—No. 2 (120 ft.) —has been commenced, the intention being to cut the leader at a depth. An average of seventeen men were employed.

Mr. Warden Bush. Thames

to the Under-Secretary, Mines Department, Wellington. Sir,— Warden's Office, Thames, 19th February, 1908. I have the honour to furnish the usual annual report on mining matters within the Hauraki Mining District.

Page 45

Karangahake. Considerable excitement was caused in this part of the field owing to a discovery of cinnabar. Several claims were taken up. It was established that the commodity existed to some extent, but the want of means has prevented anything being done to show whether the undertaking can be made, remunerative.

The Talisman Consolidated and the Crown Mines Company have been carrying on their operations vigorously. These companies are the main support

of this portion of the field, as they employ the bulk of the labour. The latter company is constructing a water-race, to cost £6,000, and their general manager is in England supervising the construction of electrical pumping machinery, which it is intended to erect to enable the management to cope with the increased water difficulty. It is expected that this plant will, in the course of the next few months, have reached New Zealand. As soon as it does, its installation will be undertaken.

The Ohinemuri River Claims have changed hands since the last report. These are claims taken up for the purpose of gathering up the tailings deposited in the river after passing through the batteries of mines. It is contended that these can be treated at a profit, and the new proprietors are about to make the attempt. Should the venture prove remunerative, it will furnish employment to several men. The industry is quite a new one on this field. The previous attempt proved unprofitable, a great deal of money being spent in a treatment plant, which did not turn out suitable for the purpose. The new owners, however, profess to be able to treat the tailings so as to make them profitable.[This will be the Waihi - Paeroa Gold-extraction Company]

Mr. R. R. Lloyd, Secretary to the Karangahake School of Mines

to the Under-Secretary, Mines Department, Wellington. Sir, — Karangahake, 4th March, 1908. It affords the Council great pleasure to present this, the ninth, annual report on the work done and the results obtained by the Karangahake School and Waikino School for the year ending 31st December, 1907.

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Attendance. The attendance for the year has remained about the same as the previous year. The average attendance per term was forty-one, taking an average of eighty-two classes, or two classes per student.

Examinations. At the annual examinations for mine and battery managers, held in January, 1907, two students sat for mine-managers, and both failed. One sat to complete as battery-manager and passed, having secured a partial pass the previous year. At the class examinations held in December last, fourteen students presented themselves, obtaining the following certificates: ten first, thirteen second, and thirteen third. In the practical examinations thirteen first-class certificates were obtained at Karangahake and two at Waikino. Three students also qualified for Customs certificates as bullion-assayers. The gold medal so generously donated by the President, Mr. C. H. Tresize, for the highest aggregate in four subjects was won by C. A. McCombie, who obtained an average of 70.4 per cent, in four subjects; W. Smith was second with 68.75 per cent. in four subjects. This scholar headed the list in these four subjects for the whole of the northern schools.

Electrical Class. This class has not been at all satisfactory during the year, owing to it being without an instructor for a great portion of the time, but with the installation of the dynamo, storage batteries, and additional apparatus, together with the services of Mr. H. Dodson, late of Ramsgate College and Hiram Maxim Laboratory, there is no doubt that the class will prove a success this year.

Additions, etc. During the year a dynamo and petrol-engine were imported from England, the installation of which is nearing completion. A 15-in. Y level and staff were imported from Messrs. W. and E. Gurley, New York. This is a splendid instrument, and will be a great boon to the surveying class, as also will the prismatic compass and Abney level procured for the same class.

The Hon. the Minister of Mines granted a subsidy of £2 to £1 up to an expenditure of £150 to procure the above, together with other appliances required for the schools.

There were also a number of useful works added to the library.

Branch School at Waikino. This was opened in the new building at the beginning of the year, and the attendance has certainly warranted this step. The classes have been under the control of Mr. Gibson, A.O.S.M., for the last six months.

School Scholarship. No student qualified for this during the year.

Auckland School. The Council view with pleasure the proposed erection of a mining school in connection with the Auckland University, and hope that some satisfactory arrangement will be arrived at whereby students from the goldfield schools can pursue their studies and take a degree without having to study dead languages.

Financial. The statement of accounts shows the total receipts for the year to have been £875 0s. 2d., whilst the expenditure was £834 1s. 10d., leaving a credit balance of £40 18s. 4d.

Thanks. The Council desires to thank the Hon. James McGowan, Minister of Mines, for his liberal assistance during the year; the Ohinemuri County Council and others, for donations; Mr. T. E. Ballard, for honorary services in auditing the books of the institution; and Mr. C. Banks, for conducting the drawing classes at Waikino.

General. The Council wish to put on record the appreciation of the work done by the Director and assistant during the year, and also to thank those gentlemen whose donations from year to year have helped the school to its present forward position.

I have, &c, R. R. Lloyd, Secretary.

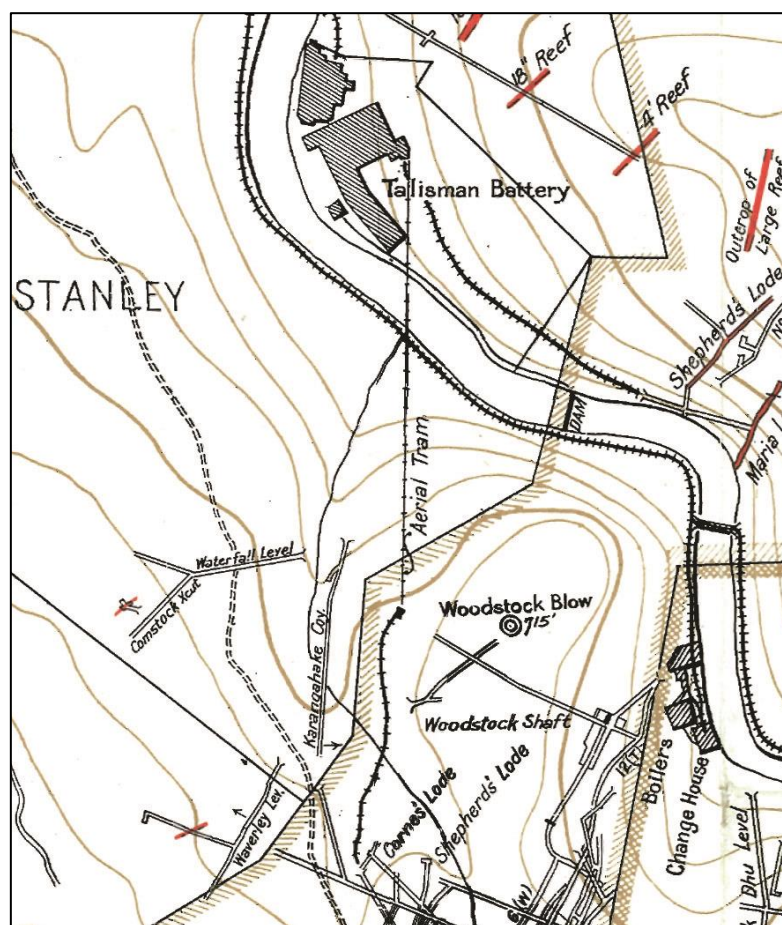
1908

9 January

MINE MANAGERS' REPORTS.

Karangahake: Mr. Ross has been appointed manager of the Karangahake mine and took charge on Monday. A contract has been let for an aerial tramway to take quartz from the upper workings to the low level, and this is expected to be completed in two weeks. Carpenters are at work erecting an office, and 12 men are working in the mine, while two men are excavating for a quartz paddock. It will be fully a week before we will be in a position to break any more quartz, but then something good should be reported.¹⁰⁷⁹

Where was this mine? What happens to these guys? Was the cableway ever built?



NZGS Bulletin 16 map, cropped

The map of the Karangahake area presented in the New Zealand Geological Survey Bulletin 16, 1913, shows a tunnel labelled “Karangahake Coy.” in the gully west of the Woodstock Blow (Plum Pudding). It seems likely that this tunnel belongs to this later Karangahake Company, rather than the first Karangahake Company.

It seems reasonable that a cableway would be a good choice. Was it built?

¹⁰⁷⁹ <https://paperspast.natlib.govt.nz/newspapers/NZH19080109.2.9>

New Zealand Herald, Volume XLV, Issue 13642, 9 January 1908, Page 3

10 January**WARDEN'S COURT.**

At the Warden's Court today applications were granted as follows:—...

New Zealand Crown Mines Gold Mining Company, Limited, protection for six months for Ravenswood, Ravenswood Extended, and Mammoth special claims...¹⁰⁸⁰

27 January

At Karangahake the Talisman Consolidated Company's mine is the leading bullion-producer, in fact, this valuable property ranks second only to the Waihi mine in point of gold output in the Ohinemuri district. In 1907 bullion worth £184,447 13s 1d was won from the Talisman mine, thus showing the substantial increase of £32,436 9s 6d over the preceding 12 months...

The feature of the Talisman has been the exceptional richness of a section of the ore in the low levels. From a band two or three inches in width at No. 11 level the rich ore has strengthened rapidly in width at greater depth...

Additions to the treatment plant are under consideration, and will, in all probability, be put in hand at an early date.

The New Zealand Crown Mines' property yielded bullion valued at £57,236 in 1907, as compared with £40,821 for 1906, and as the management intend entering on a more comprehensive and speedy system of underground development shortly the close of the present year should see a marked advance in the output. The superintendent, Mr. Daw, is at present in London consulting with the directors on the matters of detail in connection with the installation of a powerful electrical pumping plant for lifting the water from the mine to a depth of 1000 ft. and when this is installed, the water difficulty, which has hitherto proved a stumbling block, will be disposed of for many years to come...

It is also intended to commence development work at an early date on other lodes known to exist on the property, and there seems a very fair chance that before many months have elapsed holders of Crown scrip will handle a dividend, a pleasure that has been denied them for years.¹⁰⁸¹

31 January**KARANGAHAKE.**

Mr Richard Ross, mine manager, reports:—...The aerial wire rope tramway will be completed in a few days when all quartz from the winze, will be forwarded direct to the quartz. hopper at the low level.¹⁰⁸²

If the cableway was completed, which battery did they take ore to? Does it show in any photographs? The quartz hopper? Well maybe. A November report has them working on Taukani. The cableway could have been from there.

¹⁰⁸⁰ <https://paperspast.natlib.govt.nz/newspapers/NZH19080110.2.10>

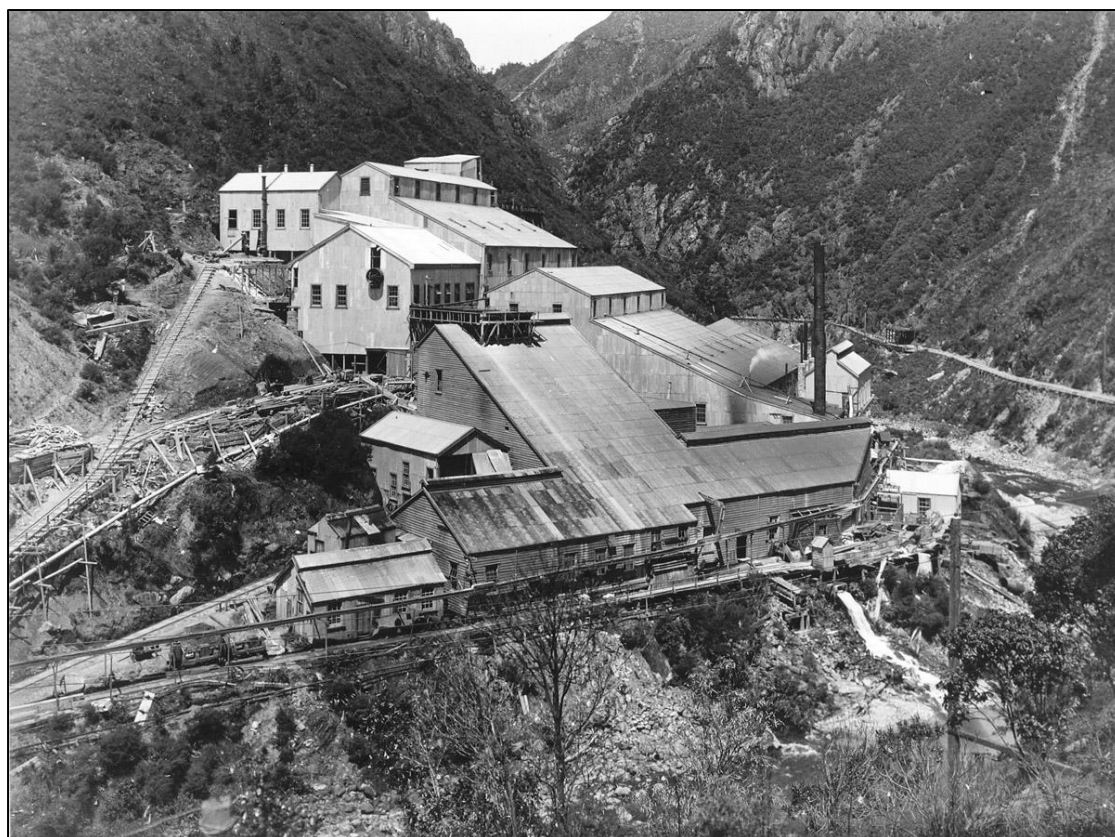
New Zealand Herald, Volume XLV, Issue 13643, 10 January 1908, Page 3

¹⁰⁸¹ <https://paperspast.natlib.govt.nz/newspapers/NZH19080127.2.96>

New Zealand Herald, Volume XLV, Issue 13657, 27 January 1908, Page 7

¹⁰⁸² <https://paperspast.natlib.govt.nz/newspapers/THS19080131.2.5.1>

Thames Star, Volume XLIV, Issue 10188, 31 January 1908, Page 1



Talisman Battery and buildings, 1909 Winkelmann W8409.

Photograph taken from the bank/headland above the Crown tramway.

At the right middle of the image can be seen the Crown tramway. On/above it is a substantial construction. Hoppers?

Staples Collection.

22 February

TALISMAN CONSOLIDATED. (By Telegraph.—Own Correspondent.)
WAIHI, this day.

The great advantage of the Waihi Company having a fitting-shop and foundry at Waikino has again been exemplified in the case of the Talisman Company. On Tuesday an intermediate shaft broke, and instead of a new shaft being cast at the Thames, as heretofore, arrangements were made with the Waihi Company, and a new steel shaft is now being turned.¹⁰⁸³

28 February

SILVER HILL.

The ground held by the recently-formed Silver Hill Gold Mining Company is situated in the Karangahake district, and comprises 75 acres. The property adjoins both the Talisman and Crown mines, the Talisman being on its south and east boundaries, and the Crown on its west to south lines [The other way round?]. The claim was first taken up by R. Stackpole, an old Karangahake miner, who handed it over to a syndicate about 15 months ago, since which time about £500 has been expended in development works. Operations were

¹⁰⁸³ <https://paperspast.natlib.govt.nz/newspapers/AS19080222.2.56>

Auckland Star, Volume XXXIX, Issue 46, 22 February 1908, Page 7

under the supervision of Stackpole, who opened up five ore bodies, one of which is said to be from 20ft to 25ft wide, and composed of bands of promising-looking ore, assaying from £2 to £25 per ton...¹⁰⁸⁴

6 March

PAEROA WARDEN'S COURT. (by telegraph. Own correspondent.) Paeroa, Thursday.

At the Warden's Court yesterday applications were granted as follows : —G. W. Nicholls, Union Jack special claim of 90 acres, at Karangahake; G. W. Nicholls, General Kitcheners special claim of 89 acres, at Karangahake; G. W. Nicholls, City of Auckland special claim of 52 acres, at Karangahake; Robert Stackpole, permission to work Silver Hill special claim, at Karangahake, with six men for six months; W. Gray, protection for six months for Crown North special claim at Karangahake.¹⁰⁸⁵

28 March

THE TALISMAN. The directors of the Talisman mine have declared a dividend of 1/- per share, payable on April 25, on all shares on the register on April 6, and the transfer books of the company will be closed from April 15 to April 25, both days inclusive. The £15,000 thus set apart for reimbursement to shareholders will bring the amount so reimbursed since the reconstruction of the company to £195,000. More than two-thirds of the 300,000 shares in the company are now held by shareholders on the colonial register, the actual holding here, according to the latest available figures, being 221,000, so that of the £15,000 to be distributed £11,050 will go to colonial shareholders.¹⁰⁸⁶

8 May

The usual monthly meeting of the Ohinemuri County Council was held this afternoon, Mr. W. G. Nicholls presiding. Tenders were accepted as follows: — ...for the supply, and erection of a firebell tower in Karangahake, W. C. Kennedy, £59 18s.¹⁰⁸⁷

Firebell to be erected

27 May

NEW ZEALAND CROWN MINES.

INSTALLATION OF NEW ELECTRIC PLANT.

GENERAL MANAGER'S MISSION HOME. DESCRIPTION OF THE PLANT. DEVELOPMENT WORKS IN PROGRESS. (By Telegraph—Own Correspondent) WAIHI, this day.

¹⁰⁸⁴ <https://paperspast.natlib.govt.nz/newspapers/NZH19080228.2.7>

New Zealand Herald, Volume XLV, Issue 13685, 28 February 1908, Page 3

¹⁰⁸⁵ <https://paperspast.natlib.govt.nz/newspapers/NZH19080306.2.9>

New Zealand Herald, Volume XLV, Issue 13691, 6 March 1908, Page 3

¹⁰⁸⁶ <https://paperspast.natlib.govt.nz/newspapers/AS19080328.2.55>

Auckland Star, Volume XXXIX, Issue 76, 28 March 1908, Page 7

¹⁰⁸⁷ <https://paperspast.natlib.govt.nz/newspapers/NZH19080508.2.98.3>

New Zealand Herald, Volume XLV, Issue 13744, 8 May 1908, Page 7

A big scheme of operations has now been entered upon for the development of the lower areas of the New Zealand Crown mines at Karangahake, a most important portion of the scheme being the decision of the directors to instal a new electric plant capable of providing power for both mine and battery. As already known to readers of the "Star," Mr. F. R. W. Daw, general manager, recently paid a flying visit to the Old Country to discuss the scheme of future operations with his Board of Directors, and also to consult with them regarding the purchase of an electric pumping plant for the unwatering of the mine to a depth of 1,000 feet, below the Waitawhite tunnel.

Mr. Daw returned to Karangahake a couple of weeks ago, and I understand that his mission was very successful in that complete arrangements were made for a plant, which, he holds, will be of the very latest pattern and second to none in the Dominion for efficacy combined with economy.

The plant recommended by Mr. Daw is capable of pumping 1,135 gallons of water per minute from a depth of 1,000 feet. This plant, arranged for by Mr. Daw, is, it may be stated, patterned on the same lines as that suggested by him in 1897, but could not then be undertaken, owing to the difficulty in obtaining guarantees as to the efficiency from manufacturers; consequently a small air plant was installed instead. The great strides made in the construction of electric pumping plants during the past eight years, however, enables manufacturers now to comply with the requirements as to guarantee of efficiency and permanency in construction; and therefore the style of plant agreed upon was one of the first considerations. Mr. Daw informed me that his directors gave him the assistance of Mr. H. F. Parshall, a consulting engineer of high standing, and who, it may be stated, is consulting engineer for the electric plant installed in connection with the Central Tube railway of London. Mr. Daw also had the assistance of Mr. Parshall's assistant, Mr. Perry, who was assistant to Lord Kelvin for a number of years. Consequently, it will be seen that every effort has been made to secure in construction the very best obtainable, and Mr. Daw expresses himself as being very pleased with the valuable suggestions and improvements made in his general scheme by those able electrical engineering experts.

The machinery will consist of a large electric three-phase generator of 550 kilowatts, 25 periods, working at 300 revolutions per minute. This generator will be worked by a Francis turbine [a water turbine, to use water from the Ohinemuri water race], manufactured by Eisher [Eicher?] Viess and Co., the turbine to be assisted by a triple expansion steam engine now being manufactured by Beiless [Belliss] and Morcam¹⁰⁸⁸ The overhead transmission to the mine will consist of three stranded conductors, each conductor being about ½-inch diameter. At the mine it will be connected up to a panel, and a three-core insulated cable. This cable will be connected to suitable resistances, and to the motors driving the pumps. Each motor will be capable of developing sufficient power for the pumps as already indicated, to lift 1,135 gallons of water per minute from a depth of 1,000 feet.

One of these pumps will be erected at the No. 5 level, and the other at 1000 feet, when the shaft is sunk to that depth, or, in other words, the water will be lifted in two stages. The pumps will be of the four throw type, and are so

¹⁰⁸⁸ Video: <https://youtu.be/KOlhVVmb9pU>

designed that each pump can be put to lift either 1135 gallons, 567 gallons, or 283 gallons per minute, according to requirements. The pump is also regulated for further intermediate quantities of water to those mentioned, a bye-pass valve being used in the operation.

This splendid plant is now being manufactured in England, and, with a view to making sure of the efficiency of each part, every portion is subjected to a most rigid examination before being dispatched to New Zealand. When erected, it will be so arranged that no expense will be incurred in the handling of coal, whilst the steam consumption will not exceed 15 pounds per indicated horse power per hour. It has been estimated that there is ample water supply in the Ohinemuri river for the driving of this plant, about 200 days of the year, and during the remaining 166 days the plant will be assisted by steam power, so that, from the above, it will be seen that every effort has been made to economise, consistent with efficiency. Another great feature, showing the immense studies made in modern machinery, is that this great plant is mounted on wheels, so that in the event of accident to can be immediately hauled up the shaft out of danger.¹⁰⁸⁹

29 May

Karangahake Items. NEWS AND JOTTINGS.

(From Our Own Correspondent.)

A Large Slip.— The heavy rain which has been falling for the past few days, has again caused considerable damage to the Crown water-race and the tramline. During the last two days huge, quantities of earth fell, and has blocked the line, so that the battery is left without crushing dirt. A staff of men are busily engaged in clearing the slip.¹⁰⁹⁰

19 June

MINING NEWS. CROWN MINES. IMPROVED PROSPECTS.

Recent development works in the Crown Mines at Karangahake have proved most encouraging, and there appears every reason to look forward to a decided improvement in the near future. At the present lowest workings the crosscut projected in a south-easterly direction to intersect the new reef (frequently referred to as Lloyd's) picked up the ore body a day or two since...

...On the occasion of the superintendent's recent visit to England, all details in connection with the up-to-date electrical plant for the generation of power to unwater the mine to a depth of 1000 ft were completed, and the necessary machinery ordered. The scheme is a very thorough and comprehensive one, and, coupled with high efficiency, the plant will be operated at a minimum of cost.¹⁰⁹¹

WARDEN'S COURT.

¹⁰⁸⁹ <https://paperspast.natlib.govt.nz/newspapers/AS19080527.2.94>

Auckland Star, Volume XXXIX, Issue 126, 27 May 1908, Page 8

¹⁰⁹⁰ <https://paperspast.natlib.govt.nz/newspapers/THS19080529.2.4>

Thames Star, Volume XLIV, Issue 10337, 29 May 1908, Page 1

¹⁰⁹¹ <https://paperspast.natlib.govt.nz/newspapers/NZH19080619.2.11>

New Zealand Herald, Volume XLV, Issue 13780, 19 June 1908, Page 3

THURSDAY, JUNE 18th, 1908.

The following applications were recommended to the Minister: —N. Z. Crown Mines Co, protection for twelve months for three water races at Karangahake; Talisman Consolidated Ltd., protection for six months for Adeline Reefs and Imperial special claim at Karangahake.¹⁰⁹²

Three water races: flumes from Ohinemuri for the battery, and Waitawheta for the air compressor, and pipe taking discharge water from the compressor pelton wheel to the battery to run the ore lift incline?

3 July

KARANGAHAKE BAND.

BAND ROTUNDA WANTED.

The following letter from the secretary of the Karangahake Brass Band was read at yesterday's meeting of the Ohinemuri County Council:—"I have been instructed by the Karangahake Brass Band Committee to ask if your Council could see its way clear to erect a band rotunda in Karangahake, say a little south of the new firebell. If the band had something it could play in, they would be out more often. Saturday nights and Sundays we could play there and have a good crowd. We often went to Mackaytown on a Sunday, but it is too far every Sunday when we want to go out, and if we had this rotunda in town it would be a good help to the band, and an ornament for Karangahake."

Mr Marrinan said that as most of the revenue came from Karangahake it would be only just for the Council to give some subsidy towards this object.

The Chairman: Could they not make use of the firebell?

Mr Marrinan: They might get too lofty if they did that. (Laughter). He moved that the band get some assistance in this matter.

The Chairman: You will be establishing a precedent if you do.

Mr Marrinan: I am not establishing anything at all...¹⁰⁹³

8th of May the tender for the erection of the firebell was accepted, now July it appears to exist. Therefore constructed May or June 1908.

13 July

FATAL MINING EXPLOSION. TWO MEN KILLED. ACCIDENT AT KARANGAHAKE.

(BY TELEGRAPH.OWN CORRESPONDENT.) Waihi, Saturday.

A fatal accident, involving the loss of two lives, occurred during last night in the Talisman Consolidated Company's mine at Karangahake.

The victims were John Chester (married) and Charles Lewis (single), both of whom were contractors in the mine, and engaged in advancing one of the low-level drives.

The men were on the afternoon shift, and the accident must therefore have occurred some time between four and 11.30 p.m., as the bodies were found

¹⁰⁹² <https://paperspast.natlib.govt.nz/newspapers/OG19080619.2.23>

Ohinemuri Gazette, Volume XVIV, Issue 2364, 19 June 1908, Page 4

¹⁰⁹³ <https://paperspast.natlib.govt.nz/newspapers/OG19080703.2.13>

Ohinemuri Gazette, Volume XVIV, Issue 2370, 3 July 1908, Page 2

lying on the floor of the drive at the latter hour by a member of the contract party named McCarron, who was going on shift at midnight to relieve the men.

Chester was then still alive, but unconscious. He was conveyed to the Tramway Hotel, where he expired about three hours later, without having regained consciousness. Lewis was dead, and had apparently been killed instantaneously.

From the position of the bodies the assumption is that the accident was due either to the premature explosion of a hole being fired in the face of the drive, or by the men returning to a hole which had missed fire and exploded just after they had got back to the face.

The evidence points to their having been in the act of leaving the face when the explosion occurred, as Lewis was injured on the back of the skull, apparently having been struck by a piece of flying quartz.

The matter has been reported to the District Coroner (Mr. Forrest), who will hold an inquiry into the circumstances surrounding the death of the unfortunate men.¹⁰⁹⁴

17 July

A meeting of the Ohinemuri County Council was held this afternoon...

The engineer reported that the cost of a band rotunda at Karangahake would be £125, and it was decided to proceed with the work.¹⁰⁹⁵

KARANGAHAKE BAND.

COUNCIL TO BUILD A ROTUNDA

At the meeting of the Ohinemuri County Council yesterday the following paragraph appeared in the engineer's report:—"I was instructed at last meeting of the Council to give an estimate for the erection of a band rotunda for Karangahake. To build a rotunda where proposed would cost £125 10s. In my opinion this rotunda is a thing very much needed in Karangahake, and would be greatly appreciated, by the residents."

Mr Marrinan said he was satisfied that if the members "looked at things straight" they would see that they ought to erect a rotunda in Karangahake. If they looked around Paeroa they would see all the money that was being spent, and of the thousands and thousands of pounds spent in Paeroa whose money was it?

The Chairman: There is no necessity to talk like that. Move that the thing be done.

Mr Marrinan: I only want what's right. I move that the engineer's recommendation be carried out. If you don't do it, I will hold forth for an hour.

Mr Trezise seconded the motion.

¹⁰⁹⁴ <https://paperspast.natlib.govt.nz/newspapers/NZH19080713.2.21>

New Zealand Herald, Volume XLV, Issue 13800, 13 July 1908, Page 5

¹⁰⁹⁵ <https://paperspast.natlib.govt.nz/newspapers/NZH19080717.2.96>

New Zealand Herald, Volume XLV, Issue 13804, 17 July 1908, Page 8

Mr Strange said that in the face of the many roads that were wanted the Council had no right to spend the money on a band rotunda, so he would oppose the motion.

Mr Corbett said he was opposed to the Council finding all the money to erect the rotunda. He would not mind so much helping if those interested would subsidise the amount.

Mr Trezise: Well, I will put the matter in as few words as possible. If you don't grant this you are going to "kill the goose that lays the golden eggs." That's what you will do.

Mr Marrinan: Mr Strange does no object to a couple of hundred pound being spent in his own locality. We are only asking for a mere £100 for Karangahake. It is no use asking the band for money, for I am satisfied they haven't got a penny. They have nowhere to play except at Mackaytown and that is too far to go. The Council ought to spend this few paltry pounds. We are not begging the question; we ask it as a right, and it is up to the Council to do something for Karangahake.

Mr Crosby: I don't quite agree with Mr Marrinan.

Mr Marrinan: I don't want you to.

Mr Crosby: Mr Marrinan only thinks about the gold duty; he doesn't think of the settlers who have to pay rates, I am agreeable to give them a subsidy of, say, £50. Mr Marrinan is all the time harping on the gold revenue; he doesn't trouble about the poor settlers who have to work—not like Mr Marrinan.

Mr Marrinan: I am glad to hear that Mr Crosby works. It is no use talking about the ratepayers; the rates won't pay the office expenses.

Mr Crosby moved, as an amendment, that the Council subsidise the amount provided by the band £1 for £1. He considered that that would be very reasonable.

Mr Marrinan said the band had nothing to subsidise. It was no use talking about a subsidy, as the band was now trying to clear off its present debt.

Mr Corbett seconded the amendment, and said he thought it was more than reasonable. The amendment was then put to the meeting and was lost, the voting being: Ayes, Messrs Crosby, Corbett, and Strange; noes, Messrs Trezise, Marrinan, Franklin, and Grace. The motion, that the rotunda be erected by the Council, was then put to the meeting and was carried.¹⁰⁹⁶

18 July

Karangahake Items.

Band Rotunda.— It understand that at the last meeting of the Ohinemuri County Council the question of the erection of a band Rotunda in Karangahake was discussed at length, and it was decided to erect a rotunda, to cost £125. This, I understand, will be erected in the main street, alongside the new firebell tower.¹⁰⁹⁷

¹⁰⁹⁶ <https://paperspast.natlib.govt.nz/newspapers/OG19080717.2.19>

Ohinemuri Gazette, Volume XVIV, Issue 2376, 17 July 1908, Page 3

¹⁰⁹⁷ <https://paperspast.natlib.govt.nz/newspapers/THS19080718.2.7>

Thames Star, Volume XLIV, Issue 10469, 18 July 1908, Page 1

TALISMAN CONSOLIDATED. PUMPING OPERATIONS. Waihi, Friday.
The deeper areas of the Talisman Consolidated mine at Karangahake continue to open up satisfactorily...

The new pump at No. 13 level is now on its foundation, and, as the air pipe and pump column are now being put in, the pump will shortly be ready to lift the water from No. 13 level.¹⁰⁹⁸

29 July

CROWN. CLOSING DOWN OF LOW LEVELS Waihi, Tuesday.

It is reported that the management intend discontinuing development works below No. 3 level, pending the installation of the new electrical plant ordered during the recent visit of the superintendent (Mr. Daw) to England. The plant will not be in position for several months, but once installed the management will be able to easily cope with the water difficulty, and to thoroughly exploit the deeper areas.¹⁰⁹⁹

3 August

THE KARANGAHAKE BOROUGH. THE AMENDED APPLICATION

"...The area is now reduced from 5680 acres to 2185 acres, excluding as far as possible mining areas. The western boundary as far as Raratu township, is unaltered. From that point the boundary is extended to the southern portion of Crown mines section, and thence to junction of Rahu and Main Road, so that the area may include the Hill Road with dwellings, the inclusion of such road being of vital importance to mining companies, viz., Talisman, Crown, Silver Hill, and others, and road requires constant supervision and attention, which it does not receive. Also, this portion includes a water supply, which is essential for fire-prevention and other purposes. From this junction the boundary proceeds to water reserve, and thence direct to starting point, including residence sites only facing the Rahu Road. The residents of this area, numbering over 2000, are still in urgent need of attention, which only a Borough can provide. The want of a drainage scheme and the want of a sanitary system are responsible for the continual visits of Health Inspector Franklin from Thames, 30 miles distant, who is continually demanding reform. The road by Doherty's Creek, connecting Rahu Road and Karangahake, some five chains in length, although under repair for twelve months, is dangerous and of no use for regular traffic. Our main street is blocked night after night with empty carts. Absence of light after dark on our roads and streets is the cause of continual accidents to miners going to and from their work at mines and batteries, and although our present governing body has now started works of surface drainage and repaired a length of footpath, yet the works are of little use for want of a regular system, no one work being actually completed. Our roads and footpaths are still in a deplorable condition, causing many accidents to men and women. Therefore, your petitioners request redress by proclamation of a Borough, having been

¹⁰⁹⁸ <https://paperspast.natlib.govt.nz/newspapers/NZH19080718.2.8>

New Zealand Herald, Volume XLV, Issue 13805, 18 July 1908, Page 3

¹⁰⁹⁹ <https://paperspast.natlib.govt.nz/newspapers/NZH19080729.2.13>

New Zealand Herald, Volume XLV, Issue 13814, 29 July 1908, Page 5

assured by the Prime Minister of the dominion that if our position is legal we have every right to local government."¹¹⁰⁰

4 August

Karangahake Items.

—Crown Mine.—

...that the pumps in the Crown mine were to be lifted from the bottom level, No. 5 to No. 3 level. Since I have made careful enquiries and find that the superintendent (Mr Daw) has decided to have the pumps taken up to No 3, which work will be commenced forthwith and the levels allowed to fill up. There is a rumour also that it is quite probable that the pumps are to be lifted right up to the surface. If this be true, and the water allowed to rise in the shaft, stopes, and levels it means a serious thing to our town, as already there are quite a number out of employment, both from the Talisman and Crown mines.¹¹⁰¹

17 August

The Ohinemuri Gazette. MONDAY, AUGUST 17, 1908. LOCAL AND GENERAL.

The Ohinemuri County Council invites tenders for the erection of a bridge over the Ohinemuri River at the Waitawheta crossing, for the erection of a band rotunda at Karangahake, and for the formation of a footpath and the erection of a fence at Karangahake. Tenders close at two o'clock on Thursday, 3rd September.¹¹⁰²

21 August

THE TALISMAN MINE.

WORKINGS BEING FLOODED

Owing to the action of the Crown Company in stopping pumping operations, the lower levels of the Talisman mine at Karangahake have been flooded, and some of the men have been obliged to cease work. It is expected that the company will be able to cope with the water shortly, as it is getting powerful machinery out from the Old Country.¹¹⁰³

25 August

—Mr Daw and the Crown Contractors—

On Saturday evening last a packed meeting of miners was held in the Miners' Union Hall to consider the advisability of signing a document attached to the usual specifications. Mr J. McGregor presided. The document in question was

¹¹⁰⁰ <https://paperspast.natlib.govt.nz/newspapers/OG19080803.2.12>

Ohinemuri Gazette, Volume XVIV, Issue 2383, 3 August 1908, Page 2

¹¹⁰¹ <https://paperspast.natlib.govt.nz/newspapers/THS19080804.2.3>

Thames Star, Volume XLIV, Issue 10482, 4 August 1908, Page 1

¹¹⁰² <https://paperspast.natlib.govt.nz/newspapers/OG19080817.2.6>

Ohinemuri Gazette, Volume XVIV, Issue 2388, 17 August 1908, Page 2

¹¹⁰³ <https://paperspast.natlib.govt.nz/newspapers/OG19080821.2.9>

Ohinemuri Gazette, Volume XVIV, Issue 2390, 21 August 1908, Page 2

one drawn up by Mr Daw, in which he asks the men to sign giving the company authority to retain from time to time the insurance money. This the contractors refused point blank to do, pending a meeting to go into the matter...

The question naturally arises, is it legal for Mr Daw or any other mining authority to retain from the contractors at the present time any moneys for insurance. The contractors in this mine are indeed very indignant at the stand taken up by the superintendent...¹¹⁰⁴

26 August

THE WATER DIFFICULTY. QUESTION IN THE HOUSE. (BY TELEGRAPH. — SPECIAL CORRESPONDENT.) Wellington, Tuesday.

In the House this afternoon Mr. Poland asked the Minister for Mines if he was aware that 100 men had been rendered idle at Karangahake through the action of the Crown Mines Company in closing down their pump and thereby flooding the Talisman mine, throwing the men named out of work. Mr. Poland asked the Minister to make inquiries into the position. It seemed, he said, a serious matter that the mine should be flooded in this way.

The Minister replied that he only had the usual newspaper information that some trouble had arisen. He had no information as to the number thrown idle, but he would make inquiries into the matter and see what could be done.

"As far as I know, there is no possible chance of the men being turned off," remarked Mr. A. Hanna, one of the local attorneys for the mine, when questioned by a Herald representative last evening regarding the above telegram. Mr. Hanna went on to say that the development work in connection with the mine would be proceeded with as usual, despite the presence of water at No. 13 level. Mr. Moreing, managing partner for Australia, of the firm of Bewick, Moreing, and Co., of London, and engineers to the Talisman Company, was expected to arrive here in about a week's time from Sydney with a deep-sinker pump, which will be installed in the Woodstock shaft, and this is expected to efficiently cope with the water trouble.¹¹⁰⁵

31 August

MINERS AND INSURANCE.

WHO SHOULD PAY? By Telegraph.—Own Correspondent. WAIHI, this day.

Some friction has occurred between mine management of the Crown Mines Company, Karangahake, and the miners, owing to the former asking the men to sign a petition indemnifying the company against accident insurance.

It appears that in the past the amount of the insurance premiums has been deducted from the earnings of the men and recently the Prime Minister, when interviewed, promised to have the Act amended so that the Company would be responsible. Matters have now reached an acute stage, and an important

¹¹⁰⁴ <https://paperspast.natlib.govt.nz/newspapers/THS19080825.2.39>

Thames Star, Volume XLIV, Issue 10460, 25 August 1908, Page 4

¹¹⁰⁵ <https://paperspast.natlib.govt.nz/newspapers/NZH19080826.2.14>

New Zealand Herald, Volume XLV, Issue 13838, 26 August 1908, Page 5

meeting of the union on Saturday night decided not to accede to the request of the management. It is hoped that the question will be satisfactorily settled.

A rumour was current here to-day that all works at the Crown mine had been closed down, but this was not correct.¹¹⁰⁶

FIRE AT KARANGAHAKE

ORIGIN A MYSTERY. At about 9 p.m. on Friday the firebell gave an alarm of fire, and it was discovered that a four-roomed house at the back of Inglis' hotel was ablaze. The brigade were soon on the spot, but the fire had too big a hold for them to prevent its destruction. The house, which is an old one, is owned by Mr W. H. Scott, of Hikutaia, and is insured for £70. The house was occupied by Mr William Moran, a miner, and there was no insurance on the furniture, so that he will be a heavy loser, as nearly everything was destroyed. Only a sewing machine and a few other articles were saved. Mrs Moran and children were away at the time spending a holiday at Waihi with her mother, Mrs James Walsh. The fire is a mystery, as since Mrs Moran has been away her husband has only been sleeping at home, having his meals out. At the time of the occurrence Mr Moran was down town, so that the origin of the fire is a mystery.¹¹⁰⁷

3 September

THE GOLDFIELDS.

NZ CROWN MINES TROUBLE. ACTION TO BE TAKEN. STATEMENTS BY MINISTERS. (By Telegraph.—Own Correspondent.) Wellington this day.

A private message was received by a member of the House of Representatives last night to the effect that the Crown mine at Karangahake had closed down, in accord with the reported threat of the manager that he would cease mining operations unless the company's conditions regarding insurance were complied with...

...The Hon. J. A. Millar, Minister for Labour, when approached upon the subject, said that he had received no official intimation that the Crown mine was closing down. He was in a position to state, however, that proceedings were to be instituted against the Crown Mines Company for committing a breach of the laws in forcing the men to protect themselves outside, contrary to the provisions of the Workers' Compensation Act.

The Minister for Labour added that he had so far received no official notification of the Crown Company closing down the mine, because the men refused to agree to their proposals regarding the accident insurance premiums.

"Would such action be treated as a lock-out?" the Minister was asked.

"The circumstances of the case, as reported, would certainly constitute a lockout, if true," Mr. Millar replied; "but until there is some official notification of the actual proceedings, it is impossible to say what must happen."¹¹⁰⁸

¹¹⁰⁶ <https://paperspast.natlib.govt.nz/newspapers/AS19080831.2.55>

Auckland Star, Volume XXXIX, Issue 208, 31 August 1908, Page 5

¹¹⁰⁷ <https://paperspast.natlib.govt.nz/newspapers/OG19080831.2.15>

Ohinemuri Gazette, Volume XXIV, Issue 2393, 31 August 1908, Page 2

¹¹⁰⁸ <https://paperspast.natlib.govt.nz/newspapers/AS19080903.2.70>

4 September

The Karangahake Miners

Crown Mine Closed. Proposed Action Against Company.

Special to the Daily Telegraph. KARANGAHAKE, this day.

The position at the Crown mine is the same, and the mine is closed down.

Particulars have been furnished to Mr. Poland, member for Ohinemuri, with a view to taking action against the company for a lock-out.

Owing to the contractors in the Crown mine ceasing operations on Monday last a large number of miners are out of employment. The town presents quite a lively appearance, as those who are idle can be seen all over the main street in little groups talking over the situation and the probability as to how long the present state of affairs will continue. In consequence of so many hands being idle, and many having left here, the business people are wearing a worried look, but those of a more optimistic frame of mind consider that the present slight depression prevailing will soon pass away, and that the future of Karangahake as a gold producer will be brighter than before.¹¹⁰⁹

OHINEMURI COUNTY COUNCIL.

Paeroa, Thursday.

The monthly meeting of the Ohinemuri County Council was held this afternoon. Tenders were accepted as follows:—Erection of a band rotunda at Karangahake, W. H. Taylor, £134; erection of a bridge over the Ohinemuri River at Waitawheta crossing, W. C. Kennedy, £1274...

The Council agreed to lay on a water supply to the Karangahake School of Mines for the purpose of driving a Pelton wheel.

It was decided to again urge upon the Railway Department the necessity for a warning signal at the mouth of the railway tunnel at Karangahake...¹¹¹⁰

The rotunda is built this year? In early March 1909 the band are asking for lights to be installed.¹¹¹¹

It is removed to Paeroa in 1921.

5 September

N.Z. CROWN MINES. MINISTER INTERVIEWED. (By Telegraph.-Own Correspondent) WELLINGTON, this day.

The Hon. J. McGowan, when interviewed regarding the complication arising on the Crown Mine closing down, and thereby causing the water to rise in Talisman Consolidated mine, stated that, while he was extremely sorry the difficulty should have arisen, it is not a matter in which he can intervene. The trouble is one which the Crown and Talisman companies must settle between themselves. Consequent upon a question raised in Parliament by Mr. Hugh

Auckland Star, Volume XXXIX, Issue 211, 3 September 1908, Page 6

¹¹⁰⁹ <https://paperspast.natlib.govt.nz/newspapers/WHDT19080904.2.28>

Waihi Daily Telegraph, Volume VIII, Issue 2343, 4 September 1908, Page 3

¹¹¹⁰ <https://paperspast.natlib.govt.nz/newspapers/NZH19080904.2.65>

New Zealand Herald, Volume XLV, Issue 13846, 4 September 1908, Page 6

¹¹¹¹ <https://paperspast.natlib.govt.nz/newspapers/OG19090305.2.9>

Ohinemuri Gazette, Volume XX, Issue 2468, 5 March 1909, Page 2

Poland, the Minister had a report prepared dealing with the matter. This report showed that on August 28th the water in the Talisman shaft was 100 ft below No. 12 level, and pumps were in readiness 40 feet above this point to work as soon as the water reached that part. It is presumed that this pump will keep No. 12 level clear of water. Two years ago the water was rising to No. 13 level, but did not affect the workings in the bottom of the shaft in the Crown mine, which was at the same depth as now. At that time, 450 ft below the level known as the Woodstock No. 5 level, water was held in check at the No. 12 level, and the pump then in use in the Talisman mine was capable of raising 100 gallons per minute, while the pump now in use will raise 230 gallons per minute, so everything will be done to keep the water from rising above the No. 12 level. At present, the Minister declares, it is impossible to say what success will be achieved, and if; No. 12 level fails to keep the water back a large number of men must be thrown out of employment.¹¹¹²

9 September

THE GOLDFIELDS.

TALISMAN CONSOLIDATED. THE BEST RETURN TO DATE. £24,467 FROM 3625 TONS.

The return from the Talisman Consolidated mine for the past month was an excellent one, constituting a record for that company. The quantity of ore treated was 3625 tons, and from this, bullion to the value of £24,467 was obtained. This is a great improvement, as, although 560 tons less of ore were treated this month, as compared with the previous one, still, the return showed an increase of £6448. This is reported by the Superintendent to be due to the fact that ore of unusually high grade was won from the stopes during the past month. Owing to the water trouble at the low level, the returns during the next few months must diminish somewhat, and are liable to fluctuation They will probably be about £15,000 monthly.

(By Telegraph.—Own Correspondent.) The water in the Talisman mine is still rising. In view of the annual inspection the battery ceased work yesterday, but resumes again this morning.

N.Z. CROWN. WAIHI, this day.

So far, there is no change in the position of affairs at the Crown mines. The Miners' Union is determined to hold out and states that the men will not go back to work under the conditions of insurance as required by Mr Daw. Mr Lomas (Chief Inspector of Awards) is to make personal investigation at Karangahake...¹¹¹³

18 September

CONTRACT OR PIECE WORK?

CHARGES AGAINST CROWN COMPANY.

THE INSURANCE QUESTION.

¹¹¹² <https://paperspast.natlib.govt.nz/newspapers/AS19080905.2.42>

Auckland Star, Volume XXXIX, Issue 213, 5 September 1908, Page 6

¹¹¹³ <https://paperspast.natlib.govt.nz/newspapers/AS19080909.2.16>

Auckland Star, Volume XXXIX, Issue 216, 9 September 1908, Page 3

At the Warden's Court at Paeroa yesterday, the New Zealand Crown Mines Company was charged with taking or receiving money by way of deduction from wages from certain workers in respect of a policy of insurance against injury by accident. There were three charges, the informant being James Shanaghan, Inspector of Factories. The charges were laid under the "Wages Protection Act, 1899."¹¹¹⁴

The details are not further explored here; check out the article if you wish.

24 September

MINING NEWS. TALISMAN.

The water rising from No. 13 level in the Talisman mine has reached the point at which the two pumps installed at No. 12 level are available. So far one of the pumps has held the water without the slightest difficulty. In view of the slow rate at which it has been rising during the past few days it is anticipated that no trouble will be experienced in keeping the water below the No. 12 level.¹¹¹⁵

9 October

INSURANCE PREMIUMS.

WHO SHOULD PAY THEM?

CHARGES AGAINST THE CROWN COMPANY

Mr J. F. Burgess, Warden, gave judgment at the Warden's Court at Paeroa yesterday in the cases in which the New Zealand Crown Mines Company was charged by the Inspector of Factories with taking or receiving money by way of deduction from wages from certain workers in respect of a policy of insurance against injury by accident. The judgment was as follows :—

It is admitted or proved that the defendant company on the date named on the information deducted from the moneys payable to John McGregor the sum of 11s 6d, being his proportion of the insurance policy taken out by the company to cover his liability to pay compensation for accident or injury happening to workmen employed by him in the company's mine; the said John McGregor being regarded by both parties as a contractor liable under section 15 of "The Workers Compensation for Accidents. Act, 1900," to pay such compensation. It is also clear from an examination of the figures on the pay sheets submitted, that a deduction, assessed on the total earnings of the contractor, has been made, which necessarily includes not only an assessment on the amount of wages earned by his workmen, but on the money accruing to him as his net profit on the undertaking; so that he has been made to provide the funds for the insurance of the company against the risk of accident to himself.....

If I am right in my opinion that McGregor was not a worker, then he does not come within the operation of section 3 of "The Wages Protection Act," and the company is not liable for retaining his money either for the insurance of his workmen or for his personal insurance. No doubt the stoppage of money by

¹¹¹⁴ <https://paperspast.natlib.govt.nz/newspapers/OG19080918.2.14>

Ohinemuri Gazette, Volume XVIV, Issue 2401, 18 September 1908, Page 2

¹¹¹⁵ <https://paperspast.natlib.govt.nz/newspapers/NZH19080924.2.7>

New Zealand Herald, Volume XLV, Issue 13863, 24 September 1908, Page 3

the employer for an insurance in respect of the person whose injury is insured against is not in accord with the spirit of our legislation, but unless the particular act complained of is specifically prohibited by statute, no offence in law has been committed. That is, I think, the position in this case.

It is only fair to the officers of the defendant company to say that it is not clear to me that there was a deliberate intention to charge the contractor in this or any of the other cases with the proportionate amount of the premium paid to cover the company's risk for any accident that might happen to himself personally. It was intended to charge against him the insurance of his workmen (whom he was bound to insure) by deducting a calculated amount assessed on the total wages earned by them for a stated period (as they were directed by his order to do). Instead of doing this, however, by a blunder, or through carelessness in calculating the amount, the deduction has been made on the total earnings of the contractor, so that a deduction has actually been made affecting his net earnings, which he certainly never contemplated and did not authorise.

I would like to add that it appears to me that in none of the cases that have come under my notice has the contractor been really insured against the liability to compensate his workmen for injury. The policy is taken out in the name of the company. This secures them in case of any claim for damages, but there is no contract with the insurance company to secure the contractor against his personal liability. The workmen are provided for as workmen of the COMPANY at the contractor's expense, but there is nothing to protect the contractor in case he should have personally to meet any demand for compensation for injury sustained by his workmen. The insurance company does not know him. The money he has paid out of his earnings has gone to protect the company, and indirectly, the workmen, but leaves him personally uncovered.

The information is dismissed.¹¹¹⁶

24 October

THE GOLDFIELDS.

TALISMAN CONSOLIDATED. THE WATER DIFFICULTY.

NEW POWER PLANT NEARING COMPLETION. COMPREHENSIVE SCHEME FOR LOW LEVEL DEVELOPMENT. (From Our Own Correspondent.) WAIHI. Friday.

The Talisman Consolidated Company's property at Karangahake has no doubt of late excited the minds of shareholders and others, the main cause being the flooding of the deepest level (No. 13) consequent upon the Crown mines—the adjoining property—drawing their pumps from the No. 5 level below the Waitawheta tunnel, it is quite probable, however, that had not the vein known as the south fissure been intersected in the south drift on the main lode, the Talisman may today have been quite free from the extra water which they now have to contend against. It might also be mentioned that if the management had completed the installation of their new power plant in time they might

¹¹¹⁶ <https://paperspast.natlib.govt.nz/newspapers/OG19081009.2.9>

Ohinemuri Gazette, Volume XXIV, Issue 2408, 9 October 1908, Page 2

have combated the water to a considerable extent, inasmuch as that they had placed in position at No. 13 level, a powerful pump capable of dealing with 20,000 gallons of water per hour; but were not allowed time to effect the necessary pipe connection before the inrush of water occurred. Had they the power ready at that time, and the connections effected, it was quite possible for them to have kept the water in check. I am informed, however, that two powerful pumps have been ordered from America, and these will be placed in duty as soon as they arrive.

The new power plant will be in readiness to commence operations in a month from now, and by the aid of the new pumps the management are hopeful of being able to unwater down to the No. 13, where it is the intention to proceed with the cutting out of another pump chamber capable of accommodating another pump of the same type and capacity as already in position at that level. The management will then be thoroughly equipped to enable them to deal with 40,000 gallons of water per hour. This will be more than adequate to deal with the whole of the waters in this deep level area...

I understand that the sinking of the Woodstock shaft is also part of a comprehensive scheme, but the management intend to place the mine in working order at No. 13 level before the Woodstock portion of the scheme will be undertaken. The necessity of deepening the Woodstock shaft and equipping it is fully recognised, it being apparent that the men cannot be expected to climb the ladders to reach their work at the deeper levels.

Important exploiting operations can be negotiated when the Woodstock shaft has been sunk to the required depth, for the company have a very large area of country lying north of their present operations which so far has not been touched, and as it embraces the north continuation of the Talisman and the Crown Company's lodes, it is quite possible that important results will be met when operations are advanced sufficiently to bring them in touch with the ore bodies north of the faulted section of country existing in this north section. The management undoubtedly deserve great credit for the energetic manner in which they are preparing for the unwatering of their No. 13 level, and it is quite possible that early in the new year the mine will again resume its usual prosperous condition.¹¹¹⁷

6 November

CORRESPONDENCE.

To the Editor.

Sir—Kindly allow me space in your valuable paper to say a few words in connection with an article in your issue of October 20th signed by Diogenes...

His first complaint is of the firebell, which he stated has been pulled down and re-erected. Such is contrary to fact. The new structure is of steel or iron; the old one was of wood. As regards the band rotunda, I have not much to say, except that it would have been an easy matter to have had it erected elsewhere had the residents of Karangahake only pointed out a more suitable site.¹¹¹⁸

¹¹¹⁷ <https://paperspast.natlib.govt.nz/newspapers/AS19081024.2.30>

Auckland Star, Volume XXXIX, Issue 255, 24 October 1908, Page 6

¹¹¹⁸ <https://paperspast.natlib.govt.nz/newspapers/OG19081106.2.5>

Ohinemuri Gazette, Volume XXIV, Issue 2420, 6 November 1908, Page 1

9 November

COUNTY WORKS.

WHAT HAS BEEN DONE IN THREE YEARS.

... suspension bridge at Waikino, £86 18s...steel bridge, Paeroa, £1533 1s 3d; footbridge at Mackaytown, £104 ; extension of Mackaytown Water Supply, £473 10s; footbridge at Mackaytown, £267 2s 9d [this is the re-erection of the Mackaytown bridge after the flood in January ^{1119 1120}]; fence and sheeting, Karangahake, £87; road, Doherty's Creek, £99; forming road, Karangahake, £28 10s; asphalting, concrete, kerbing and channelling, Karangahake, £387; firebell tower, Karangahake, £59 18s; driving piles and sheeting, Karangahake, £118...¹¹²¹

17 November

TALISMAN CONSOLIDATED. WATER CHECKED AT No. 12 LEVEL.
Waihi, Monday.

The installation of the new air-compressor plant at the Talisman mine [power house, Battery Flat] is now completed, and, with the additional power provided, no difficulty will be experienced in holding the water below No. 12 level and operating the whole of the rock drills underground, one or two of which had been thrown out of work recently, pending the provision of the extra power now available. The position now is that the management have ample ore supplies from No. 12 level up to ensure the maintenance of a monthly yield averaging £15,000, until such time as the mine is unwatered down to No. 13 level, and mining operations are resumed at the deepest workings. The two Cameron sinking pumps ordered will reach the mine before the end of next month. As it will only take a day or two to place them in position in the shaft, the work of draining off the water will, at latest, be commenced with the opening of the New Year. Exactly how long it will take to get back to No. 13 level depends upon the amount of water to be lifted from the Crown mine, but as the pumps now working, together with those coming forward, will be capable of raising upwards of 60,000 gallons per hour, good progress should be made with the unwatering.

When No. 13 level is reached a chamber will be cut out, and a second stationary pump similar to that now in the low level (with a capacity of 20,000 gallons) will be immediately installed, thus giving the management pumps in the shaft and winzes capable of raising in the aggregate upwards of 100,000 gallons of water hourly to meet an estimated influx from both the Crown and Talisman workings of 40,000 gallons. With the 13th level drained, the work of sinking the shaft for No. 14 level will be proceeded with, and no difficulty should be experienced with the water thenceforward.

¹¹¹⁹ <https://www.ohinemuri.org.nz/historic-texts/ohinemuri-county-diamond-jubilee/some-early-works>

Some Early Works. Diamond Jubilee of the Ohinemuri County 1885 - 1945

¹¹²⁰ <https://paperspast.natlib.govt.nz/newspapers/OG19070114.2.17>

Ohinemuri Gazette, Volume XVII, Issue 2150, 14 January 1907, Page 2

¹¹²¹ <https://paperspast.natlib.govt.nz/newspapers/OG19081109.2.16>

Ohinemuri Gazette, Volume XXIV, Issue 2421, 9 November 1908, Page 4

The London board of directors have not yet approved the scheme submitted on the occasion of Mr. Bigelow's recent visit to the mine, which provides for the installation of a powerful pumping and hauling plant in the Woodstock shaft capable of meeting all requirements for many years to come, but in all likelihood this will be authorised at an early date. The installation of this plant will occupy from 18 months to two years, and the cost will be met from the company's reserve fund in hand.

CROWN. MINING AND MILLING, SUSPENDED Waihi, Monday.

For the first time for over 25 years mining and milling operations in the New Zealand Crown mines at Karangahake have been suspended. At the earliest work is not likely to be resumed for several months, during which the new electrical pumping plant for unwatering the mine to a greater depth will be installed. The decision of the management was made known to the employees on Saturday, and a number of men will be thrown out of work in consequence. Since the pumps were lifted from the lower levels some attention had been devoted to the upper workings of the mine, but, as disclosed by the yield for September and October months, the ore quantities and values were neither sufficiently large nor high enough to be profitably treated. In the low level the lode generally known as Lloyd's reef was intersected some months ago, but up to the time operations were discontinued, the results met with had not realised expectations. The main ore body here discloses pay dirt pitching away underfoot, but this cannot be worked upon until the new plant is installed, owing to the difficulty in contending with the water. Reefs so far not exploited are known to exist in the upper areas of the mine, and will doubtless be operated upon in due course, but the future of the property as a bullion-producer seems to rest mainly upon the opening up of the mine at greater depth. Part of the new plant, which in all cost from £12,000 to £13,000 in England, is on the ground, and the estimated cost of the water-race now in course of construction is £6000.

NOTES

The manager of the Karangahake mine [Ross ?] states that the Kaukani [Taukani?] level is in excellent country. A quartz paddock to hold 400 tons is being prepared. The manager is driving on the southern trend of the Dominion reef, which is 3ft wide and prospects well.

The manager of the Comstock United mine reports that he has stopped the south face, and is crosscutting for the hanging-wall in the reef about 500 ft back from the face. Up to the present time, the main reef has shown much better quartz; the country on the hangingwall is first-class. On prospecting on the surface some very nice stone has been found.¹¹²²

Crown: "the water-race now in course of construction is £6000" would appear to be a reconstruction of their Ohinemuri race.

The report above is the last useful mention of Mr. Ross and the Karangahake Company.

¹¹²² <https://paperspast.natlib.govt.nz/newspapers/NZH19081117.2.11>

New Zealand Herald, Volume XLV, Issue 13909, 17 November 1908, Page 3

17 December

KARANGAHAKE FIRE.

INQUIRY BY THE CORONER. "RESULT OF AN ACCIDENT."

At the Miners' Union Hall, Karangahake, on Monday an inquiry was held before the coroner (Mr W. Forrest) regarding the fire that occurred on Wednesday last in Mrs K. Manton's shop in the main street at Karangahake. A jury was sworn in, and Mr A. E. Wight was appointed foreman.

Sergeant McKinnon appeared for the police; Mr Porritt represented Mrs Manton; and Mr H. Guthrie was present in the interest of the insurance company affected.

The first witness was Mrs Manton. She stated that she was a widow, and was the occupier of the shop recently burned, which was situated in the main street at Karangahake. The fire occurred about nine o'clock on the evening of Wednesday last...¹¹²³

18 December

CROWN MINES COY.

APPLICATION FOR PROTECTION

OBJECTION BY THE MINERS' UNION.

A large amount of interest was taken in an application by the New Zealand Crown Mines Company, at the Warden's Court at Paeroa on Wednesday, for protection for twelve months for the Abbey and Earl of Glasgow special claims at Karangahake. Mr Porritt appeared for the applicant company.

An objection was lodged by the Thames Miners' Union, the chief points of the objection being that the period of protection asked for was too long, and that there were men out of work at Karangahake who were willing to work part of the mine on tribute. Mr Moresby appeared in support of the objection.

Mr Porritt said that the Abbey and Earl of Glasgow claims were worked in conjunction with another claim held by the company, namely, the Crown. Some time ago it was found that the machinery and other appliances were insufficient to cope with the water in the mine, and certain extra plant had been ordered and was on the way out from Home. The company was preparing to carry on operations on a larger scale than formerly, but these two claims could only be worked in conjunction with the Crown claim. During the progress of the work of installing the new machinery a large amount of skilled labour would be employed, and the company was only asking for protection so that the claims would be safe in the event of anything unforeseen happening and a lesser number of men than required by law being employed. At the present time the company employed a greater number of men than was necessary to man the ground, and as far as they knew the number would be maintained. Mr Porritt then read a declaration by Mr F. R. W. Daw, general manager of the company.

The declaration was as follows: — "I am unable to employ the number of men required by law to man the claims, owing to the present machinery and plant

¹¹²³ <https://paperspast.natlib.govt.nz/newspapers/OG19081216.2.7>

Ohinemuri Gazette, Volume XXIV, Issue 2437, 16 December 1908, Page 2

being insufficient to keep the mine unwatered. At the present time a large number of men are being employed on the construction of the new water race, excavation of site for new machinery, preparing timber, and otherwise, but the number of men I can employ on such works is not sufficient to fully man the claims, and I am therefore applying for protection for two of the claims until I get the new machinery installed. A new workshop and machine shop has been erected, so that the work can be steadily carried on, and the excavations for the new plant are now well forward, and efficient heavy machinery is now under order and will be installed on arrival. The erection of the plant, fitting up the power station and cables, and carrying out the works in hand will occupy fully twelve months, and I therefore make application for the twelve months' protection, as I have no other works I could profitably or advantageously employ other men on during that period."

In connection with the declaration, Mr Porritt said that Mr Daw, in computing the number of men required to man the ground, did not take into consideration that the number was reduced owing to expenditure of money on the claims for machinery. If there was no plant on the ground 65 men would have to be employed, but taking into account the amount expended on machinery, only 33 men were required to man the ground. At present 36 men were employed, a day or two ago it was 39, and the number was bound to fluctuate according to the nature of the work. The application for protection was simply a precautionary measure, so that the board of directors at Home could be assured that the expenditure they were incurring would be safeguarded.

F. R. W. Daw, general manager of the New Zealand Crown Mines Co. Ltd., deposed that in the course of last year the company formulated a scheme of working to develop the low workings of the mine. This scheme was to go 500 feet below the present lowest level. In connection with that scheme he had gone to London, and had arranged for the machinery required. The board of directors had authorised the proposed scheme and the works in connection with it. Witness was detained in London longer than he anticipated in connection with the purchase of the machinery, and this kept him nearly two months longer than he expected. Witness was therefore in a position to say what the machinery was. The plant consisted of a large triple expansion steam engine, a 550 kilowatt generator, a 720 h.p. turbine, two Babcock boilers (250 h.p. each), two motors, two large duplex pumps, seven tons of copper stranded conductors, and insulated cables, together with the necessary fittings. It was proposed to instal this machinery in an electrical power station, which was now under construction. The steam power was for the purpose of supplementing the water power during the drought. The energy generated at the station was to be used for working the motors. Witness was of opinion that the plant would enable him to carry out his scheme of operations. It was estimated there would be about 1100 gallons of water per minute to pump. About £8000 worth of machinery was now on the way out. In connection with the installation of this machinery they had commenced the power station, and excavated for the turbine site. One of the buildings was also partly constructed. They had also spent thousands of pounds in connection with the water race. They had erected a very large workshop, which was thoroughly equipped and finished. At the present time 36 men were employed, and the number had varied from 36 to 44, that was ordinary labour and skilled labour. During the progress of the works they would not be able to continue to keep

all the unskilled labour on. Until the completion of the works they could not maintain any particular number of men, but they would be employing a goodly number of men. It would be most economical for the company to push the works to a conclusion. Witness could not say how long it would be before the work was completed; it might be in April or June. After the machinery was installed, there would be the work of draining the mine. The company proposed to carry out its development work as soon as it could do so. The total value of the new machinery would be £20,000, and the value of the present machinery was about £100,000.

Cross examined by Mr Moresby, witness said that in January and February fully the same number of men as at present would be employed. The application was made to give confidence to the board of directors that their property would be absolutely secure. Witness thought it a shame that the company had to defend the case at all, and did not consider such objections as the present one were intended by law to be made. Witness had an absolute objection to letting the higher levels of the mine on tribute. There was not sufficient ore in the upper levels to keep the mill going profitably. It was not the intention of the company to work the upper levels of the mine during the coming six months nor did they intend to allow anybody else to do so. Tributers could not make the working of the upper levels pay. The company had not taken up the property to work it on tribute. They would work the upper levels later on when they had sufficient ore from the lower levels to keep the mill going. There were six levels in the mine above the tramway level, but some of the levels had badly fallen in. He had an absolute objection to anybody else working their property at all. It might interfere with the installation of the new machinery if men were working in the upper levels of the mine.

Re-examined by Mr Porritt, witness said the company would be requiring the tramline itself. The access to the upper levels was along the tramline in the Crown mine. The shaft was a little way inside the level. The company would be working in the Crown portion of the mine.

Mr Daw: If ever the application to work on tribute is granted we will abandon the mine. We won't stand any nonsense.

Mr Moresby: You can't take the mine away with you.

In reply to the Warden, witness said it would take nearly six months to clear and drain the mine. After six months the company would be able to employ a sufficient number of men to man the mine.

Mr Moresby said that this was a matter of great importance to the population of Karangahake. In connection with the application, he did not consider that Mr Daw had shown any sound reasons for asking for protection. At the present time the company was working the claims with the number of men required by law, and according to Mr Daw would do so during January and February, so that it seemed the application was a bit premature. They could have come and asked for protection when it was required, and he therefore thought there was some reason for asking for protection that was not disclosed. He submitted that the attitude of Mr Daw was unreasonable, that it was a "dog in the manger" policy. There were six levels above the tramway level that the company did not propose to work, so why shouldn't they be worked on tribute if it would not interfere with the company. It would not cost the Crown

Company anything, and the fact that these levels would have to be timbered and made secure would improve the value of the property. At Karangahake at the present time a large number of men were out of work, and it was not right for the company to lock up the ground and prevent these men from earning a living, it was for the Warden to say if the application was reasonable, seeing that there were men out of work, who wanted to work the ground. What these men proposed doing would not interfere with the company's workings.

M. Marrinan, secretary of the Karangahake branch of the Thames Miners' Union, was called by Mr Moresby. He stated that there were men at the present time out of work at Karangahake. Several had had to leave Karangahake because they could not get work. The portion of the claim that the union wished let on tribute was not being used by the company, and the tributers could work the surface. The union did not want to work in the portion of the mine where the machinery was to be erected. There was no desire to hamper the company in any way. The action of the union was taken so as to provide work, for the workmen.

Cross-examined by Mr Porritt, witness said that if the mine was worked at 500 feet lower it ought to be more permanent than it was at present. If the ore in the upper levels of the mine would not pay the company to crush, it would not pay the men.

In giving his decision, the Warden said that, regarding the question of tribute, it did not seem that the objectors wanted to work the levels, and it was very doubtful if there was any ground at all to work on tribute. The case of a company like the Crown, that had spent a large sum of money on the mine, and now desired to spend another £20,000, was very different to that of a company that had spent nothing and came and asked for protection. In the case of the Crown Company he did not feel that it should be compelled to let tributes, and he would not insert any condition about letting portions of the mine on tribute. The company was, however asking for too long a period of protection, and he did not feel disposed to grant more than six months. If at the end of that period more protection was required he would be prepared to consider an application.

Mr Porritt said that the company would be satisfied to take the six months and hoped they would not require any more.¹¹²⁴

22 December

Fire at Karangahake.

NARROW ESCAPE OF INMATE.

Shortly after midnight on Friday last the firebell rang out an alarm of fire, and it was soon discovered that a small two-roomed house occupied by a miner named Kenny Morrison was ablaze. The house, which stands a short distance behind the Talisman office, is said to be one of the oldest little wooden huts in Karangahake, and it has been occupied by many old prospectors of the early days. Mr Morrison, who was asleep at the time had a very narrow escape from being burnt to death. He retired to rest shortly after 11 p.m., and lay reading by

¹¹²⁴ <https://paperspast.natlib.govt.nz/newspapers/OG19081218.2.12>

Ohinemuri Gazette, Volume XXIV, Issue 2438, 18 December 1908, Page 2

candle light, the candle being in a miner's spider. Mr Morrison fell asleep and forgetting to extinguish the light it must have burnt down and fell on some papers around his bed, with the result that the bed clothes caught fire. This soon awoke the slumberer in time to escape to save his life, but not before he had received a scorching, his hands and body being slightly burnt and his hair almost singed off. Mr Morrison was unable to save anything. There was no insurance—(Own Correspondent.)¹¹²⁵

31 December

At Karangahake, the Talisman Consolidated has gone through an anxious year, owing to the drowning out of the No. 13 level, consequent upon the cessation of pumping operations in the Crown mine. This water difficulty, however, is in the way of being efficiently overcome, with a new pumping plant that will be installed before long. In the meantime the upper levels are yielding a good quantity of ore, and, as already stated, the year's output shows an increase. When No. 13 level is drained the company's ore reserves will be considerably added to.

The Crown mine's operations during the year have been somewhat disappointing. The present outlook, however, is by no means black, as the company is preparing to instal pumping and other machinery, at a cost of £20,000 (this is now on the way out from Home), and intends sinking to 500 ft below its present deepest level.¹¹²⁶

AJHR 1909

For the year 1908

MINES STATEMENT, BY THE HON. RODERICK McKENZIE, MINISTER OF MINES.¹¹²⁷

Page 3

The Talisman Consolidated Mine has also had a record yield during the year, notwithstanding a temporary suspension of work caused by an influx of water from adjoining workings, which has since been dealt with by the installation of more powerful pumping machinery.

THE GOLDFIELDS OF NEW ZEALAND (REPORT ON).

Mr. Frank Reed, M.I.M.M., Inspecting Engineer

to the Under-Secretary for Mines. Sir, — Mines Department, Wellington, 16th April, 1909. I have the honour to present the annual reports of inspection of mines, together with reports of Wardens and other officers, accompanied by

¹¹²⁵ <https://paperspast.natlib.govt.nz/newspapers/THS19081222.2.19>

Thames Star, Volume XLIV, Issue 10600, 22 December 1908, Page 2

¹¹²⁶ <https://paperspast.natlib.govt.nz/newspapers/NZH19081231.2.76>

New Zealand Herald, Volume XLV, Issue 13946, 31 December 1908, Page 7

¹¹²⁷ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1909-II.2.2.2.5>

MINES STATEMENT, BY THE HON. RODERICK McKENZIE, MINISTER OF MINES., Appendix to the Journals of the House of Representatives, 1909 Session II, C-02

statistical information in regard to the goldfields and metalliferous mines of the Dominion, for the year ended the 31st December, 1908.¹¹²⁸

Page 6

Karangahake Goldfield. —Talisman Consolidated (Limited): A considerable increase both in tonnage treated, bullion recovered, and dividends declared has to be recorded, notwithstanding that since August, 1908, by the stoppage of the pumps on the adjoining New Zealand Crown Mines, work below the No. 12* level at the Talisman Mine was suspended owing to the influx of water until the end of May, 1909. To overcome the water difficulty it has been decided to increase the pumping-power by placing electrically driven Cornish pumps in the Woodstock shaft, which it is then proposed to deepen, and from thence develop the northern section of the mine. It is also proposed to install during the ensuing year the Waihi system of treatment — viz., tube mills, air agitating-tanks, and vacuum filters. The efficiency of this treatment is indorsed by its adoption upon many of the most important goldfields in the world. Probably in no other mining country are the metallurgical plants for the recovery of electrum from cyanide-solutions more advanced than in this Dominion, and this is undoubtedly due to the research work constantly being advanced at Waihi by Messrs. H. P. Barry and F. C. Brown and their respective staffs.

* No. 12 level at the Talisman Mine is 25 ft. above sea-level, and about 1,075 ft. below the apex of the vein.

Operations at the New Zealand Crown Mines, adjoining the Talisman, have also been retarded by the influx of water, to overcome which it is proposed to install electrically driven duplex pumps capable of dealing with 1,100 gallons per minute, from a depth of 1,000 ft. Pending the erection of this plant, mining operations have been suspended.

Mr. Matthew Paul, Inspector of Mines

Waihi, to the Under-Secretary, Mines Department, Wellington. Sir,—
Inspector of Mines' Office, Waihi, 27th March, 1909. I have the honour to present my report on the gold-mining industry in the Hauraki Mining District, together with statistics, for the year ended 31st December, 1908.

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Ohinemuri County.

Talisman Consolidated (Limited). Considerable development was carried out in the Nos. 11 and 12 levels during the year. On No. 11 level it is proposed to continue the south drive, and the crosscut already started east and west to be pushed forward vigorously. At No. 12 level the south drive was advanced 350 ft., and is nearing the point where it should intersect the Dubbo ore-shoot, which it is proposed to thoroughly develop.

No. 13 Level. —The south drive was extended 260 ft. through high-grade ore. Owing to the New Zealand Crown Mines stopping their pumps, this level became flooded in August, and has remained so pending the erection of

¹¹²⁸ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1909-II.2.2.2.6>

THE GOLDFIELDS OF NEW ZEALAND (REPORT ON)., Appendix to the Journals of the House of Representatives, 1909 Session II, C-03

additional pumping plant capable of dealing with the increased amount of water. It is expected that the plant will be available in the latter part of January, when the unwatering of the level will begin.

A Riedler compressor with a capacity of 3,100 cub. ft. of free air per minute has been erected during the year, also four Babcock and Wilcox boilers and a 100-kilowatt generator, to supply power to the mine. It is proposed to install during the coming year at the Woodstock shaft a Cornish pump of sufficient capacity to handle all the water that may reasonably be expected. It is proposed also to sink this shaft considerably deeper, and from it develop the northern section of the mine. Tube mills, air-agitators, and vacuum filters are to be added to the treatment plant during the ensuing year. Three fatal accidents occurred in this mine during the year, two men being killed by a blasting accident, and another by falling down the shaft. No blame was attachable to the management in either instance.

New Zealand Crown Mines (Limited). The main shaft has not been sunk during the year, owing to the stream of water cut in the No. 5 level keeping the pumps working to very nearly their full capacity.

No. 5 Level. —South of the main incline shaft this level was extended 199 ft., making a total of 2,293 ft. In the winze sunk from this level there is no decrease in the quantity of water flowing, and the water continues to give off sulphuretted-hydrogen gas. The south-east crosscut was extended 428 ft., making a total distance of 566 ft., and a reef believed to be the New reef was intersected and driven on 69 ft.

No. 4 Level. —South of the main incline shaft the level was extended 199½ft., making a total distance from the shaft of 2,348 ft.

Workings on New Reef. —Waitawheta level south of the south-east crosscut: The level was advanced 301 ft., making its total length from the crosscut 1,048 ft. In Nos. 1, 2, 3, and 4 levels the drives were all advanced during the year.

Two electrically driven duplex pumps have been procured, and will be installed at the main shaft. The power will be transmitted from a station close to the reduction-works, and during a considerable portion of the year water-power will be utilised to generate electricity, and when water is unobtainable the engine and boilers which are being supplied will be employed. The plant will be capable of pumping, in two stages, 1,135 gallons per minute from a depth of 1,000 ft. Pending the erection of the pumping plant, operations at the mine have been suspended.

During the year a man died from the effects of blood-poisoning caused by a rusty nail running into his leg whilst removing slabs in the workings.

Dominion Mine. This company commenced operations, chiefly of a prospecting character, in the early part of the year. Several outcrops of reefs were discovered on the surface by trenching, and assayed well. In order to test these reefs at a greater depth, a low level was driven a distance of 348 ft. It is expected to intersect the reefs at about 750 ft. in. An average of four men were employed.

Shotover Mine. This property is situated about a mile from the Township of Karangahake, and adjoins the Talisman, Comstock, and Dominion properties. Development-work was started in June, and an average of five men have been employed since. A low level was put in with the object of locating the reef

from which good prospects had been obtained on the surface by the previous owners. The level is now in 490 ft., and about 200 ft. more will need to be driven. At 330 ft. in, a rise of 80 ft. was put through to the surface for ventilation purposes.

Silver Hill Mine. This claim adjoins the eastern boundary of the Talisman Mine. A good deal of prospecting-work has been carried on during the year, and several reefs located, some of which give high assay values. An average of ten men were employed. The mine is at present under protection.

Comstock United. The work in this mine has been chiefly confined to the continuation of the drive on the main reef, which is about 14 ft. in width, encased in an improving class of country as the drive advances towards the belt of country from which the Talisman is procuring highly payable ore. Better results are expected.

Work in the main crosscut has been greatly retarded owing to a big flow of water coming from the face, which seems to indicate the near presence of a large body of ore. The average number of men employed during the year was five.

Karangahake Mine. Work for some time has been confined to the Taukani section. A low level has been driven a distance of 550 ft., and two reefs intersected, No. 1 being 12 ft. in width, and No. 2 10 ft. No. 1 reef assayed from 16s. to £1 per ton. No assays have been taken of No. 2 reef but fair prospects of gold can be obtained by panning. It is intended to continue the crosscut a further distance of 240 ft., and when this is done the various reefs will be vigorously prospected. Twelve men have been employed during the year.

Mr. Warden Burgess, Thames

to the Under-Secretary, Mines Department, Wellington. Sir, — Warden's Office, Thames, 1st April, 1909. I have the honour to forward herewith my annual report on the Hauraki Goldfield for the year ended 31st December, 1908.

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At Karangahake, work has been successfully carried on, particularly in the Talisman Mine, which as a gold-producer stands second only to the Waihi Mine. Bullion worth £218,975 was won from the mine during the year ended last December, being an increase of £34,529. In August of last year, owing to the influx of water caused by the cessation of pumping operations in the Crown Mine, adjoining, all work had to be discontinued on No. 13 level, where at the time the main reef, from 7 ft. to 8 ft. in width, and in places carrying rich ore, was being worked. Since then operations have been carried on from No. 12 level upwards, and ample supplies of ore have been obtained to keep the mine and battery fully employed. Additional pumping plant is being erected, which, when completed, will enable operations to be resumed at No. 13 level.

The other large mine of the district, the New Zealand Crown Mines, shows a considerable decrease in the output of gold compared with the yield of the previous year; e.g., this year's product being something less than half that of the year 1907. Operations in the mine have been to a large extent suspended owing to the presence of a large inflow of water, which it was not possible to

reduce with the pumps then in position. Two electrically driven duplex pumps have been obtained, and will be placed in the main shaft. These pumps will be capable of coping with the water, and will enable the richer ore below the No. 5 level to be worked, and an increased yield of gold may be expected during the coming year.

There are several other mines at work in the locality, but they have not contributed to the gold production of the district. They are all in process of development, work being steadily carried on with well-founded expectations of success, and it is probable that some of them may be found among the gold-producers before the end of the year.

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Mr. F. W. Reid, A.O.S.M., Director of the Karangahake School of Mines

to the Under-Secretary, Mines Department, Wellington. Sir, — Karangahake, 17th April, 1909. I have the honour to submit the following report on the work of the Karangahake School of Mines, and of the branch school at Waikino, for the year ending 31st December, 1908: —

As it was in September of last year that I was appointed Director, my information relating to the earlier portion of the period under review is drawn entirely from the school records.

Attendance. —The average number of individual students in attendance for the three terms of the year was forty-four, with a class attendance of ninety. The fact that mining operations at Karangahake were less active than usual during the latter portion of the year militated against the attendance, and was also largely responsible for the comparatively low results obtained at the annual examinations.

Classes. —The number of classes in operation was eight at Karangahake and six at Waikino.

Examinations. —At the annual examinations, held in December, 10 students presented themselves at Karangahake, the passes obtained being 2 second-class and 5 third-class. At Waikino 13 students presented themselves for examination, and obtained 5 first-class, 2 second-class, and 5 third-class certificates. At the examination in bullion-assaying 1 student at Karangahake and 2 at Waikino qualified for the certificate issued by the Customs Department. At the annual examinations for mine-managers, held during March, 1909, one student, Mr. Walter Smith, of the Talisman Mine, succeeded in obtaining a first-class certificate of competency as a mine-manager. Another student obtained a second-class stationary-engine driver's certificate.

Library. —During the year some valuable additions were made to the library of each school by the purchase of standard works. The leading mining and metallurgical magazines are also regularly obtained, and by the courtesy of the Hon. the Minister of Mines the various publications of the Department are made available for the use of students. In this connection I desire to make special mention of the excellent articles in the Mines Record, which are very helpful and instructive.

Equipment. —The equipment of the schools in respect of apparatus and instruments is fairly good, especially in connection with the surveying classes. The class in electricity has been considerably handicapped owing to the oil-engine for driving the dynamo not proving suitable. A Pelton wheel is now

being installed, and will doubtless permit of more systematic work being carried out.

Assays. —During the year a large number of assays were made for the public, those for bona fide prospectors being free of charge.

Conclusion. —I desire to express my thanks to the Council and the secretary for their generous support since my arrival, and my appreciation of the excellent work done by Mr. W. Gibson, B.E., at Waikino, as well as by the other members of the teaching staff.

I have, &c, F. W. Reid, Director.

1909**6 January****Workers Compensation Act of 1908**

POSITION AT WAIHI. "WAITING FOR A LEAD." Waihi, Tuesday.

Nothing fresh has occurred to-day in connection with the difficulty created by the recent legislation providing for compensation to miners suffering from "miners' complaint." The men employed by the Waihi Gold Mining Company resumed work when they returned from their holidays, and neither employers nor union have mentioned the question of medical examination. It is, however, evident that the intentions of this and other companies in the district will be made known at an early date, as already the principals of the Waihi, the Waihi Grand Junction, and the Talisman (Karangahake) Companies have met in conference, and at a late hour last evening the superintendent of the Waihi Company (Mr. H. P. Barry) left for Auckland, presumably in connection with the matter under notice.

As far as the Miners' Union is concerned, the officials are simply waiting for a lead from the employers' representatives, and as soon as the latter make their intentions known the members of the union will be immediately called together to consider the position. The officials of the union, in the absence of action by the employers, show no inclination to discuss the position beyond intimating that the majority of the members will probably decline to submit to medical examination.

One prominent union official, who has discussed the position with members, ventured the opinion that a solution of the difficulty that would in all likelihood be favourably received by the men, if practicable, would be the suspension of the clauses relating to miners' complaint, pending the next session of Parliament, the miners meanwhile to continue to work under the old conditions. In the interim, Parliament could review the Act, and make such amendments and variations as might be found acceptable to all parties concerned...

At the Talisman mine (Karangahake), where mining operations were suspended yesterday, the men are reported to have resumed work underground.¹¹²⁹

THE KARANGAHAKE DECISION. MEN REFUSE EXAMINATION

At a largely attended meeting of members of the Miners' Union it was decided that no member should submit to medical examination. Yesterday both the mine and battery of the Talisman resumed work. The company decided to risk the added cost.

Mr Daw (N.Z. Crown mine) refuses to allow his men to start without being examined.

INSURANCE COMPANIES' STAND. LETTER TO MINEOWNERS.
AUCKLAND, this day.

¹¹²⁹ <https://paperspast.natlib.govt.nz/newspapers/NZH19090106.2.71>

New Zealand Herald, Volume XLVI, Issue 13951, 6 January 1909, Page 8

The insurance companies, including the Government Department, refuse all risk under the section of the Workers' Compensation Act applying to the trouble known as "miner's complaint," and the following is the copy of a letter sent out by the Auckland manager of an insurance company:—"As a large number of men are known to be suffering from this disease we have to notify you that we cannot extend your current policy to cover this risk unless each man in your employ has been examined by a duly qualified practitioner, and a certificate given to the effect that he is absolutely free from all signs of the disease. If any employee is found to be affected, he can only be re-employed at your own risk so far as relates to the disease unless he agrees not to claim under this section of the Act. The rejected men will have no reasonable cause to complain, as they will be in exactly the same position as before the operation of the Act, except that the compensation for accidents is largely extended and increased."¹¹³⁰

19 January

Mining Trouble.

When the men presented themselves to Mr Daw (of the Crown mine) this morning for work around the new plant, they were informed that they could not start until they were examined by a medical man. This the men refused, to do. What with the decision of Mr Daw refusing to start the men, and with hands being discharged this morning from the Talisman mine, things look anything but promising. The business people are looking upon the present state of affairs as serious, and unless matters are brought to a head it means that some of the trades people will have to close down on the credit system.¹¹³¹

3 February

WHERE IS THE OHINEMURI COUNTY ENGINEER?

(To the Editor.)

SIR —It is in regard to this question that residents of Karangahake are exercising their minds at present. Some works partly completed, and some now started, are causing much speculation as to whether there is such a person. It must be patent to any ordinary individual that the bridge over the Ohinemuri River leading to the Talisman mine is unsafe, and it is a fact that the manager of the Talisman Company regards it so, as in spite of the large contribution to the County finances by the company, yet the machinery recently imported has had to be carted over the Hill Road at a large extra expense, owing to the condition of the bridge, which has been recognised unsafe by the Council for some two years...¹¹³²

This is the Traffic Bridge of 1898? Deteriorating now after ten years. It appears to be known as the Talisman (Swing) Bridge now.

¹¹³⁰ <https://paperspast.natlib.govt.nz/newspapers/WHDT19090106.2.22>

Waihi Daily Telegraph, Volume VIII, Issue 2443, 6 January 1909, Page 3

¹¹³¹ <https://paperspast.natlib.govt.nz/newspapers/THS19090119.2.7>

Thames Star, Volume XLV, Issue 10618, 19 January 1909, Page 1

¹¹³² <https://paperspast.natlib.govt.nz/newspapers/OG19090203.2.17.3>

Ohinemuri Gazette, Volume XX, Issue 2455, 3 February 1909, Page 3

5 February

OHINEMURI COUNTY COUNCIL. MONTHLY MEETING

TALISMAN BRIDGE. On the motion of Messrs Franklin and Marrinan, the engineer was instructed to examine this bridge....

PROPOSED TIMBER DAM.

A copy of the specifications of the proposed receiving dam, to be constructed for the Kauri Timber Company on the Waitawheta Stream, was received.

Mr Marrinan moved that the Council oppose the Kauri Timber Company's application to the Warden's Court for permission to construct this dam.

The Chairman said that the company had expressed its willingness to put up a bond of £30,000 to meet any damage caused to the County bridges or roads.

Mr Marrinan said that if the dam broke away the mines would be flooded, and the miners would be drowned.

Mr Nathan said they had nothing to do with the Crown or Talisman mines, and as long as they had the bond to cover any loss that might be occasioned to the County works they should not oppose the application.

The Chairman said that the bond of £30,000 was to cover any loss to the County works or the two mines.

Mr Marrinan said that the Council should take all possible steps to oppose the application.

Mr Crosby suggested that Messrs Grace, Nathan, and Laughlin confer with Mr Porritt (the Council's solicitor) and see what grounds they should oppose the application on.

Mr Lloyd seconded the motion that the application be opposed...¹¹³³

19 February

THE GOLDFIELDS.

TALISMAN CONSOLIDATED.

The new compound Cornish air-compressor recently installed by the Talisman Consolidated is working most satisfactorily. It is on a similar principle to that used in the Waihi Company's No. 5 shaft. The water in the shaft has been reduced about 80 feet, leaving 60 feet yet to be pumped before operations can be resumed at No. 13 level. When unwatering is completed, I understand there will be employment for about 60 more miners.

CROWN MINE.

The concrete foundations for a powerful electrical plant are now being prepared at the Crown mine [battery]. The site is on the banks of the Ohinemuri river.

KARANGAHAKE, this day.

The manager of the Talisman mine has sent the following cable to the London office: "No. 12 level, south progress 40 feet: reef broken up and very mullocky; values low; reduced water 24 feet."¹¹³⁴

¹¹³³ <https://paperspast.natlib.govt.nz/newspapers/OG19090205.2.11>

Ohinemuri Gazette, Volume XX, Issue 2456, 5 February 1909, Page 2

¹¹³⁴ <https://paperspast.natlib.govt.nz/newspapers/AS19090219.2.13>

TIMBER DAM.

APPLICATION BY THE KAURI TIMBER COMPANY,
OPPOSED BY THE TALISMAN CONSOLIDATED

At the Warden's Court at Paeroa yesterday an application was made by the Kauri Timber Company for permission to erect a receiving dam on the Waitawheta Stream. The application was objected to by the Talisman Consolidated.

Mr Porritt appeared for the applicant company, and Mr Hanna for the objectors.

Mr Porritt said this was an application for a receiving dam on the Waitawheta Stream. The company had certain rights on the Waitawheta watershed, and it was to enable it to use these rights that the application was made. In fixing the site the company had arranged for the minimum of risk to life and property. The company had taken the highest flood level yet known, and had made the dam strong enough to stand double that pressure. The quantity of water to be stored in this dam was no more than that stored in Riley's [Railey's] dam on the same stream, which dam had been in existence 20 years, and no accident had happened. The company had provided for the most extreme possibilities, and the question of danger was never likely to arise. At the request of the Ohinemuri County Council, the application would be for seven years, instead of the usual 42 years...

... Mr Hanna first of all called H. Stansfield, superintendent for the Talisman Consolidated Ltd. He knew the Kauri Company proposed erecting a dam in the Waitawheta Stream, but did not know exactly the proposed site. If by any means the water in the stream was raised above the normal level the power plant of the Talisman would suffer, and this would mean the stoppage of the mine. The plant cost £22,500, and the company proposed increasing that. He considered that if the dam should be carried away the flow of water would be increased to such an extent that the Talisman plant would be damaged...

...John McCombie, mine manager for the Talisman Consolidated, was the next witness. He said he had been at Tairua for two years, while the Kauri Company was carrying on operations there. He had frequently seen logs below the company's boom going out to sea. Witness knew the Waitawheta River very well, having first seen it in 1876. It was a stream that rose very rapidly at times. He thought it was beyond the scope of human ingenuity to say whether the proposed dam was strong enough, and the dam might in time of flood fail. If it did fail, it would be disastrous for the mines of Karangahake. If the water reached the level of the mine workings the men down below would have a very poor chance of escape. In 1882 the water rose to such a height, that it would have been above the present Crown workings and would submerge the site of the Talisman power plant...

...E.F. Adams, surveyor and civil engineer... The distance from the dam to the Crown mine was about nine miles, and he did not think there would be any danger to the mines by the dam breaking away. He knew Riley's dam, that was formerly on the Waitawheta Stream, and it stood for fifteen years until it was

dismantled. The proposed dam was very much stronger than was Riley's dam.¹¹³⁵

Railey's dam lasted either 15 or 20 years (1886 to 1901 or 1906).

23 February

LATEST MINING NEWS

TALISMAN CONSOLID LTD. SUCCESSFUL PUMPING OPERATIONS EXPLOITATION SCHEME

(Special to the Daily Telegraph.) KARANGAHAKE, this day.

The operations in connection with the unwatering of the Talisman Consolidated mine at Karangahake, and that of the adjacent company's property (New Zealand Crown mines) is progressing most satisfactorily. By the aid of the two new Cameron pumps, assisted and supported by two of the original shaft pumps, excellent headway is being made, and, at the time of writing, the pumps had lowered the water down to a depth of over 100 feet below No. 12 level. Taking into consideration the fact that the water area is a very extensive one, including that of the whole of the neighbouring mine, and that this has to be raised to No. 11 level, a height of quite 300 feet from present water level, it will be seen that the task imposed upon the pumps is of considerable magnitude. Yet in the face of this, it is gratifying to learn that the water is steadily decreasing daily. In the event of the pumps being capable of maintaining their present rate of progress, the No. 13 level should be reached in about six weeks' time. It is the intention of the management to commence lowering the duplicate horizontal pump as soon as the water is clear, and also to connect the present submerged pump at No. 13 level, and get it into duty as soon as possible. It will be seen that the capacity of the pumping plant, when in full swing, will be more than ample to cope with the whole of the waters now impounded in both the Talisman and Crown mines.

Regarding the present power, the management is satisfied that the air-compressing plant possesses ample capacity for supplying all power that will be required. The new compressor, recently installed, continues to render an excellent account of its capabilities, but if necessity arises, the original machine can be brought into requisition at any time.

With reference to the comprehensive scheme for the development of the deeper levels, the management is now engaged in supervising the cutting out of a large chamber in the immediate vicinity of the Woodstock shaft. This chamber will be 100 feet in length, by 30 feet in width, and 35 feet high. It will be occupied by a powerful winding and pumping plant. The type of machine has not yet been decided upon, but the general manager (Mr. Stansfield) states that it will be operated with steam power, and that the shaft will most likely be sunk to a depth of 100 feet below the No. 13 level. At this substantial depth the unwatering of the whole of the mine will be negotiated, and in addition to that the exploitation of the northern area of the company's property will be undertaken. In undertaking this important work the management have in view the intersection of the their own lode series on the

¹¹³⁵ <https://paperspast.natlib.govt.nz/newspapers/OG19090219.2.14>

Ohinemuri Gazette, Volume XX, Issue 2462, 19 February 1909, Page 2

north trend, and also the vein system of the Crown Company. The latter has a number of ore bodies traversing into the Talisman area, the majority being responsible for values of a payable character, where operated upon on the higher areas. The development of the main lode and east vein at this sound depth will serve to determine the life of the mine upon a very substantial basis...¹¹³⁶

The Talisman Company is pumping from their incline shaft. The pumps are powered by compressed air, supplied by a large new compressor in the power house on Battery Flat and/or the old Woodstock battery (it is run by water, and steam backup). Smaller, older, compressors are on standby. The compressed air is conveyed to the mine via a pipeline (8 in. diameter wrought-iron welded pipes¹¹³⁷) which enters at the Woodstock No.5 Level portal.

The Talisman pumps are lowering the water level in their mine, and also to some extent in the Crown. The Crown are not pumping; they are installing an electricity plant at their battery to power their new pumps when installed.

The Talisman Company intend to cut out a large chamber in the vicinity of the Woodstock shaft (inside No. 5 level) to house a powerful winding and pumping plant. This will become the "Underground Pumphouse" as we know it. This is additional to, or adds to, the original chamber cut by the Woodstock Company. The machinery will be run by steam, the boilers will be installed outside the No.5 portal, jammed in a tiny area beside the Waitawheta.

26 February

A TIMBER DAM.

APPLICATION TO THE WARDEN GRANTED SUBJECT TO CERTAIN CONDITIONS

Judgment was given by the Warden, Mr F. J. Burgess, at the Thames yesterday in the case in which the Kauri Timber Company applied for permission to construct a receiving timber dam on the Waitawheta Stream at Karangahake. Mr E. W. Porritt appeared for the applicant company, and Mr A. Hanna for the objector (the Talisman Consolidated.) The judgment is as follows :—¹¹³⁸

The application was granted; see the whole article for details. The dam was never built?

Ohinemuri Licensing Poll: Vote = No-license

4 March

Ohinemuri Licensing Election.

¹¹³⁶ <https://paperspast.natlib.govt.nz/newspapers/WHDT19090223.2.31>

Waihi Daily Telegraph, Volume VIII, Issue 2484, 23 February 1909, Page 2

¹¹³⁷ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1902-I.2.1.4.3>

THE GOLDFIELDS OF NEW ZEALAND: REPORT ON ROADS, WATER-RACES, MINING MACHINERY, AND OTHER WORKS IN CONNECTION WITH MINING., Appendix to the Journals of the House of Representatives, 1902 Session I, C-03

¹¹³⁸ <https://paperspast.natlib.govt.nz/newspapers/OG19090226.2.10>

Ohinemuri Gazette, Volume XX, Issue 2465, 26 February 1909, Page 2

As we briefly mentioned in our last issue, the special Court appointed to hear the petition to upset the Ohinemuri Licensing Poll sat at Waihi on Monday morning...

The judgment concluded : —“We do not think the irregularities proved show that the poll was not conducted substantially in accordance with the provisions of the law, nor do we think that the result was affected thereby. The petition is dismissed with costs amounting to £97 16s. The official result of the poll as announced after a recount of the votes recorded was as follows: Continuance 2040; Reduction 2295; No-license 3340. No-license was carried by 86 over the required number...

As soon as the decision on the Ohinemuri licensing petition was known, a “Star” reporter waited upon Mr A. M. Myers, chairman of the Auckland Brewers and Wine and Spirit Merchants’ Association, and asked if he could give any indication of the probable monetary loss involved. “The closing in June next of the 16 hotels that are affected by the decision,” said Mr Myers, “will probably involve a loss to the owners of about £30,000.”...

Our reporter then interviewed Mr Palmer, the President of the Auckland Licensed Victuallers’ Association.

“I can only,” said Mr Palmer, “express my deep regret that so many of the retail trade should have such a heavy loss inflicted on them, under such unfair conditions; especially as there can be little doubt that the question of the retail price of beer played a prominent part at the poll, and the vote was really more of a retaliatory nature than based on any broad lines of principle. I do not hesitate to predict that when the people of the Ohinemuri district realise the true effects of No-license, and find how rampant sly-grog and gambling dens, with their attendant evils will become, they will deeply regret their recent action.”..

THE HOTELS TO BE CLOSED,

The hotels to be closed as a result of the Court’s decision, as from June 30, number 14, and are as follows; At Waihi: The Central, Sterling, Rob Roy, and Waihi. At Waikino: The Waikino. At Karangahake: The Tramway and Talisman. At Mackaytown; The Mackaytown. At Waitekauri: The Waitekauri. At Golden Cross: The Golden Cross. At Paeroa: The Commercial, Paeroa, Criterion, and Royal Mail.¹¹³⁹

5 March

Talisman Swing Bridge, Karangahake.— As regards the safety of this bridge, I may state that it is not safe to be subjected to a greater load than three tons, and a team of horses of not more than three. I would suggest that a notice be posted on each end of the bridge stating that the Council will not be responsible for any accident which might occur if such accident should be caused by a greater load than the above mentioned being taken over the bridge, and that all damage caused to the bridge by taking any load heavier than that specified shall be made good by the owner of team or load.¹¹⁴⁰

¹¹³⁹ <https://paperspast.natlib.govt.nz/newspapers/TAN19090304.2.30>

Te Aroha News, Volume XXVII, Issue 4381, 4 March 1909, Page 3

¹¹⁴⁰ <https://paperspast.natlib.govt.nz/newspapers/OG19090305.2.10>

22 March

OHINEMURI RIVER TAILINGS. PUBLIC MEETING AT PAEROA.

by TELEGRAPH.— OWN correspondent. Paeroa, Saturday.

A public meeting in connection with the silting up of the Waihou and Ohinemuri rivers by tailings was held last night, Mr. P. Grace, chairman of the Ohinemuri County Council, presiding. Resolutions were passed as follows:-

"That this public meeting of residents in the Thames Valley expresses its gratification at the sympathy and promise of practical help expressed in public by the Hon. R. McKenzie (Minister for Mines), and respectfully urges the Minister to prompt action by carrying out the recommendation of the Mines Committee, and by every other means available."

"That the Government be requested to revoke the proclamation of the Waihou and Ohinemuri rivers as sewage channels, and, as there is at present no mining on the Waihou River, that the proclamation as relating to that river be cancelled immediately."

"That the co-operation of the Thames and Piako County Councils, the Thames and Te Aroha Borough Councils, and the Morrinsville Town Board be asked."

"That the attention of the Minister for Mines be called to the fact that at present the number of mining companies affected is small, while if any delay arises in this matter a revival in mining may cause a much larger number of companies to come into existence, thus increasing the difficulty of coping with this question; and that the Minister be also urged to, in any case, immediately take steps to revoke the proclamation of the river as a sludge channel so far as regards any claims granted in the future."

"That the secretaries of the Farmers' Unions in the Auckland province be furnished with copies of the resolutions, passed at the meeting, and informed that the mining industry in this district is not only injuring the farmers, but is nullifying the expenditure on the Hauraki Plains and destroying a navigable highway."

A committee to look after the interests of the settlers was appointed, consisting of Messrs. Brunskill, Kenny, Porritt, Hubbard, Laughlin, Forrest, and Strange.

At a subsequent meeting of the committee Mr. Porritt was elected chairman and Mr. Niccol secretary.¹¹⁴¹

29 March

Karangahake Items.

—The Talisman.—

Pumping operations at the Talisman have been more than satisfactory this week, and barring accidents or further trouble with the air supply, two or three week's time should see number 13 level in active operation again.

—Crown Co's New Plant.—

Great progress is being made with the erection of the Crown company's new plant. Two new boilers have been placed in position and the work of encasing

Ohinemuri Gazette, Volume XX, Issue 2468, 5 March 1909, Page 2

¹¹⁴¹ <https://paperspast.natlib.govt.nz/newspapers/NZH19090322.2.10>

New Zealand Herald, Volume XLVI, Issue 14015, 22 March 1909, Page 3

them with brick has already commenced. The whole structure is assuming a definite shape, lending the impression of an imposing appearance when completed.

The Silting Question. — At the committee meeting of the Miners' Union it was decided in view of the renewed activity displayed by the Paeroa residents' to have the Ohinemuri river revoked as a sludge channel, to take steps to avert such a decision of Parliament being arrived at. The matter will be fully dealt with at the next quarterly meeting of the union, which takes place some time next month. It is proposed to forward a petition, with as many signatures as possible, to the authorities, pointing out the disastrous effects that would result to the mining industry if the companies now working, were not allowed to deposit their tailings in the river.¹¹⁴²

22 April

LOCAL AND GENERAL

Haywards' Picture entertainment at Karangahake.

Tuesday night, the first of a series of weekly shows, was well attended, and the audience were enthusiastic in their appreciation of the excellent picture; projected on the sheet.¹¹⁴³

7 May

RECREATION RESERVE. BREATHING PLACE FOR KARANGAHAKE

At yesterday's meeting of the Ohinemuri County Council the following letter from Messrs Porritt and Mueller, solicitors, was read :—" The Warden made an order yesterday (22nd April) reserving Cornes' paddock as a recreation ground for the residents of Karangahake, in accordance with the petition that was forwarded to you. In making a survey of the paddock it will be necessary for the surveyor to provide for access to the Crown Mines Co's property [Crown House?], and to reserve the Crown Mines Co's water race pipe line which runs through the paddock..."¹¹⁴⁴

10 May

KARANGAHAKE. In this district the Talisman Consolidated mine is turning out regular returns and paying dividends to shareholders, and the Crown is putting in a pumping plant in order to enable the lower levels of the property to be un-watered and developed in due course.

Another property called "Karangahake" is attracting attention, owing to a new reef having been discovered from which high assay results have been obtained. In order to fully test the value of this reef, a parcel of 50 tons of ore is to be broken out and sent to the Thames for treatment, and if the results are equal to anticipations, steps will be taken to erect a crushing plant.¹¹⁴⁵

¹¹⁴² <https://paperspast.natlib.govt.nz/newspapers/THS19090329.2.22>

Thames Star, Volume XLV, Issue 10682, 29 March 1909, Page 2

¹¹⁴³ <https://paperspast.natlib.govt.nz/newspapers/WHDT19090422.2.7>

Waihi Daily Telegraph, Volume IX, Issue 2532, 22 April 1909, Page 2

¹¹⁴⁴ <https://paperspast.natlib.govt.nz/newspapers/OG19090507.2.12>

Ohinemuri Gazette, Volume XX, Issue 2492, 7 May 1909, Page 2

¹¹⁴⁵ <https://paperspast.natlib.govt.nz/newspapers/AS19090510.2.4>

11 May

Karangahake

The body of quartz recently met with on the surface of the Karangahake. Company's property, Karangahake, near the Comstock ground (your representative is informed) is to be followed down some distance by a winze, in order to ascertain the width and value of the lode with depth. On the surface the reef is said to be about 4ft wide, showing some rather good-looking ore, which gives nice prospects in the-dish.¹¹⁴⁶

17 May

Says the Karangahake Advocate : — The committee set up to make arrangements for objecting to the proclamation of the Ohinemuri River as a sludge channel being revoked met on Tuesday last in the Miners' Union Hall, Mr McGregor in the chair. A report was received from Messrs McGregor, Wells, and Clavis of the result of their interview with the mine superintendents of the district, and the report was adopted. Other business was transacted, and it was resolved to expedite the matter of drawing up a petition and the procuring of signatures. It was resolved to meet every week until some satisfactory termination of the difficulty had been arrived at.¹¹⁴⁷

7 June

KARANGAHAKE BRIDGE.

ITS UNSAFE CONDITION. REQUEST FOR A LARGER BRIDGE.

The following letter from the superintendent of the Talisman Consolidated, Ltd, Karangahake, came up for consideration at Friday's meeting of the Ohinemuri County Council: — "We wish to draw your attention to the unsafe, condition of the present traffic bridge at Karangahake. The hanger bolts are drawing through the timbers, and, sooner or later, the matter has to be faced of putting up a new traffic bridge, and we would like it faced at once. We are, no doubt, the largest contributors to the County fund, and should anything happen whereby the bridge is cut off through want of a proper bridge, then our battery and mine would be stopped, involving a loss to the company of thousands of pounds, besides loss of revenue to the County, and throwing hundreds of men out of work.

For the twelve months ending April, 1909, the Talisman Consolidated, Ltd, has paid some five thousand pounds odd gold duty, and we claim our demands are entitled to consideration, and we know that your Council will do their utmost to meet us. In about six months' time we have £20,000 worth of machinery coming to Karangahake, and some of the pieces are too heavy (ten ton pieces) to come over the present bridge, and they are too long to be taken over the hill. The driving shaft is 26 inches in diameter in itself. The last lot of machinery brought out had to be taken over the hill because many of the parts (six ton pieces) were considered too heavy for the bridge, and the cost to the

Auckland Star, Volume XL, Issue 110, 10 May 1909, Page 2

¹¹⁴⁶ <https://paperspast.natlib.govt.nz/newspapers/NZH19090511.2.8>

New Zealand Herald, Volume XLVI, Issue 14057, 11 May 1909, Page 3

¹¹⁴⁷ <https://paperspast.natlib.govt.nz/newspapers/OG19090517.2.7>

Ohinemuri Gazette, Volume XX, Issue 2494, 17 May 1909, Page 2

company was enormous, for it took 16 horses to come up the Crown Hill. Then there was the great risk of an accident as it was brought down the hill, and the company would not risk any of the new machinery coming that way, even were it possible. Therefore, we have to respectfully ask your Council to consider the erection of a new traffic bridge at Karangahake, after the pattern of the Waitawheta one just erected at Waikino. Your engineer, Mr McArthur, was in Karangahake a few days ago, and this matter was mentioned to him, and he was also shown the serious state of the present bridge."

Mr Marrinan said there was no doubt the bridge was in a very dilapidated state, and it must have something done to it. Some repairs would have to be made to the bridge even to get the coal over. In the present state of its finances, however, the Council could not erect a new bridge, so he moved that the engineer report as to what would be the cost of doubling the hangers and bearers of the bridge.

This was seconded by Mr Franklin.

The Chairman (Mr Grace) said that they should get Government to put a grant for a permanent bridge on the next estimates.

Mr Lloyd said there was no doubt they would be able to get a grant for the bridge. If they could fix the bridge up so as to take over the machinery the Talisman people would be satisfied for the present. The motion was then put to the meeting and was carried.¹¹⁴⁸

This must have satisfied the Talisman management, as no new bridge was erected until 1912-13. Is the original footbridge already gone? The next bridge will be a truss with concrete pier.

The £20,000 worth of machinery must be for the pumphouse in the Woodstock shaft.

5 July

CORRESPONDENCE.

THE WAYS OF OUR COUNCIL

To the Editor.

Sir —The great majority of ratepayers in Ohinemuri, who cannot but sympathise with the movement in favour of retrenchment by our County Council, considering their present financial position, will read with regret the report of their last meeting in re dispensing with the services of their engineer...

...works, grants, and subsidies have increased the overdraft by some three thousand pounds, most of which expenditure was most decidedly unjustifiable.

Such items, for instance, as for a band rotunda at Karangahake, now known as the "Hen-roost"¹¹⁴⁹

Ow, unkind!

¹¹⁴⁸ <https://paperspast.natlib.govt.nz/newspapers/OG19090607.2.9>

Ohinemuri Gazette, Volume XX, Issue 2503, 7 June 1909, Page 2

¹¹⁴⁹ <https://paperspast.natlib.govt.nz/newspapers/OG19090705.2.11>

Ohinemuri Gazette, Volume XX, Issue 2515, 5 July 1909, Page 2

17 July**THE MINING REVIVAL.**

The Karangahake Gorge, on the road between Paeroa and Waihi, presents varied scenes of beauty and mining industry. The Ohinemuri River, which flows through the Gorge, contains a most difficult problem for the future in the thousands of tons of silt which have been discharged into the river from the great batteries situated on its banks. The silt has been filling up the river for years, and in time of flood is carried over the low-lying lands with disastrous results from an agricultural point of view. Several schemes have been propounded for dealing with this question, but up to the present a satisfactory solution has not been arrived at. (1) The township of Karangahake. (2) The Crown Battery. (3) A pretty bend in the Gorge. (4) The train entering the tunnel in the Gorge. (5) The Talisman Battery.¹¹⁵⁰

Above is the caption for a dark, poor quality, montage of images. Use the link to view if you wish.

6 August**WARDEN'S COURT. Paeroa, Thursday.**

The Talisman Consolidated, Limited applied for fix months' protection for the Imperial and Adeline Reefs special claims at Karangahake. Mr. Hanna, who appeared for the applicant, read a declaration by Mr. H. Stansfield, superintendent of the Talisman Consolidated, in which it was stated that these claims could only be worked advantageously by drives from the other portions of the company's property, and these drives were now being proceeded with. Though company held a total area of 507 acres, and up to the present had spent not less than £433,078 on its various claims. The average number of men employed was 309, and during the past six months the company had spent in wages £24,288.

The Warden said he would recommend the application to the Minister.¹¹⁵¹

Crown Power House completed**14 August****THE TALISMAN MINE. INTERESTING DEVELOPMENT WORK.****SOME RICH RUNS OF ORE.****(BY OUR SPECIAL COMMISSIONER.)****No. IV.**

Probably at no time in its history have operations in the Talisman mine at Karangahake been attended with such interest as at present. The check to development caused by the drowning out of No. 13 (the lowest) level, about a year ago, has naturally thrown the company back as regards ore reserves, and the question of supreme importance ever since has been the overcoming of difficulties in the way of resuming work in the most hopeful section of the

¹¹⁵⁰ <https://paperspast.natlib.govt.nz/newspapers/AS19090717.2.67.1>

Auckland Star, Volume XL, Issue 169, 17 July 1909, Page 13

¹¹⁵¹ <https://paperspast.natlib.govt.nz/newspapers/NZH19090806.2.10>

New Zealand Herald, Volume XLVI, Issue 14132, 6 August 1909, Page 3

mine, so that these reserves may be added to. Whilst, in the interim, the company have been able to keep their mill going, their average monthly output at a good figure, and their dividend payments regular, the fact has never been lost sight of that the ore supplies above No. 13 level could not be depended upon for more than a limited time...

In the Woodstock section the cutting out of a huge chamber for the new machinery, in connection with the sinking of the Woodstock shaft from its present depth of 250 ft to the Talisman low levels, was well in hand. The shaft should be going in about 18 months. At the battery the company are installing three tube mills, eight B. and M. agitating tanks, a vacuum filter plant, and a new mill engine. With these improvements an increase in extraction is assured...

I should be disposed to characterise the Talisman as a fascinating proposition, all things considered, seeing that it is one of the few in the Dominion which claims to rank as a high-grade one...

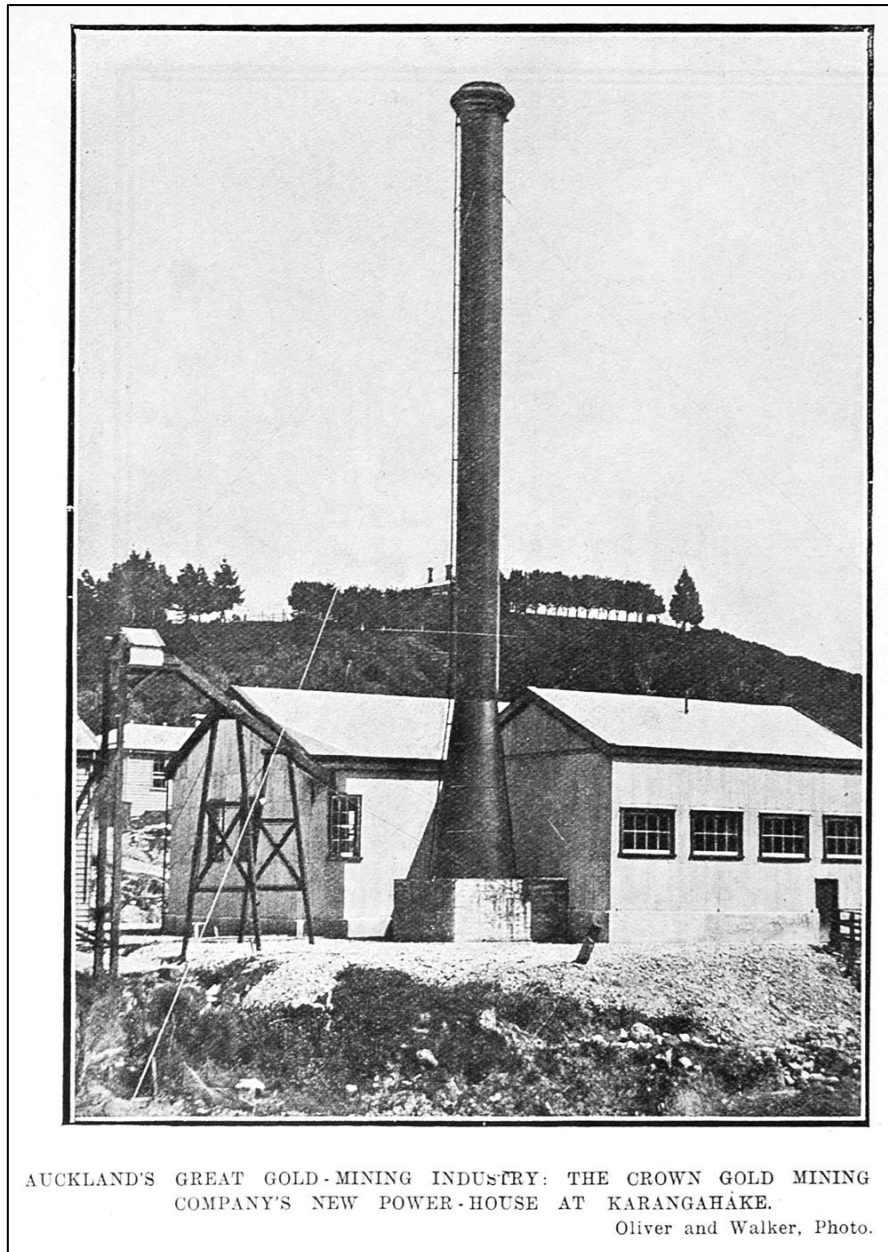
The mine possesses great interest, moreover, inasmuch as its ore is different in character to any other being mined in the Dominion. Consequent upon this, we have no local data as a guide to its possibilities, such as in the case of the comparatively uniform grades of Waihi, the free gold of the Thames, and the "pockety" deposits of Coromandel.

NEW ZEALAND CROWN MINES. Whilst at Karangahake I took the opportunity of visiting the New Zealand Crown Mines Company's new plant, which I found to be practically completed. Mr. F. R. W. Daw, the company's general manager, was kind enough to personally pilot me through the works. The plant, which is one of very first-class efficiency, has been erected for the draining of the mine to the 1000 ft level, and the power station near the company's reduction works is finished. Here a large triple expansion engine for driving a three phase 550 kilo. generator has been installed. There is also a large Francis turbine for driving the same generator when there is a sufficient supply of water in the Ohinemuri River for doing so. The plant is completely fitted up in all other respects. There are two Babcock boilers of 250 horse-power each, feed pumps, and every type of safety device to provide against accidents. The plant has been built on very substantial foundations, a great deal of the concrete work being over 20ft deep.

Ironbark poles have been erected from the plant to the mine, and are ready for receiving the stranded conductors. Practically all that the company now have before them is the draining of the mine, and the installation of the pump, to be electrically driven at No. 5 level, below the Waitawheta tunnel. The company have also erected a workshop for the carrying out of the whole of the repairs. As to when operations are likely to be resumed underground (the mine has been shut down about a year), Mr. Daw could say nothing definite. He is awaiting instructions from Home on that point.¹¹⁵²

¹¹⁵² <https://paperspast.natlib.govt.nz/newspapers/NZH19090814.2.68>

New Zealand Herald, Volume XLVI, Issue 14139, 14 August 1909, Page 6



The New Crown Company Powerhouse. Image published by the Auckland Weekly News 4 November 1909.

The photograph was taken from across the river (ie roadside). The two buildings and chimney are the lowest set of foundations now seen at the Crown battery site. The concrete tunnel at almost river level is the tailrace for the water turbine, and also, legend has it, for the ash and clinkers from the two boilers.

The trestle wooden conduit may have contained the electrical cables. The little "house" atop the trestle, at extreme left, has cables exiting to the left. The foot print of the large chimney can still be made out today. The chimney incorporates a ladder.

Auckland Libraries Heritage Collections AWNS-1909 11 04-06-01 Oliver and Walker.

3 September

A letter as under was received by the Ohinemuri County Council at its meeting yesterday from the general manager of the New Zealand Crown Mines Company, Karangahake: —" I beg to call the attention of your Council to the fact that the drainage from the water table of the upper road between Crown battery and Scotchman's Gully Creek is discharging into the

subsidence cracks at the top of the old landslip, causing in wet weather further slips of debris which are a source of much trouble and expense to this company in connection with their operations on the new water race formation and tramway below. I have, therefore, to request your Council to arrange, if possible, to divert the road drainage in such a way that the discharge will not aggravate matters further in this connection."¹¹⁵³

5 October

TALISMAN CONSOLIDATED.

WORK AT No. 13 LEVEL.

...The deepening of the main shaft from No. 13 level for the purpose of opening up a No. 14 level is now in full swing, and those competent to judge expect the results at greater depth to be quite equal to those disclosed at No. 13 level, as the ore body can be seen pitching strongly under foot from the latter working.

In the Woodstock section of the mine the large chamber has been completed, and the foundations for the new haulage and pumping plant are in hand. The additions to the mill are also being pushed on as rapidly as possible.¹¹⁵⁴

7 October

A rich patch of cinnabar ore (says the Karangahake Advocate) has been struck in the Mackaytown cinnabar mine, recently a quantity of rich stone—about four tons—was inspected at the mine office. One magnificent specimen, although not a very large stone, weighed 40lbs, while four other smaller pieces tipped the scales at 86lb. The lowest estimate of the whole lot is that it will return 50 per cent, of metallic mercury to the ton, the value of which is £224 per ton.¹¹⁵⁵

1 November

BOWLING. OPENING OF GREENS

KARANGAHAKE CLUB. (BY TELEGRAPH. OWN CORRESPONDENT.)
Paeroa, Saturday.

The official opening of the Karangahake bowling green took place this afternoon, when there was a good attendance of players from the neighbouring clubs. Mr. Hilton (president of the Karangahake Club) welcomed the visitors. Unfortunately, the pleasure of the afternoon was marred by rain, and play had to be stopped when the games were only half played.¹¹⁵⁶

¹¹⁵³ <https://paperspast.natlib.govt.nz/newspapers/OG19090903.2.12>

Ohinemuri Gazette, Volume XX, Issue 2541, 3 September 1909, Page 2

¹¹⁵⁴ <https://paperspast.natlib.govt.nz/newspapers/NZH19091005.2.11>

New Zealand Herald, Volume XLVI, Issue 14183, 5 October 1909, Page 3

¹¹⁵⁵ <https://paperspast.natlib.govt.nz/newspapers/FS19091007.2.9>

Feilding Star, Volume IV, Issue 1003, 7 October 1909, Page 2

¹¹⁵⁶ <https://paperspast.natlib.govt.nz/newspapers/NZH19091101.2.91.4>

New Zealand Herald, Volume XLVI, Issue 14206, 1 November 1909, Page 7

Karangahake bowling green official opening**10 December**

NEW ZEALAND CROWN MINES. (BY TELEGRAPH.—OWN CORRESPONDENT.) Waihi, Thursday.

Crushing has been resumed at the New Zealand Crown Mines, Karangahake. At present the battery is only running one shift, but as development works in the deeper areas of the mine, which are now thoroughly drained, will be pushed on more vigorously after the holidays, and the underground staff increased, it is anticipated that an increased quantity of ore will be sent to the mill early next year.

Seen yesterday by your representative, the mine superintendent (Mr. F. R. W. Daw) expressed himself well pleased with the results disclosed since the resumption of work in the mine, and sanguine of the future...

The fine new electrical plant for unwatering the mine to a greater depth, and for haulage purposes (supplied to designs repaired by the superintendent), has been installed, and an inspection showed that the scheme is most complete, making for high efficiency combined with economy. The installation is of a most permanent character, and thoroughly up-to-date in every detail.

TALISMAN. (BY TELEGRAPH.—OWN CORRESPONDENT.) Waihi, Thursday.

The pressure of water in the shaft below No. 13 level in the Talisman mine has eased off somewhat during the past few days, and the pumps are now handling about 30,000 gallons at water per hour. The work of advancing the south face at No. 13 level has not yet been resumed...¹¹⁵⁷

31 December

At Karangahake prospects are also brighter. At the Crown mine, which has been closed down for a considerable period, adequate pumping and other machinery has now been installed at a cost of £20,000, and operations in the mine and battery have just been resumed. As soon as the holidays are over the underground and other staffs will be augmented, and an increased quantity of ore will be sent to the mill.

The developments at the various levels of the Talisman mine have all been of a satisfactory nature, and latest reports show that the pressure of water in the shaft, below No. 13 level, has eased off considerably.¹¹⁵⁸

AJHR 1910

For the year 1909

¹¹⁵⁷ <https://paperspast.natlib.govt.nz/newspapers/NZH19091210.2.9>

New Zealand Herald, Volume XLVI, Issue 14240, 10 December 1909, Page 3

¹¹⁵⁸ <https://paperspast.natlib.govt.nz/newspapers/NZH19091231.2.78>

New Zealand Herald, Volume XLVI, Issue 14257, 31 December 1909, Page 7

MINES STATEMENT, BY THE HON. RODERICK McKENZIE, MINISTER OF MINES.¹¹⁵⁹

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CINNABAR. Some progress has been made during the year in the development of the cinnabar deposits in the vicinity of Mackaytown, near Karangahake. The Ascot Cinnabar Syndicate have erected a plant for the reduction of cinnabar, and, so far, their operations, which are on a small scale, appear to be meeting with some success, as they have recently notified me of their intention of claiming the Government bonus for the production of quicksilver, of which they had then produced a small quantity. The Inspector of Mines at Waihi has been appointed to certify to the quantity of quicksilver produced.

THE GOLDFIELDS OF NEW ZEALAND (REPORT ON).

Mr. Frank Reed, M.Inst.MM., Inspecting Engineer

to the Hon. Roderick McKenzie, Minister of Mines. Sir, — Mines Department, Wellington, 30th June, 1910. I have the honour to present the annual reports of inspection of mines, together with reports of Wardens and other officers, accompanied by statistical information in regard to the goldfields and metalliferous mines of the Dominion, for the year ended the 31st December, 1909.¹¹⁶⁰

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Karangahake Goldfield. — Talisman Consolidated (Limited): For a considerable time the lower levels of this mine were inaccessible, owing to an influx of water; but in June, 1909, additional pumping plant having been installed, the mine was unwatered, and the south drive of the No. 13 or bottom level advanced to and beyond the boundary of payable values as obtained in the level above. After further driving at a distance of 711 ft. south of the crosscut, highly payable sulphide-ore was again obtained, and this continued for 120 ft., varying in width up to 7 ft., the present southern face of the level being 1,263 ft. from the incline shaft, and the northern face 416 ft. from that shaft. Winzes sunk prove the maintenance of high values underfoot in the southern level. It has been recently decided by this company to vigorously develop the Woodstock section of their mine by enlarging and sinking the Woodstock shaft to connect with the lowest workings of the Talisman section. At the present time the bottom of this shaft is about 10 ft. above the No. 13 level of the Talisman workings, and a considerable distance therefrom. A horizontal compound pumping-engine is being installed in a chamber at drainage level in this shaft to work rope-driven Cornish pumps of 26 in. diameter by 10 ft. stroke. A reorganization of the reduction-works is being carried out. Three new tube mills and eight pneumatic slimes agitators have

¹¹⁵⁹ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1910-I.2.1.4.8>

MINES STATEMENT, BY THE HON. RODERICK McKENZIE, MINISTER OF MINES., Appendix to the Journals of the House of Representatives, 1910 Session I, C-02

¹¹⁶⁰ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1910-I.2.1.4.9>

THE GOLDFIELDS OF NEW ZEALAND (REPORT ON)., Appendix to the Journals of the House of Representatives, 1910 Session I, C-03

been installed, and further additions have been contemplated. This company treated 46,456 tons of ore (2,240lb.) for a yield of £208,886, and paid dividends amounting to £105,000 during the year. The average yield per ton was £4 10s., and the cost of production £2 0s. 4d. per ton.

New Zealand Crown Mines (Limited): Since November, 1908, operations in this mine have been suspended pending the installation of electrically driven pumps, now completed. When the mine is unwatered operations will probably be directed to the considerable body of rich sulphide ore which was proved in the No. 5 level prior to cessation of work. This company is under reconstruction.

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Cinnabar. During the year systematic operations were undertaken for the development of the cinnabar deposits of the Auckland Province by the Ascot Cinnabar Syndicate, who have laid down at their property, Mackaytown, near Karangahake, a Novak furnace of the latest type — 21 ft. in height by 8 ft. diameter—with necessary condensers, cooling-chambers, and pipes, the whole having a capacity of 8 to 10 tons per day. The cinnabar-deposit outcrops within the company's property, on the face of the hill, above the township, and consists of a strong vein of flint and quartz traversing andesite country, the cinnabar occurring in the form of shoots in the vein matter. The ore proved contains about 10 per cent, cinnabar, but some very much richer pockets have been found. The vein has been traced for about 15 chains on the surface, and a drive has been put in from the face of the cliff, and the cinnabar followed for about 30ft. About 50 tons of ore has been obtained, the treatment of which is now being carried out. Development-work has not proceeded far enough to enable an estimate of the extent of the deposits to be made, but operations are being conducted in an unostentatious and practical manner, and deserve success. A company is being formed to work this property, the efforts of the syndicate in testing the property proving satisfactory.

Mr. Matthew Paul, Inspector of Mines, Waihi

to the Under-Secretary of Mines, Wellington. Sir, — Inspector of Mines' Office, Waihi, 31st March, 1910. I have the honour to furnish herewith my report on the gold-mining industry in the Hauraki Mining District, together with statistics, for the year ended 31st December, 1909.

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Karangahake.

Talisman Consolidated (Limited).

A considerable amount of development-work was carried out in this mine during the year. The No. 8 crosscut at No. 11 level was extended to the Crown boundary, or a distance of 1,030 ft. from starting-point. At 540 ft. the Welcome reef was intersected, at a point where it is about 4ft. wide and carrying low values. A little driving has been done north and south on this reef without disclosing any improvement, but further development will be done during the ensuing year. The No. 10 crosscut at No. 11 level has been driven westward from face of south drive for over 500 ft. without intercepting anything of value. It is intended that this crosscut shall be advanced to the western boundary.

No. 12 Level. —Considerable driving has been done southward in the Dubbo section, disclosing varying widths of quartz, giving low values. Several crosscuts were driven east and west off main drive in this section without intersecting any parallel ore-bodes. The north drive at No. 12 level has been advanced about 300 ft., with varying results. This drive will be extended considerably further, so as to prospect the ground below Woodstock No. 5 level.

No. 13 Level. —This level was drained in June last, and subsequently the south drive was advanced to and beyond the boundary of payable values. Although the southern boundary of the ore-shoot was reached earlier than expected, the length of payable ore at this level is fully as great as at No. 12 level. After the south drive got beyond the ore-shoot the reef became small and very poor, but at the close of the year an improvement occurred both in width and values. Highly payable values reached at 711 ft. south of the crosscut, and the same continued for 120 ft., with a width varying from 2½ ft. to 7 ft. From 831 ft. to the present face (857 ft.) the width of the reef is 6ft., but the values in this last section are much lower. The south drive is measured from a crosscut that is 406 ft. south of shaft, therefore the present face is 1,263 ft. south of shaft. The five winzes that are being sunk below No. 13 level show that the average of the conditions existing along the level are being maintained.

The north drive at No. 13 level is 416 ft. from the shaft. The north drive at No. 12 level is 993 ft. north of shaft. It is intended to continue driving south on this level until the Dubbo section is reached, a distance of about 600 ft. A little crosscutting has been done, both east and west, of south drive, without intersecting anything of value. About 150 ft. of driving has been done northward on the east vein, and this progress has disclosed a short run of good ore. Further driving on the reef will be necessary before getting under the section carrying the best values on levels above.

Shaft-sinking was resumed in the last quarter of the year, and shortly thereafter a fissure was cut that drained the water that hitherto flowed along level from the southern section of the mine. This has stopped shaft-sinking for the time being, but has enabled the sinking of the winzes mentioned before. As soon as these winzes overtake the water pumps will be put in some of them. This will relieve the shaft pumps considerably, and should make shaft-sinking thereafter much easier.

A chamber at the Woodstock, 110 ft. by 30 ft. by 25 ft.. has been cut out and timbered. In this chamber will be installed the pumping-machinery that will ultimately drain the whole of the mine. A large part of this machinery has arrived, and the necessary arrangements for its installation are well in hand.

Treatment Plant. —Considerable additions and alterations to this plant have been made. In consequence of this rearrangement of reduction plant, further power was required, and a new 500-horse power Fraser and Chalmers' compound engine has been erected and brought into use. This engine has cylinders of 18 in. and 35 in. respectively by 3 ft. 6 in. stroke, and runs at 75 revolutions per minute. A new surface condensing plant for main engine and auxiliaries has also been installed. Additional boilers will be installed at the power plant during the next year. Also, a new boiler plant is to be erected at

Woodstock No. 5 level to supply steam for the Woodstock shaft pumping and winding machinery.

The following additions have been made to the treatment plant: Complete new assay office with latest appliances; new smelting-room, with tilting, oxidising, and bullion furnaces; slag reduction plant and prospecting stamps: new slimes, Spitzkasten's; eight new pneumatic slime-agitators, each 30 ft. by 8 ft.; one new slime-dewateriser; three tube mills, each 4 ft. by 12 ft., on the Abbe roller principle; also five classifiers and two sand-elevators.

New Zealand Crown Mines (Limited).

Since the month of November, 1908, the development of the mine has been suspended, and the attention of the staff has been devoted to the erection of a new electrical-power plant, the completion of which is essential to the opening-up of the mine below No. 5 level. The powerhouse and boilers are situated close to the Government railway, and consists of two Babcock boilers, designed to raise 6,000lb. of steam per hour at a pressure of 160lb. The boilers are connected to superheaters capable of imparting 500° Fahr. of superheat to the steam produced from the boilers.

The machinery in the power-house is as follows: One 550 BHP high-speed triple-expansion engine: one 550 K.W. generator, 25 periods, 2,200 volts. 300 revolutions per minute; one 25 K.W. exciter, 110 volts, 750 revolutions per minute; one two-panel switchboard; one Francis turbine; one condenser; one feed-water heater.

Transmission Line. — From the power-station to the mine the distance is 92 chains, and the transmission is by single circuit, consisting of three bare stranded conductors, each made up of thirty seven wires of No. 4 standard gauge. The conductors are carried on ironbark and kauri poles, which in the Waitawheta Creek are bolted to the solid rock, and stayed by struts and guy ropes. Under the aerial tramways in the gorge the cable is laid in 3 in. galvanized pipes under the ground. The machinery was started on the 10th July, and worked without the slightest hitch.

On the 12th August a start was made to drain the mine with the old pumping plant, and the water has been drained down to No. 4 level. When the water is drained to No. 5 level one of the electrically driven pumps will be installed, and a start will be made to sink on the rich shoot of ore in the bottom of this level, which total length is 227ft. For a distance of 128ft. the width of lode is over 4 ft., and the assay-value £6 per ton. North of this shoot of ore a winze has been sunk 284ft. in good ore, and near the bottom some very rich sulphide-ore was obtained. There is also evidence of a body of sulphide-ore at greater depth.

Dominion Mine.

The low-level crosscut to intersect the Dominion lode has been driven a distance of 648 ft. Owing to the lack of ventilation, work has been stopped for the present, and the men removed to prospect the surface of the mine. A new reef was discovered, and a winze sunk on it proved it to be 12 ft. wide, and giving fair values. A crosscut is now being put in to intersect this lode at 100 ft. down, in solid country.

Comstock United.

Work in this mine has also been chiefly confined to surface prospecting. No. 1 level was driven 310 ft., No. 2 level 273 ft., and No. 3 level 260 ft. A considerable amount of crosscutting was done on this last level also. The average number of men employed was seven.

Karangahake Mine.

During the past year 1,500 ft. of driving in crosscuts, 250 ft. of driving on reefs, 90 ft. of rising, and 40 ft. of sinking has been done in this mine. The ore treated (45 tons) produced gold to the value of £39 7s. 6d.[treated at Thames?]

Crown Royal Mine.

Operations on behalf of this company were started on the 24th August. Since then an adit level has been driven 240 ft., and at this point the hanging-wall of No. 1 reef was intersected and penetrated for 9 ft. without sign of foot-wall. Three assays taken gave the following results: 9s. 9d., £1 10s., and £8 1s. per ton. An average of six men have been employed.

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Ascot Cinnabar-mine.

This mine is situated on the east side of Mackytown, on the Rahu Road, about one mile north of the Talisman Mine. The property consists of 176 acres, a mill-site of 5 acres, and timber reserve of 20 acres, together with aerial tram and dam-site. The cinnabar-deposit outcrops on the face of a steep escarpment about 600 ft. above the Rahu Road. Here there is a very strong body of very flinty rock above which is a layer of from 4 ft. to 6 ft. of andesite. The cinnabar occurs in well-defined almost horizontal veins striking east and west along the contact of the flint rock and andesite, also penetrating the latter, and as kernels and veins in the former. Its full extent has not yet been determined, but it has been traced for a distance of 15 chains. The situation of the deposit enables it to be opened up with comparative ease by removing the overburden and dumping over the edge of the cliff. Some 5 chains in length has been dealt with in this manner, proving the cinnabar-formation to vary from 6in. to 10 ft. in width. It carries an average of about 10 per cent. of cinnabar, but there are some rich pockets containing almost pure cinnabar, assaying some 70 to 80 per cent. mercury. A drive has been put in at right angles to the face of the cliff, and follows the cinnabar for a distance of 30 ft., when it pinches out. At about 15 ft. a soft formation, 18 in. in width, was passed through, carrying pug rich in cinnabar, and also nodules of pure cinnabar, the whole averaging about 25 per cent. of mercury. A drive running parallel to the face of the cliff was carried along on this soft formation, good ore being obtained from it. The rich pug is going underfoot in the drive, and appears to be contained in a series of pipes; these are doubtless connected with the source of the deposit. About 10 chains west of the main working, and on the same line, the cinnabar is found again outcropping. A cut put in at this point exposed rich cinnabar, assaying 70 per cent. of mercury. No further work has been done at this point, so that its extent is not yet known. Although comparatively little work has been done, and that chiefly of a prospecting character, there are some 50 tons of ore stacked at the mine awaiting treatment which averages about 15 per cent. of mercury. Development-work has not proceeded far enough to enable any useful estimate of ore in sight to be made, but it is certain that a few hundred tons of ore, averaging about 10 per cent., can be obtained without much deadwork.

The Novak furnace installed for the treatment of the ore is of the latest type, it being double walled, 21 ft. in height by 8 ft. diameter externally. The inner wall is of firebrick and the outer of ordinary brick, the whole being surrounded by an iron jacket, which serves to prevent the escape of fumes. The ore and fuel (charcoal) are charged at intervals at the top of the furnace, which is covered by a "bell," with water-seated lid, which enables the charging to be effected without escape of vapour. The spent ore is drawn off through openings at the bottom of the furnace.

The mercurial vapours are drawn from the furnaces into condensers, consisting of a series of Y-shaped stoneware pipes 12 in. in diameter, of which there are three sets side by side. The liquid mercury collects in water-filled troughs running under the condensers. From the condensers the fumes are led into two large chambers containing water-sprays, where dust and residual mercury are collected in the form known as "soot," which is subsequently re-treated. The fumes are further conveyed through 150 ft. of 12 in. pipes laid underground, with cesspits every 10 ft. for retention of any mercury which may have passed the condensers and chambers.

An 11 in. suction-fan, with capacity of 5,000 cubic feet per minute, and driven by a Pelton wheel, gives the reduction of pressure required to produce the necessary draught through the furnace, condensers, chambers, and pipes.

Mr. Warden Burgess, Thames,

to the Under-Secretary, Mines Department, Wellington. Sir. Warden's Office, Thames, 20th May, 1910. I have the honour to forward herewith my report on the Hauraki Mining District for the year ended 31st December, 1909.

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At Karangahake, the Talisman Mine, which is second only to the Waihi Mine in its annual output of gold, is the only claim that has yielded returns throughout the year. The difficulty experienced with the water in the mine, which prevented operations at the No. 13 level, has been overcome by the employment of a system of pumps, which have drained the water from this level. A very complete pumping plant is being installed in the Woodstock shaft, which will, when completed, effectively secure the permanent unwatering of the mine. Work has been resumed in the No. 13 level, and has disclosed reserves of payable ore for future operations.

The only other prominent mine at Karangahake—the New Zealand Crown Mines—has been closed down during the past year, while an electrical plant of a very complete and effective character was being installed. This work, which has involved the expenditure of about £20,000, is nearing completion, and mining-work is being resumed. The unwatering of the mine which will be effected by this plant will enable operations on an extensive scale to be conducted at greater depth than previously, and successful development may be expected during the coming year.

There are other claims at work at Karangahake, but they have not reached the stage of gold production, the operations so far being of a prospecting nature.

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The cinnabar-mine taken up by a syndicate near Mackaytown, Karangahake, has been well prospected during the past year, and a considerable amount of

development-work has been done. Some specimens of the ore obtained are exceptionally rich, and the prospects are generally sufficiently good in the opinion of the owners to justify the erection of an expensive plant for the extraction of the metal from the ore. The construction of the plant has already been begun in convenient position, not far from the mine.

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Mr. F. W. Reid, Director of the Karangahake School of Mines

to the Under-Secretary, Mines Department, Wellington. Sir, — Karangahake, 30th April, 1910. I have the honour to present the following report upon the work of the Karangahake School of Mines and the branch school at Waikino for the year ended 31st December, 1909.

Attendance. —The average number of individual students in attendance for the three terms of the year was forty-live, with a class attendance of eighty-seven. There were nine classes in operation at each centre.

Examinations. —At the annual examinations 15 students presented themselves at Karangahake and 13 at Waikino. The passes obtained were 5 first class, 16 second class, and 12 third class, in addition to 20 passes in the practical examinations.

Prizes. —The President's medal, presented by Mr. J. Nodwell for competition at Karangahake, was awarded to Mr. G. Hyde. At Waikino the mathematics prize, presented by the Waihi Students' Association, was won by Mr. S. Fuller, and Mr. L. Wilson secured the Council's prize for drawing and mathematics.

Equipment. —The Pelton wheel installed for driving the dynamo has given entire satisfaction, and greatly facilitated the work of the electrical class. The assay furnace was rebuilt, and several minor improvements carried out. At Waikino an additional room to serve as laboratory for wet assaying is now in course of erection.

Library. —The students largely availed themselves of the standard works supplied by the Department for their use. These books are a decided acquisition to the library. The Department might with advantage include a few works on the metallurgical treatment of ores, in which most of the students at Waikino are interested. There can be no doubt that this is as integral a part of the mining industry as the exploitation of the mines themselves.

Mineral Collection. —This has been increased by addition of specimens from various sources, but chiefly by a representative collection of Tasmanian ores kindly forwarded by Mr. D. V. Allen, Director Zeehan School of Mines.

Assays. —A large number of assays were made for prospectors and tributers, in the former case free of charge.

Staff. —Mr. C. Banks resigned from the instructorship in drawing at Waikino, his place being taken by Mr. S. Fraser.

I have again to record my appreciation of the zealous work done by the members of the teaching staff, and to express my thanks to the Council and secretary for their assistance and support.

I have, &c, F. W. Reid, Director.

WAIHOU AND OHINEMURI RIVERS (REPORT OF COMMISSION APPOINTED TO INQUIRE INTO SILTING OF); TOGETHER WITH MINUTES OF EVIDENCE AND EXHIBITS.¹¹⁶¹

Page iii

Whereas by a Proclamation, dated the twenty-fifth day of March eighteen hundred and ninety-five, the Waihou and Ohinemuri Rivers, in the Hauraki Mining District and the Auckland Land District, were, in accordance with the Mining Act then in force, duly proclaimed as watercourses into which tailings, waste water, and mining debris from mining claims in their vicinity might be discharged. And whereas it is now claimed that by the operation of the said Proclamation landowners in the vicinity of these rivers are injuriously affected and that the navigation of the said rivers is impeded....

The report is not included here. I have Word and PDF versions.

¹¹⁶¹ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1910-I.2.1.4.30>

WAIHOU AND OHINEMURI RIVERS (REPORT OF COMMISSION APPOINTED TO INQUIRE INTO SILTING OF); TOGETHER WITH MINUTES OF EVIDENCE AND EXHIBITS., Appendix to the Journals of the House of Representatives, 1910 Session I, C-14

1910**11 January**

THE GOLDFIELDS.

UPPER THAMES FIELDS. CROWN ROYAL. (By Telegraph.—Own Correspondent.) WAIHI, this day.

Encouraging developments have taken place in the Crown Royal Mine (Karangahake), where a large body of ore was recently intersected in the new low level crosscut. The results so far are highly satisfactory. The reef has been penetrated a distance of eight feet with no sign of the other wall. Assays made every two feet range from 30/- upwards, the highest being £8 per ton. The manager (Mr. O'Keefe) has forwarded a general sample of the reef to Auckland, which when assayed should give the average value of the lode. Some of the ore samples are heavily mineralised, and also carry copper. When the present level is opened up there should be 400 feet of backs available.

ASCOT. The new plant at the Ascot Cinnibar [Cinnabar] Mine (Karangahake) is nearing completion. The plant is being erected under the supervision of Mr. D. Cousins, manager. At the mine itself development work is proceeding satisfactorily, and the ore deposits promise well. A new level has been commenced lower down from where the main works are in operation, and some nice specimens have already been obtained. This development proves that deposits are not merely confined to the surface. A contract has been let for the making of charcoal. There is a good quantity of ore already stacked, and also in sight ready for breaking down.¹¹⁶²

20 January

NEW ZEALAND CROWN MINES. LONDON, 10th December.

Sir Westby B. Percival presided at the thirteenth annual ordinary general meeting of the New Zealand Crown Mines Company, held on Wednesday...

The new plant was now completed and ready for work, and was considered to be highly efficient. The water has already been pumped from the mine down to the No. 5 level, and during the last three or four weeks work had been resumed there, and the mill had already been restarted during the current month, but was not yet running full time. It would soon be possible to judge whether the venture would meet with the looked-for reward. Whatever the result might be, nothing else could possibly have been done. The directors - would have preferred to have first proved the quantity of pay ore so that they might have been perfectly sure that there was sufficient of it to justify the expenditure involved for the new machinery, but it was not possible to do this owing to water, and consequently a certain amount of risk had to be taken. The position now was one of great interest, and although the modern mine properly conducted was worked when possible on lines which left little to chance, yet in their case they had to take some risk and lay down their machinery without knowing as much as they would have liked to know about the value of the ground they were about to work. The new plant was, the chairman believed,

¹¹⁶² <https://paperspast.natlib.govt.nz/newspapers/AS19100111.2.54>

Auckland Star, Volume XLI, Issue 9, 11 January 1910, Page 5

complete of its kind, and the first hydro-electric power plant in New Zealand [no]. It was to be worked by water, supplemented by a steam plant when water was insufficient...¹¹⁶³

1 February

REVIEW OF THE YEAR

TALISMAN CONSOLIDATED.

At Karangahake the Talisman Consolidated Company's mine was the only bullion-producer during the past 12 months, the yield for the period being valued at £208,885 15s 10d, against £218,992 4s.4 d in 1908, an increase [decrease] of £10,106 8s 6d. Development works at depth were considerably retarded by the influx of water at No.13 level, and to prevent a recurrence in the future the management embarked on a comprehensive and thorough scheme for unwatering the mine and improving the haulage system by installing a powerful plant in the Woodstock shaft, capable of coping successfully with the whole of the water from the field for several years to come. The work now in progress is one of considerable magnitude, and when the installation is completed the question of drainage will needs cause the shareholders no further uneasiness...

NEW ZEALAND CROWN MINES.

During 1909 the New Zealand Crown Mines (Karangahake) were closed down, pending the installation of an up-to-date hydro-electrical plant, for the unwatering of the mine several hundreds of feet below the present bottom workings, and for other mining purposes. This is now nearing completion, and meanwhile mining and milling operations on a curtailed scale have been resumed...

The future of the Crown mine will, of course, depend very largely upon development works to be prosecuted at greater depth, and which are only made possible by the installation of the new plant, involving a capital expenditure of something like £20,000. The company's mine superintendent speaks in hopeful vein of the prospects ahead.

Several other claims in and about Karangahake were more or less systematically worked during the year, the operations being mainly of a prospecting nature, but with the close of 1909 no developments calling for special mention had been disclosed.¹¹⁶⁴

2 March

A new departure (says the Karangahake Advocate), and one that should be productive of excellent results, has been made by the Council of the Karangahake School of Mines. It has been decided to offer two scholarships annually to boys attending the public schools of Paeroa, Karangahake, and Waikino. The scholarships will be awarded on the results of an examination to be held at the close of each year by the Director of the School of Mines. The

¹¹⁶³ <https://paperspast.natlib.govt.nz/newspapers/EP19100120.2.32>

Evening Post, Volume LXXIX, Issue 16, 20 January 1910, Page 4

¹¹⁶⁴ <https://paperspast.natlib.govt.nz/newspapers/NZH19100201.2.86>

New Zealand Herald, Volume XLVII, Issue 14283, 1 February 1910, Page 7

scope of the examination will be kept within the public schools syllabus for 6th standard work. Successful candidates will be granted free tuition at Waikino or Karangahake Schools of Mines for a term of one year, to be increased to two years on a favourable report from the director. The scheme is one that cannot fail to have the hearty support of all concerned, as whilst engendering a healthy rivalry amongst the boys, it will doubtless lead many of them to set their feet firmly on the path to a sound technical education.¹¹⁶⁵

18 March

ASCOT CINNABAR SYNDICATE.

The Ascot Cinnabar Syndicate, which has acquired an area of cinnabar-bearing country at Mackaytown, near Karangahake, hopes to start treating ore shortly. A Noval [Novak?] furnace has been erected, and is now being placed in commission. The syndicate will endeavour to secure the bonus of 4d per lb, which the Government has offered for the first 100,000lb of marketable quicksilver free of impurities produced in the Dominion.¹¹⁶⁶

19 March

PAEROA WARDEN'S COURT. Paeroa, Friday. At the Warden's Court at Paeroa today, applications were granted as follows: —...

J. B. Morris and L. Meager, coal prospecting license for 200 acres for two years at Karangahake...¹¹⁶⁷

30 March

PAEROA FLOODED

PAEROA, 9.20.

Paeroa, situated on the delta formed by the Ohinemuri and the Waihou rivers, is again being visited by a serious flood...

The unusually heavy rain of the past two days has been making the settlers very anxious, and the worst fears were realised this morning just about daybreak, when the Ohinemuri flooded its banks, and already has done a great deal of damage. It is the biggest flood ever recorded in the district, and at the time of writing, the waters are still rising. Paeroa is flooded, the streets being in some places over three feet under water. The main street is a small torrent, and the lower parts of the town are rapidly disappearing from view. Most of the shops in the main street are flooded, and the houses in the Puke and Junction roads are all more or less feeling the effects of the rising.

PAEROA. 10.30. The line from Paeroa to Waihi runs along the bank of the Ohinemuri, and the service has been suspended owing to the rails being under water in a number of places.

¹¹⁶⁵ <https://paperspast.natlib.govt.nz/newspapers/OG19100302.2.9>

Ohinemuri Gazette, Volume XXI, Issue 2613, 2 March 1910, Page 2

¹¹⁶⁶ <https://paperspast.natlib.govt.nz/newspapers/NZH19100318.2.9>

New Zealand Herald, Volume XLVII, Issue 14322, 18 March 1910, Page 3

¹¹⁶⁷ <https://paperspast.natlib.govt.nz/newspapers/NZH19100319.2.10>

New Zealand Herald, Volume XLVII, Issue 14323, 19 March 1910, Page 5

PAEROA, 11.15. Heavy rain is still falling, and the waters continue to rise. The station yard is quite flooded. The express train from the Thames got through this far all right, but cannot proceed any further, as the line is washed away. Between here and Karangahake the roadway is in some places seven feet deep, and the people are isolated from this end till the waters go down. It is difficult yet to say the extent of the damage, but reports come to hand of live stock being lost. The waters came up so quickly that many people were taken unawares, and there have been several narrow escapes. The flood is the biggest on record, and the river is still rising.¹¹⁶⁸

Flood!

31 March

THE GALE. (Continued)

...Reports from Paeroa are to the effect that the district is flooded and that there are several feet of water in the main streets. The river, which must be obstructed, rose so rapidly in the vicinity of the tunnel at Karangahake, that the water rushed through the railway tunnel and caused considerable consternation. The backed-up waters formed a raging torrent in more than one place, and some of the sights on the road from Waihi to Paeroa were quite exciting. The floods caused considerable interruption in telegraph communication and several districts were almost isolated...¹¹⁶⁹

1 April

The Karangahake tunnel, which is 20ft or 30ft above the normal level of the river was reached by flood for the first time, with the result that a tremendous volume of water rushed through, carrying with it logs, etc., which caused a serious block. Several other wash-outs and slips happened at other sections of the line, while the railway telephone, telegraph, and tablet wires along the route, were in many places completely demolished.¹¹⁷⁰

AFTER THE FLOOD. COUNTING THE COST

A lot of damage has been done to the mining companies' properties at Karangahake, amongst other damage being the crumpling up of the Talisman water-race. One man who came through from Waihi this morning says the race just looks as if it had been caught in a giant's hand and squeezed and twisted in all directions.¹¹⁷¹

2 April

IN THE DOMINION. A fierce gale, accompanied by very heavy rain, visited the northern portion of New Zealand during the week, and caused extensive

¹¹⁶⁸ <https://paperspast.natlib.govt.nz/newspapers/AS19100330.2.33>

Auckland Star, Volume XLI, Issue 75, 30 March 1910, Page 5

¹¹⁶⁹ <https://paperspast.natlib.govt.nz/newspapers/AS19100331.2.4>

Auckland Star, Volume XLI, Issue 76, 31 March 1910, Page 2

¹¹⁷⁰ <https://paperspast.natlib.govt.nz/newspapers/NZH19100401.2.71>

New Zealand Herald, Volume XLVII, Issue 14333, 1 April 1910, Page 6

¹¹⁷¹ <https://paperspast.natlib.govt.nz/newspapers/OG19100401.2.14>

Ohinemuri Gazette, Volume XXI, Issue 2624, 1 April 1910, Page

damage. The gale was the tail-end of a hurricane which struck Fiji and Norfolk Island, where very heavy damage was caused to the crops, trees, and buildings. The disturbance reached New Zealand on Tuesday, its approach being heralded by heavy rain. The gale followed, and continued for over two days, during which time many buildings were unroofed, trees were blown down in all parts of the country, and crops and fences were levelled. The Ohinemuri district suffered most, and while the rainfall in Auckland was 6.38 inches for the three days, in Waihi it was as much as 14 inches in 16 hours. Paeroa was under water on Wednesday, when the Ohinemuri River, rising in a few hours, overflowed its banks. The first overflow was at 7 a.m. and an hour and a-half later the town by the railway station was completely submerged.

The wind was blowing a hurricane from the east, and the rain continued to fall in torrents. The flood waters steadily rose, and by 12 o'clock nearly every shop in the main street was flooded out. The residents of the houses on the low-lying lands in Rye-lane, Puke road, Junction-road, and Karangahake road were also flooded out of their houses, the water rising 3ft in some of the houses...

The residents of Waikino and Karangahake, and, in fact, all along the river suffered severely. Waikino was flooded to a depth of ten feet in some places, and people had to be rescued from their houses by rafts. There was seven feet of water in the shops on the main road, and three feet of water was running through the tunnel on the Paeroa-Waihi railway, carrying with it logs and other debris. The tunnel is now blocked up with logs and rocks. The line is all washed out, and slips have occurred all the way along...

The Talisman Company at Karangahake will also lose a considerable amount of property. Their iron water race is destroyed, and the battery is very badly damaged [the old Woodstock battery]...¹¹⁷²

DAMAGE BY FLOODS. LOSSES -AT KARANGAHAKE.

THE TALISMAN WATER-RACE. TWO HOUSES SWEEP AWAY.

Surprising occurrences have taken place in the Karangahake Gorge, the walls of which confined the raging waters, causing the roaring stream to undermine the roadway cuttings for many chains and twist the huge steel pipes forming the Talisman water-race into fantastic shapes. Over half a mile of the race has been completely destroyed, and at lowest estimate the damage will not be repaired for £3000. A considerable quantity of roofing was also blown off the Talisman power house, and a short distance higher up the river two residences were swept away by the roaring torrent early on Wednesday morning. Mrs. Robinson and her four children occupied one and Mr. D. Skirsky the other. Fortunately all of them got out just in time to avert disaster.

Several outhouses on the river banks at Waikino were washed away, while shops in the main street were flooded as high as the counters.¹¹⁷³

4 April

LOCAL AND GENERAL.

¹¹⁷² <https://paperspast.natlib.govt.nz/newspapers/AS19100402.2.47>

Auckland Star, Volume XLI, Issue 78, 2 April 1910, Page 8

¹¹⁷³ <https://paperspast.natlib.govt.nz/newspapers/NZH19100402.2.83>

New Zealand Herald, Volume XLVII, Issue 14334, 2 April 1910, Page 8

The Ohinemuri County Council gives notice that in order to effect repairs the road in the gorge at Karangahake is absolutely closed for all traffic. Notice is also given that any person removing or interfering with any fence erected across the road will be prosecuted.¹¹⁷⁴

8 April

MINING NEWS. TALISMAN.

The mine superintendent has cabled to London, as follows:-

...Floods have destroyed more than half the Woodstock water-race. Damage estimated at £3000. It will take 90 days to repair the damage. Work will be carried on as usual.¹¹⁷⁵

MORGUE.

The Karangahake Miners' Union wrote stating that they desired the morgue at Karangahake erected alongside the ambulance shed.¹¹⁷⁶

It was decided to make a concrete crossing on the Talisman-road, Karangahake. The Council decided to make a ford over the Ohinemuri river where the bridge was washed away on the Waihi-Tauranga-road.¹¹⁷⁷

This is where the Old Tauranga Road crosses the river by McKinney Road?

What is the Talisman Road?

9 April

MINISTER'S GOLDFIELDS TOUR.

The Engineer had reported as to damages, stating that footbridges were destroyed at Mackaytown station, Owaharoa station, also the footbridge and Benner's bridge, near Waikino. The estimated cost of replacing the Mackaytown bridge was £640, and of Benner's bridge £275; Owaharoa bridge would not need replacing.

UNWORKED MINING AREAS.

Mr. Taylor introduced a deputation from the Miners' Union.

Mr. Sawyer (president) said it was against the best interest of mining that protection should be given so readily to companies holding large areas of land; it was also bad to grant such large areas for mining claims. If the claims were in smaller areas they would be better worked. He considered it ridiculous to grant protection to work 100 acres with six men. If each hundred acres had 33 men employed there would be plenty of work for miners. There was one claim held by a company for the past 38 years, which had only been worked 12 months in the whole time. Diggers had no chance to take up land for themselves.

¹¹⁷⁴ <https://paperspast.natlib.govt.nz/newspapers/OG19100404.2.8>

Ohinemuri Gazette, Volume XXI, Issue 2625, 4 April 1910, Page 2

¹¹⁷⁵ <https://paperspast.natlib.govt.nz/newspapers/NZH19100408.2.10>

New Zealand Herald, Volume XLVII, Issue 14339, 8 April 1910, Page 3

¹¹⁷⁶ <https://paperspast.natlib.govt.nz/newspapers/OG19100408.2.25>

Ohinemuri Gazette, Volume XXI, Issue 2627, 8 April 1910, Page 3

¹¹⁷⁷ <https://paperspast.natlib.govt.nz/newspapers/AS19100408.2.26>

Auckland Star, Volume XLI, Issue 83, 8 April 1910, Page 3

Mr. Lucas also spoke in support of the contention. He said some companies held four or five claims of 100 acres each, and only employed a few men in one corner of one claim. One claim of 100 acres had been held for 14 years by a man and his mate alternately, and was never worked. The so-called mining companies in many instances never intended to work the ground; it was simply held for speculative purposes, the object being to float a company and unload shares on the public.

Mr. McKenzie said he did not want the ground to be protected too long, but, if the land was forfeited, someone could take the ground up again next morning. The proper course was for the Miners' Union to oppose protections in such cases. He did not think any of the companies within the drainage area should be pressed to man their ground until the tunnel was completed. He was strongly opposed to people holding areas unworked for years.¹¹⁷⁸

14 April

NEW ZEALAND CROWN MINES

RECONSTRUCTION PROPOSALS. HALF MILLION 4/- SHARES.

LONDON, April 13.

The New Zealand Crown Mines, Ltd., propose to voluntarily wind up and form a new company with a capital of £100,000 in 4/- shares, giving the Consolidated Goldfields Co. of New Zealand an option at par of 150,000 shares for guaranteeing the working capital.

A LITTLE HISTORY. The New Zealand Crown Mines, Ltd., is a company controlled in England, the bulk of its 200,000 shares being held in Great Britain. The property held by the present company is the second in importance of the Karangahake goldfield, and lies next door to the gold-producing Talisman mine. When the local company first took up the property about 1884, it was named the Golden Crown, and for some years was worked as such, and became a good gold producer, some very rich ore being found at the surface, from which work was carried on downwards. Those were the days before the advent of knowledge that the ore contained silver, and much valuable stone was sent to the mullock heap, as the only treatment the ore received was for gold in the ordinary battery.

Subsequently the property was purchased by a Scottish syndicate, which formed the present New Zealand Crown Mines Company, Ltd., and during the period in which the mine has been worked by this company, a considerable quantity of bullion has been recovered, and several dividends paid. An adjoining property was purchased and added to the area in the early days of the present company and it was generally considered that this mine had one of the most promising prospects on the peninsula. For some years, however, the mine eat up its production, and for a considerable period past it has dropped altogether out of the ranks of bullion producers. Development work was stopped a little while back to facilitate the installation of an up-to-date electrical plant for running the battery and the rock drills. Operations resumed a month or two ago, but up to the present no crushing returns have been announced. The 200,000 shares into which the present company is divided are

¹¹⁷⁸ <https://paperspast.natlib.govt.nz/newspapers/AS19100409.2.57>

Auckland Star, Volume XLI, Issue 84, 9 April 1910, Page 9

£1 shares fully paid up, and for some time past it has been rumoured that reconstruction of some sort would take place to enable the development work in the mine to proceed without hindrance.¹¹⁷⁹

16 April

Talisman

At the Woodstock shaft, where the powerful pumping and haulage plant is to be installed, the preliminary work is well forward. The foundations for the winding engine are going in, and preparations are being made to put in the foundations for the pumping engine and driving gear. The chamber for the capstan engine, to be used in the first instance in handling the pump workings in the shaft, has been excavated and timbered.¹¹⁸⁰

18 May

THE CROWN MINES. DEVELOPMENT OF DEEPER AREAS. Waihi, Tuesday.

The new pumping and haulage plant recently installed at the New Zealand Crown Mines Company's property (Karangahake) is working smoothly and satisfactorily, and as the deeper areas of the mine are now clear of water, the management has been able to embark on the scheme of developing the property below No. 5 level. Upon the success or failure of this work the future of the mine largely depends, and although sufficient has not yet been done to enable an opinion to be expressed as to the company's prospects, an inspection made yesterday by your representative showed that the developments up to the present are encouraging...

The superintendent (Mr. Daw) has recently increased the underground staff, and more miners will be employed as developments are advanced, the intention being to open up at depth as speedily as possible to enable an increased tonnage of quartz to be sent to the mill, where crushing at present is confined to one shift per day of eight hours. The pump is capable of lifting upwards of 1200 gallons per minute from the bottom workings, but has only to cope with some 600 gallons, and the coal consumption per 24 hours is but slightly over five tons. As a certain amount of power is being utilised for other purposes, it will be recognised that the company's plant makes both for efficiency and economy.

TALISMAN CONSOLIDATED. OPERATIONS AT LOW LEVELS. Waihi, Tuesday.

Since last reported upon the Talisman mine (Karangahake) has continued to open up satisfactorily in the deeper areas, the only change of moment being the falling away in the width and values of the ore on the main lode going south at No. 13 level...¹¹⁸¹

¹¹⁷⁹ <https://paperspast.natlib.govt.nz/newspapers/AS19100414.2.39>

Auckland Star, Volume XLI, Issue 88, 14 April 1910, Page 5

¹¹⁸⁰ <https://paperspast.natlib.govt.nz/newspapers/NZH19100416.2.21>

New Zealand Herald, Volume XLVII, Issue 14326, 16 April 1910, Page 5

¹¹⁸¹ <https://paperspast.natlib.govt.nz/newspapers/NZH19100518.2.14>

New Zealand Herald, Volume XLVII, Issue 14373, 18 May 1910, Page 5

23 May

MINING NEWS.

TALISMAN. THE WOODSTOCK PROPERTY. IMPORTANT PROPOSALS. ISSUE OF 45,000 NEW SHARES.

The following circular was issued to shareholders in the Talisman Consolidated Gold Mining Company on Saturday.

“As you are aware, upon recommendation of the company's consulting engineers, it was decided some time since to enter into a big scheme for the vigorous development of the Woodstock property, which is believed to contain much payable ore. It was decided to enlarge and sink the Woodstock shaft the required depth to connect with the lower workings of the Talisman mine, to instal permanent pumping machinery, to provide necessary winding plant, considerable mine and milling machinery, to reorganise treatment plant, and do other necessary things in connection therewith.

Towards completion of this scheme the directors have already provided over £60,000 out of accumulated and current profits. They have decided that the time has now arrived when it is desirable to capitalise this expenditure. Satisfactory developments recently made justify the expectation that the monthly returns and dividends will be maintained fully, and sufficiently increased profits earned to pay dividends on fresh capitalisation...¹¹⁸²

THE LICENSING LAW.

THE FATE OF A BARREL OF BEER.

A journey to Hikutaia by Thomas Flynn, a Karangahake resident, and the subsequent purchase by him of five gallons of beer, caused him to appear at the Paeroa Police Court on Thursday before Mr F. J. Burgess, S.M., to answer to a number of charges.

First of all he was charged with bringing into a no-license district a package containing beer, without such package bearing the statement that it contained liquor. Secondly, he was charged with purchasing liquor from Julia Corbett, of Hikutaia, for the purpose of bringing it into a no-license area, without notifying the vendor of his name and address. Thirdly, he was charged with failing to notify the vendor that he was a resident of a no-license district...

Defendant got his beer safely as far as Paeroa, but Constable Henry happened to be on the Paeroa railway station platform, and the package not being properly labelled he seized the liquor. Similar breaches of the law had been very frequent in this district, and they had been well notified through the press...¹¹⁸³

28 May

DISPOSAL OF TAILINGS.

THE ROYAL COMMISSION. HEARING PROS AND CONS Paeroa, Friday.

¹¹⁸² <https://paperspast.natlib.govt.nz/newspapers/NZH19100523.2.8>

New Zealand Herald, Volume XLVII, Issue 14376, 23 May 1910, Page 3

¹¹⁸³ <https://paperspast.natlib.govt.nz/newspapers/OG19100523.2.9>

Ohinemuri Gazette, Volume XXI, Issue 2643, 23 May 1910, Page 2

The Royal Commission which is charged with the preparing of a report for the Government upon the silting of the Ohinemuri and Waihou rivers, owing to the deposit of mining tailings in the former stream, made an early morning trip to some of the affected areas at Komata, on the lower Waihou, and resumed its sitting at 10 a.m. today. The Silting Association proceeded to bring its case to a close...¹¹⁸⁴

30 May

NEW ZEALAND CROWN MINES. LONDON; April 22.

... Having also in view the economy in working which would be effected by completing the water race, thereby saving the coal bill for running the electric plant for probably 7-months in each year...¹¹⁸⁵

This suggests that the water race is not yet completed. Was it ever?

1 June

THE ROYAL COMMISSION.

THOMAS GILMOUR

The excavated material from the Karangahake railway tunnel was thrown into the river, and most of it had gone down the river since. Mr Vickerman said the whole tunnel ran into 30,000 yards, and that was not one-twentieth of the amount put in every year from the mines. There had been a lot said about the railway tunnel, but the damage it had done was really nothing. The Chairman said this was a very good example of the immense amount of stuff that went into the river from the mines. The amount from the railway tunnel altogether was not equal to a months' output from the mines.¹¹⁸⁶

10 June

COUNTY COUNCIL. MONTHLY MEETING

MACKAYTOWN BRIDGE. Mr Lloyd moved that plans and specifications be prepared for the footbridge at Mackaytown. This was seconded by Mr Marrinan, and was carried.

The Chairman said they wanted this bridge erected in such a way that it would not be washed away by flood as were the previous bridges.¹¹⁸⁷

8 July

COUNTY COUNCIL. MONTHLY MEETING

Mackaytown Swing Bridge. — The plans for this bridge have been put in hand, and are sufficiently far advanced to enable me to arrive at a fairly accurate estimate of its cost. The estimated cost of the bridge is £524 1s 8d.

¹¹⁸⁴ <https://paperspast.natlib.govt.nz/newspapers/NZH19100528.2.95>

New Zealand Herald, Volume XLVII, Issue 14381, 28 May 1910, Page 8

¹¹⁸⁵ <https://paperspast.natlib.govt.nz/newspapers/AS19100530.2.77>

Auckland Star, Volume XLI, Issue 126, 30 May 1910, Page 6

¹¹⁸⁶ <https://paperspast.natlib.govt.nz/newspapers/OG19100601.2.9>

Ohinemuri Gazette, Volume XXI, Issue 2647, 1 June 1910, Page 2

¹¹⁸⁷ <https://paperspast.natlib.govt.nz/newspapers/OG19100610.2.19>

Ohinemuri Gazette, Volume XXI, Issue 2651, 10 June 1910, Page 3

Benner's Bridge.—Although the plans are not in hand, I have measured the site. The span will be 138 feet and the deck level one foot above the footpath. I have prepared an estimate of the cost on the lines I would propose to build the bridge and the cost would be about £177 15s.¹¹⁸⁸

The Mackaytown Swing Bridge across to the Mackaytown railway (flag) station.

Benner's Bridge is the suspension bridge near the hotel at Waikino, swept away again in 1981.

13 August

Talisman Consolidated

At the reduction works, three new tube mills and eight pneumatic slimes agitators have been installed, and further additions have been contemplated. During the year the average yield per ton was £4 10s, and the cost of production £2 0s 4d per ton.

CINNABAR LODGE.

Reporting on the Cinnabar outcrops, Mr. Reed says that during the year systematic operations were undertaken for the development of the Cinnabar deposits of the Auckland province by the Ascot Cinnabar Syndicate, who have laid down at their property, Mackaytown, near Karangahake, a Novak furnace of the latest, type, 21ft in height by 8ft. in diameter, with the necessary condensers, cooling chambers, and pipes, the whole having a capacity of 8 to 10 tons per day. The Cinnabar deposit outcrops within the Company's property on the face of the hill above the township consist of a strong vein of flint and quartz travelling in andesite country. The Cinnabar occurs in the form of shoots in the vein matter. The ore proved contains about 10 per cent of Cinnabar, but some very much richer pockets have been found. The vein has been traced for about 15 chains on the surface, and a drive was put in from the face of the cliff, and the Cinnabar followed for about 40ft. Work has not proceeded far enough to enable an estimate of the extent of the deposits to be made, but operations are being conducted in an unostentatious and practical manner, and deserve success. A company is being formed to work this property.¹¹⁸⁹

15 September

Fire destroys Woodstock battery

16 September

FIRE AT KARANGAHAKE.

WOODSTOCK BATTERY DESTROYED, TWO MEN INJURED.
TALISMAN MINE STOPPED WORKING.

A fire that will have serious results occurred at Karangahake yesterday afternoon, the Woodstock portion of the Talisman Company's battery being

¹¹⁸⁸ <https://paperspast.natlib.govt.nz/newspapers/OG19100708.2.21>

Ohinemuri Gazette, Volume XXI, Issue 2663, 8 July 1910, Page 3

¹¹⁸⁹ <https://paperspast.natlib.govt.nz/newspapers/AS19100813.2.27>

Auckland Star, Volume XLI, Issue 191, 13 August 1910, Page 5

totally destroyed. How the fire started is not known, but when discovered it had a strong hold, and all efforts to extinguish the flames proved unavailing.

An endeavour was made to rescue some of the contents of the burning building, and while this was proceeding two men were injured. Some eight men were moving some cyanide cases, when the floor gave way, and they fell a distance of about ten feet. A man named McClymont had his leg broken, while another man named Captick, who was overcome by the cyanide fumes, sustained an injury to his chest and was also hurt inwardly.

The fire destroyed nearly the whole of the air compressor plant, and the result will be that the mine must stop working for some days. How long it will take to get going again is not known, but in the meantime a large number of men will be thrown out of employment. As the Talisman employs about 350 men this will be a very serious matter if the men are unemployed long.

The plant destroyed included three air compressors and two steam engines. Part of the plant for treating the slimes, which is situated in this part of the works, was also destroyed. The new air compressor is situated in the other part of the plant [Powerhouse on Battery Flat], and by means of this the water in the mine was being kept down to-day.

The estimated amount of the damage is about £10,000.

A message from Karangahake this morning stated that the battery was still working, and that it was possible that work would be resumed in the mine on Monday. The destroyed building and plant were insured in the Victoria Insurance Company for £4500.¹¹⁹⁰

FIRE AT KARANGAHAKE. TALISMAN MINE AFFECTED.

TEMPORARY STOPPAGE OF WORK.

AN OLD MILL DESTROYED. AIR-COMPRESSORS BURNT.

Yesterday afternoon a fire at Karangahake destroyed the old Woodstock mill the property of the Talisman Gold Mining Company. The old Woodstock mill, which was situated at the junction of the Waitawheta stream with the Ohinemuri River, must not be confused with the Talisman Company's two other treatment plants, the "new mill" and the "old mill," which are situated higher up the Waitawheta. The prime importance of the old Woodstock mill is not the treatment machinery that it contained, but the air-compressors, which supplied the motive power to drive the pumps in the shaft. Unless the pumping can be kept going, the productive levels of the mine Nos. 12 and 13, must apparently be flooded.

In telegrams printed below, our Karangahake correspondent states that "a part of the Talisman air-compressing plant was totally destroyed," while our Waihi correspondent, states that it is understood that "one or two of the Talisman Company's smaller air-compressors were in the building." Inquiries made, however, of the attorney of the company, Mr. A. Hanna, show that a temporary but serious stoppage of mining operations is imperative. "The air-compressors that drove the pumps in the mine have been destroyed," stated Mr. Hanna. He had received the following telegram from the mine manager, Mr. H. Stansfield :—

¹¹⁹⁰ <https://paperspast.natlib.govt.nz/newspapers/OG19100916.2.20>

Ohinemuri Gazette, Volume XXI, Issue 2693, 16 September 1910, Page 2

"Woodstock battery plant destroyed by fire. This will stop mining operations for a time. Cannot say how long at present."

Asked, how long it would take if new air-compressing plant had to be imported and installed, Mr. Hanna said it might be some months. He could not see any way of driving the pumps other than by compressed air. It would not be possible to instal a steam engine in the shaft. Some time would be lost, but the gold was still there, only it would take longer to get it out. He could make no definite statement as to the period of cessation. The stoppage of pumping would mean that the water would rise to No. 12 level...

Except the compressors, the contents of the old Woodstock mill were, it is stated, mostly old machinery, not at present in use. The compressors were driven by a Pelton wheel, and there was in the building a steam engine, that served as an auxiliary power, in the event of the water supply breaking down.

Our Karangahake correspondent wired last evening :—"serious fire occurred in Karangahake about two o'clock this afternoon, when the old Woodstock battery, in which was housed a part of the Talisman air-compressing plant, was totally destroyed. By the collapse of the flooring a number of men fell through, and one, Fred. McClymont, had his leg broken. Others sustained minor injuries. By the exertions of the brigade and staff, the fire was prevented from destroying the company's bridges, which cross the river at this point."

The following telegram was received last evening from our Waihi correspondent :—"The old Woodstock battery, now the property of the Talisman Consolidated Company (Karangahake), was destroyed by fire this afternoon. No details have reached Waihi, but it may be mentioned that the battery—which must not be confused with the Talisman Company mill— has not been in general use for some years. It is, however, understood that a certain amount of machinery and one or two of the Talisman Company's smaller air-compressors were in the building, but to what extent the contents were damaged is not known."

A gentleman well acquainted with the destroyed building and the position of the compressors and boilers suggests that, when the fire is out, both the compressors and the boilers may be found to be not beyond repair. A restart may, therefore, be possible at a much earlier moment than would otherwise be the case. Even were the compressors completely destroyed, new ones might, with expedition, be landed in four months. The foundations would, of course, be intact.¹¹⁹¹

17 September

TALISMAN CONSOLIDATED. MINING OPERATIONS RESUMED.
OUTPUT NOT AFFECTED BY THE FIRE.

The results of the destruction of the Woodstock Mill buildings and plant by fire at Karangahake are not likely to interfere with the returns from the Talisman Consolidated Company. This fact was definitely stated in the following telegram last night:—"Now that the fire is all out, and we have been able to look over things, we find we can hold the water below No. 13 level,

¹¹⁹¹ <https://paperspast.natlib.govt.nz/newspapers/NZH19100916.2.23>

New Zealand Herald, Volume XLVII, Issue 14476, 16 September 1910, Page 5

and have this afternoon commenced mining operations, and this will enable the battery to be kept going."

In a circular forwarded to Wellington informing shareholders about the fire, the local Board point out that the compressors are only working in the Woodstock plant, and this is some distance from the Talisman Mill, and the same is covered by insurance; also that the latest developments below No. 13 level are the best in the history of the mine, and there is little or no cause for anxiety, as only part of the compressing plant is destroyed, and nothing of the Talisman Mill or plant."

A preliminary examination made shows that the air compressors appear to have sustained no serious damage from the fire, but, of course, a thorough overhaul will be necessary to exactly determine the full extent of the injury. Winding ore from below No. 13 level has been resumed, and as the large compressor is quite equal in power to the three thrown temporarily out of use, the management do not anticipate any difficulty in continuing mining and milling operations as usual, and the monthly returns should, therefore, be maintained, pending necessary repairs. The whole of the ore-producing points were fully manned yesterday afternoon.

(By Telegraph.—Own Correspondent.) Waihi, this day.

The official report to the District Coroner, in connection with Woodstock battery fire at Karangahake, shows that the property destroyed or damaged includes the mill, a building of wood and iron, containing two engines, three air compressors, vats, stamps, and the electric light plant. Approximate value is £8000. The insurance is £4260, in the Victoria office. The estimated amount under insurance is £3700, but as it appears some of the machinery is only damaged, the loss will probably be under this figure.

The origin of the fire is as follows:— Jas. Archer, engine driver, who was in charge at the time, states that a joint blew out over the air receiver, and everything near the receiver being saturated with oil, the hot air coming in contact with some waste immediately ignited it, and a blast of air escaping from the broken joint spread the flames to the woodwork which is very inflammable. The fire spread rapidly, and before the water could be turned on, the whole place was a mass of flames.¹¹⁹²

THE TALISMAN FIRE.

WORK IN FULL SWING. NO EFFECT ON OUTPUT. SUFFICIENT PUMPING POWER.

(BY TELEGRAPH. — OWN CORRESPONDENT.) Waihi, Friday.

This morning your representative visited the Talisman mine at Karangahake, with a view to ascertaining the extent of the damage caused by the fire in the old Woodstock battery yesterday afternoon, and its influence on the company's mining and milling operations. The battery building, which, in addition to the plant of the old Woodstock Company, including stamps, vanners, etc., contained three of the Talisman Company's small air compressors and vats used in connection with the treatment of ore, was completely demolished, and the machinery suffered more or less damage. A thorough overhaul will be

¹¹⁹² <https://paperspast.natlib.govt.nz/newspapers/AS19100917.2.49>

Auckland Star, Volume XLI, Issue 221, 17 September 1910, Page 8

necessary to determine the exact amount of damage, and gangs of men are busily engaged on this work. From a preliminary examination made, the compressors appear to have sustained no serious damage, and quite probably they will be in commission again very shortly. Other machinery in the building is not required in connection with present mining and milling operations, and as the building and contents were covered by insurance no very serious loss will fall on the company.

The outbreak occurred about 2.30 p.m., and by eight p.m. the necessary connections had been made with the large air compressor, and pumping operations were resumed, with the result that the water was soon well in hand, and is now being quite easily held well below No. 13 level. The winding of ore from the mine was also resumed this morning, and as the large compressor is quite equal in power to the three thrown temporarily out of use, the management do not anticipate any difficulty in continuing mining and milling operations as usual, and the monthly returns should, therefore, be maintained, pending necessary repairs. The underground staff went below this afternoon, and the whole of the ore-producing points were fully manned. It is just possible that work in the development and mullock ends will be temporarily suspended, but this, of course, will depend upon the power available from the main compressor, which, in the haulage of quartz and pumping, was only being run at half speed. Should these works be discontinued for the time being, there will be no interference with the monthly gold production from the mine, and any delay occasioned is likely to be of but short duration.¹¹⁹³

27 September

Mr. John Rickards, supervisor for the deep level crosscut, Thames, has been appointed manager of the Talisman mine in place of Mr. John McCombie, who, it is understood, is to take charge of the Crown mine at Karangahake.¹¹⁹⁴

7 October

COUNTY COUNCIL.

During the month the bridge at Owaharoa known as the "Black Bridge" was damaged by a high load passing under the backstays. One of the backstays was pulled right off the poppet head and broke the overhanging part of the poppet head. Steps were immediately taken to replace the wire and open the bridge for traffic. The cost of making the repairs was £3. The bridge is now practically as strong as ever, but the broken poppet head does not look well.

So the bridge remains after all.

FOOTBRIDGE AT KARANGAHAKE.

E. J. Kitching applied for a footbridge to be erected at Karangahake over the Ohinemuri River opposite the School of Mines.

¹¹⁹³ <https://paperspast.natlib.govt.nz/newspapers/NZH19100917.2.39>

New Zealand Herald, Volume XLVII, Issue 14477, 17 September 1910, Page 7

¹¹⁹⁴ <https://paperspast.natlib.govt.nz/newspapers/AS19100927.2.4>

Auckland Star, Volume XLI, Issue 229, 27 September 1910, Page 2

Mr Nathan moved that the letter be "received." He did not think the Council would be justified in erecting a bridge at this place, as there was another bridge close handy.

Mr Marrinan said the cost of the bridge would be very small, and he moved that the engineer report as to the cost of a bridge.

This was seconded by Mr Lloyd, who said that there were a number of people who would use the bridge, including some school children.

The motion for the engineer to report was carried.¹¹⁹⁵

WARDEN'S COURT. THURSDAY, OCTOBER 6th.

Before F. J. Burgess, Esq., Warden.

Applications were granted as follows : —Comstock United G.M. Co., protection for six months for water race at Karangahake...¹¹⁹⁶

The Comstock have a water race. Is this from Hauraki Stream, Scotchman's Gully?

5 November

The monthly meeting of the Ohinemuri County Council was held on Thursday. It was decided to erect a footbridge over the Ohinemuri river, at Karangahake, near the School of Mines.¹¹⁹⁷

22 December

The following contracts let: erection of a footbridge over the Ohinemuri river at Karangahake, M. Gojack, £104.¹¹⁹⁸

Dougherty's swing bridge (suspension bridge) is built early 1911?

27 December

TALISMAN

The work of reinstating the air compressors and other plant destroyed by the fire in the Talisman Company's old Woodstock battery, has been practically completed. With the resumption of work after the holidays the management will thus be in a position to resume development operations below No. 13 level as soon as the winzes and shaft have been unwatered.

THE CROWN MINES. IMPROVED PROSPECTS AND RETURNS. (BY TELEGRAPH. — OWN CORRESPONDENT.) Waihi, Monday.

The adoption by the recently-appointed general manager of the New Zealand Crown Mines of a vigorous development policy has already been attended with encouraging results, and the prospects underground in the company's mine (Karangahake) are now brighter than for some time past...

¹¹⁹⁵ <https://paperspast.natlib.govt.nz/newspapers/OG19101007.2.24>

Ohinemuri Gazette, Volume XXI, Issue 2702, 7 October 1910, Page 3

¹¹⁹⁶ <https://paperspast.natlib.govt.nz/newspapers/OG19101007.2.17>

Ohinemuri Gazette, Volume XXI, Issue 2702, 7 October 1910, Page 2

¹¹⁹⁷ <https://paperspast.natlib.govt.nz/newspapers/AS19101105.2.43>

Auckland Star, Volume XLI, Issue 263, 5 November 1910, Page 8

¹¹⁹⁸ <https://paperspast.natlib.govt.nz/newspapers/AS19101222.2.55>

Auckland Star, Volume XLI, Issue 303, 22 December 1910, Page 7

On what was formerly known as the New reef, and will in future be called the Crown reefs (the object of renaming being to keep track of it upwards, it being evidently identical with the reef on the surface known as the Crown) two blocks are being stoped out south of the Waitawheta crosscut...

At the mill 55 stamps are now in commission for one shift of 10 hours per day, and are stamping from 40 to 45 tons of ore daily. As the dirt coming from the mine is maintaining its grade the next return may be expected to show an increase over that recently issued.

The present returns cover two monthly periods but in all probability monthly crushing will be reverted to after January. Afterwards the mill, which meantime is being run with steam power, will be run by motor power from the power-house, thus effecting a saving in cost.¹¹⁹⁹

It appears that the Crown battery is still run by steam from the old engine behind the mill.

AJHR 1911

For the year 1910

Mr. Frank Reed, M.Inst.MM., Inspecting Engineer

to the Hon. Roderick McKenzie, Minister of Mines. Sir, — Mines Department, Wellington, 28 April, 1911. I have the honour to present the annual reports of inspection of mines, together with reports of Wardens and other officers, accompanied by statistical information in regard to the goldfields and metalliferous mines of the Dominion, for the year ended the 31st December, 1910.¹²⁰⁰

Page 6

The Waihi-Paeroa Extraction Company (Limited) was formed in 1908 for the purpose of extracting gold and silver from the slimes and sand deposited as tailings in the River Ohinemuri by the Waihi and Karangahake Mines. During eighteen months prior to the 31st March, 1910, this company, from their treatment plant established near the Waihi dam, obtained bullion to the value of £14,000 from 32,000 tons of tailings treated, being an extraction of 8s. 7d. per ton. The residue contained bullion averaging in value, if completely extracted, 4s. per ton, the working-cost and renewals amounting to about 5s. per ton. No doubt the high value of the tailings treated must be attributed, to a certain extent, to natural concentration after deposition in the river, also to the fact that in the earlier days of mining the present methods of extraction were not employed, hence the loss of bullion in the tailings. The plant is now in course of removal and re-erection much lower down the river. The capacity of the Union vanners, tube mills, pneumatic tanks, and vacuum filters now being installed is 500 tons per day. It is proposed to elevate the sand by air-lift dredger into barges of 80 tons (of sand) estimated capacity per hour.

¹¹⁹⁹ <https://paperspast.natlib.govt.nz/newspapers/NZH19101227.2.8>

New Zealand Herald, Volume XLVII, Issue 14562, 27 December 1910, Page 3

¹²⁰⁰ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1911-I.2.2.3.17>

THE GOLDFIELDS OF NEW ZEALAND (REPORT ON)., Appendix to the Journals of the House of Representatives, 1911 Session I, C-03

Karangahake Goldfield. —The Talisman Consolidated (Limited) has improved its annual bullion production, the output for 1910 amounting in value to £210,264 from 45,020 tons treated, against £208,886 from 46,456 tons during the previous year, showing thereby an increase in average yield per ton as well as in value. Dividends amounting to £94,374 were declared during 1910. The above returns would have been even more satisfactory had not development been retarded by water troubles in the deeper areas of the mine, also owing to the destruction by fire in September of the Woodstock air-compressors, which caused temporary loss of power. The chief development has been carried out at levels Nos. 12 and 13, the latter being 550 ft. below the drainage level to the Waitawheta Gorge. Winzes sunk 80 ft. below the No. 13 level have proved the Bonanza shoot to extend considerably in length, which shoot has supplied the bulk of the high-grade ore obtained at this mine. At No. 13 level the south drive has been put in 1,530 ft. from the shaft, and while in progress towards the Dubbo shoot a new ore-body, in width from 3 ft. to 9 ft. and of high value, was proved for a length of 300 ft., and in height by an uprise for 140 ft. The reopening of the Woodstock section of the property is being rapidly advanced. In the shaft chamber, at drainage level, new winding and horizontal compound pumping-engines have been installed, also rope-driven Cornish pumps 26 in. in diameter by 10 ft. stroke. It is proposed to immediately deepen the Talisman and Woodstock shafts to the No. 14 level.

New Zealand Crown Mines (Limited): This company having undergone reconstruction and a change of management, development was resumed after the completion of the electric installation in April 1910. For the period worked during the year bullion worth £13,301 was obtained from 6,661 tons treated. The future of this mine will depend largely upon operations below No. 5b level. From that level No. 2 winze was sunk 86 ft., but was abandoned in faulted country owing to the influx of water. No. 6 level south of No. 1 winze (120 ft. below No. 5) was driven 374 ft. towards the aforementioned abandoned winze. The Crown reef was developed 158 ft. northward from the Waitewheta drainage level in low-grade ore. Upon this reef, towards the south end of No. 3 level, developments have been resumed for the augmentation of milling-ore. With the powerful electrically driven pumps now in commission, there is no reason to fear a recurrence of the water difficulty at this mine.

Mr. Matthew Paul, Inspector of Mines, Waihi

to the Under-Secretary, Mines Department, Wellington. Sir. Inspector of Mines' Office, Waihi, 31st March, 1911. I have the honour to present my report on the gold-mining industry in the Hauraki Mining District together with statistics, for the year ended 31st December, 1910.

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Karangahake.

Talisman Consolidated (Limited) (J. Rickard, Mine-manager).

The principal developments in this mine have been carried out on the Nos. 13 and 12 levels during the year.

No. 13 Level (550 ft. below Waitewheta drainage level). —The south drive is now 1,530 ft. south of shaft, and is being extended further, with a view of intersecting the Dubbo shoot. The development for the year at this point has proved another ore-shoot 300 ft. in length, varying in thickness from 3 ft. to 9

ft., and carrying good value. A rise on this ore-body has been put up 140 ft., the whole length showing good value. At 140 ft. the rise is connected with a winze sunk from No. 12 level improving the ventilation in the southern section very much.

The No. 4 crosscut has reached a point 290 ft. west of main reef without intersecting any further ore. Nos. 5 and 6 winzes, sunk 80 ft., proved the continuation of the ore as obtained at the starting point. Nos. 12 and 13 winzes have also been sunk in payable ore.

Owing to a fire which destroyed the Woodstock air-compressors in September, all work below No. 13 level was necessarily suspended; but it is expected that the winzes will be unwatered early in 1911.

The north drive is now 685 ft. north of shaft. The reef varies in width from 18 in. to 5 ft., and the value for the whole of the distance is low. From the north drive a rise is being put up to connect with the Woodstock No. 6 level.

No. 12 Level.—The No. 8 crosscut west from face of main north drive is now 413 ft. in. At 240 ft. a vein was found where Shepherd's reef was expected, if the dip of the upper levels was continuous. The vein is from 3 ft. to 4 ft. wide, being filled with country rock, clay, calcite, and iron pyrites. The value contained is low. It is proposed to drive north and south on this vein during the next year. At 400 ft. in Corne's reef was intersected, 3 ft. in width, and carrying low value. This reef was driven on north and south, but no improvement in width or value was shown.

New Plant. —Three tube mills, two vacuum filter-vats, and two B. and M. agitating-tanks have been installed and employed. At the Woodstock shaft chamber a new winding-engine, capstan engine, and a large pumping-engine have been laid down, and will soon be available for use. Two Babcock and Wilcox boilers, with mechanical stokers, to work at 160 lb. pressure, are now being installed.

During 1911 it is intended to push the south drive at No. 13 level out into the Dubbo section, and to sink the Talisman and Woodstock shafts to No. 14 level. A new Ingersoll-Sergeant air-compressor, with a capacity of 3,700 cubic feet of free air per minute, will be installed early in 1911.

Since the beginning of 1911 a connection has been made between No. 13 level and the Woodstock shaft, and the new winding-engine is now available for hauling men from the No. 13 level.

New Zealand Crown Mines (Limited) (G. N. McGruer, Mine-manager).

Development was retarded owing to the new electric plant not being completed until April, 1910.

Welcome Reef. —No. 2 winze has been sunk from No. 5 level to a depth of 86 ft. The lower half of the winze was in faulted country, and was abandoned owing to an influx of water. No. 6 Level (south of No. 1 winze). —This level was started at a depth of 120 ft. below No. 5 level, and a total distance of 374 ft. was driven on the course of the reef, to test the lode at that depth. A distance of 120 ft. has yet to be driven to reach a point under the winze sunk from No. 5 level. It is expected that as this level advances it will drain the winze, and allow sinking to be resumed. The ore so far exposed is low grade.

Crown Reef (formerly New reef).—A distance of 158 ft. was driven north from the Waitewheta level in low-grade ore, but showing signs of

improvement as the drive advanced. Another 100 ft. must be driven to get under the place where good gold was found by prospectors on the surface workings. Developments have been started near the south end of the workings on this reef at No. 3 level, and it is expected that this will lead to a considerable augmentation of milling-ore supplies within the next few months.

Milling Plant. —At the beginning of the year electric power was installed at the mill. The result has been highly successful, and a distinct saving in cost has been effected. The mill engine (steam) has been put out of commission, and will be reserved for use in case of emergency [this is the original engine, at the back of the battery?].

During May the old company was wound up and a new company, having the same name, was formed to provide further capital to open and develop the mine at greater depth. In October Mr. F. R. W. Daw (general manager) resigned, and was succeeded by Mr. John McCombie, formerly of the Talisman Mine.

Dominion Mine (H. J. Hyde, Mine-manager).

The eastern low level at this mine was continued 200 ft., making a total of 287 ft. in promising country. It is expected that this crosscut will intersect five lodes, varying from 3 ft. to 30 ft. in width, with several hundred feet of backs. The western lode has been driven and sunk on, and proved to be about 20ft. in width, 7 ft. of which is payable. A low level is being driven to cut the reef at a point 630 ft. south. The level is now in 126 ft., and the reef should be intersected at about 160 ft. further, according to survey. Six men have been employed.

Comstock United Mine (A. Kell, Mine-manager).

Work in this mine was confined to testing a large reef at the low level and prospecting the surface. Although a considerable amount of driving was done, nothing payable was discovered, and, the funds becoming exhausted, application was made for protection, which was granted.

Crown Royal Mine (H. Goldsworthy, Mine-manager).

This claim adjoins the Talisman and Crown properties. A considerable amount of prospecting was done during the year by six men on several lodes, without disclosing anything of value.

Karangahake Mine (H. James, Mine-manager).

Work has also been of a prospecting character, and chiefly confined to driving the Tukanu [Taukani?] low level and sinking upon a small leader showing free gold on the surface.

Silver Hill Mine (T. Casey, Mine-manager).

Two men have been employed driving a low level. Very hard country was encountered, and, the capital becoming exhausted, work was suspended.

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Mackytown. Ascot Cinnabar Claim.

An average of six men has been employed, and 70 tons of ore were treated at the Novak furnace for 1,200lb. mercury, worth £128. The furnace has not come up to anticipations, as there is still a considerable loss of mercury, which evaporates. The deposit occurs in pockets in the cliffs for about half a mile in

length, and, although a considerable amount of development has been done during the year, the results have so far been unsatisfactory.

Mr. Warden Burgess, Thames

to the Under-Secretary, Mines Department, Wellington. Sir,— Warden's Office, Thames, April, 1911. I have the honour to present my report on the Hauraki Mining District for the year ended the 31st December, 1910.

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At Karangahake the Talisman Mine still maintains its position as the second mine of the Dominion. During the past year 45,020 tons of ore were treated, for a yield of £210,624 3s. 6d. worth of gold. In September last the air-compressors situated in the Woodstock section were, unfortunately, destroyed by fire, and all work below No. 13 level was suspended. In spite of this, however, the company have had a successful year. The value of the lodes worked during the past year has been maintained, and the prospects of the mine are excellent. In the south drive operations have disclosed another payable ore-shoot, 300 ft. in length and from 3 ft. to 9 ft. in thickness. During the year the company has added considerably to its reduction plant, and in the Woodstock shaft chamber a new mining-engine, capstan-engine, and large pumping-engine are nearing completion.

Under new management the New Zealand Crown Mine is being vigorously worked. A saving in the cost of milling has been effected during the year by substituting electricity for steam as the motive power. The mill is now being driven by power delivered from the generator at the power-house.

Several other claims are being worked at Karangahake, but they have not reached the stage of gold-production.

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Mr. F. W. Reid, Director of the Karangahake School of Mines

to the Under-Secretary, Mines Department, Wellington. Sir, — Karangahake, 1st April, 1911. I have the honour to present my report upon the work of the Karangahake School of Mines and of the branch school at Waikino for the year ended 31st December, 1910.

Attendance. —The average number of students in attendance for the three terms of the year was 47.6, with an average class enrolment of 89. There were nine classes in operation at Karangahake and six at Waikino.

Examinations. —At the annual examinations held in December, 14 candidates presented themselves at Karangahake. Eleven passes were obtained in the practical and 27 in the written examinations, the latter being distributed in the three grades as follows: First class, 12; second class, 10; third class, 5. At Waikino 9 students sat for examination, the results being: practical work, 4 passes; written examinations, 3 first-class, 1 second-class, and 3 third-class passes. Karangahake headed the list in six of the subjects of examination, and Waikino was equal with Waihi for top place in one subject.

The following students completed the examinations entitling them to H.M. Customs certificate for bullion-assaying, viz.: T. R. Hogg, H. T. Harman, and W. J. Mayberry.

Prizes. —A prize presented by Mr. D. M. Deane (ex-President of Council) was awarded to G. Hyde, and one presented by Mr. W. Wilson (President of Council) to F. Smale.

Scholarships. —The Council of the School of Mines is now offering two scholarships annually, open for competition to boys attending the public schools of the district. At the examination held in December for the purpose of awarding these scholarships, 9 candidates presented themselves, the successful ones being A. Connelly and R. Morrison.

Equipment. —Additions to the Waikino school, completed early in the year, greatly facilitated the work in practical chemistry and wet assaying. An assay-balance and other apparatus were purchased during the year. Additional electrical apparatus is now on order, and will serve to remove a disability under which the classes in electricity have been labouring. Several standard volumes have been added to the library.

Assays. —During the year 67 assays were made for prospectors and others.

Conclusion. —I desire to express my appreciation of the conscientious work done by the members of the teaching staff, and of the unfailing interest and support of the Council of the school. I have, &c, F. W. Reid, Director.

1911

2 February

AT KARANGAHAKE.

TALISMAN CONSOLIDATED.

...The work of reinstating the plant lost in the Woodstock mill fire was completed some weeks ago, and as the unwatering of the shaft and winzes below No. 13 level was commenced shortly after the holidays all development works temporarily suspended, including the sinking of the shaft, should soon be resumed. The installation of the powerful pumping and haulage plant in the Woodstock shaft is being pushed forward as speedily as possible, and should be completed well before the close of the present year. With this plant available the company will be in a position to handle the water from the whole field, for years to come, the haulage of quartz from the mine will be facilitated and cheapened and the working conditions underground will be improved.

Towards the close of 1910 Mr. J. McCombie was appointed general manager of the New Zealand Crown Mines (Karangahake), and with the change of management a more speedy and systematic development of the mine has been undertaken. The future of the Crown Mines will depend largely upon operations below No. 5B level: meanwhile, it must be gratifying to shareholders to note that further blocks of pay ore are being opened up in the upper areas of the mine, and that the gold returns are again showing improvement. At present the battery is running one shift of 10 hours per day, and the returns are issued every two months, but it is anticipated that developments will shortly justify monthly returns. With the up-to-date pumping plant available there need be no fear of water trouble in future, and should the mine open up satisfactorily with greater depth the company will be in a sound position again at no very distant date.

Prospecting operations were continued during the year on several smaller properties in and about Karangahake, notably, the Rising Sun, Crown Royal, Comstock United, Dominion, Karangahake, and Maoriland (Waitekauri), but with the exception of the last-mentioned claim none of the mines mentioned have produced gold.¹²⁰¹

3 February

MINING ENGINEERS' CONFERENCE.

(By Telegraph.—Own Correspondent.)[^]

KARANGAHAKE, this day.

The mining delegates left Waihi this morning by special train, stopping at Karangahake to inspect the Crown and Talisman mines. They were entertained at luncheon, and left for Thames in the afternoon.¹²⁰²

¹²⁰¹ <https://paperspast.natlib.govt.nz/newspapers/NZH19110202.2.9>

New Zealand Herald, Volume XLVIII, Issue 14594, 2 February 1911, Page 4

¹²⁰² <https://paperspast.natlib.govt.nz/newspapers/AS19110203.2.80>

Auckland Star, Volume XLII, Issue 29, 3 February 1911, Page 6

4 February

HARD WON GOLD.

THE KARAHGAHAKE MINES. CONFERENCE INSPECTION. THAMES, Friday.

...The visitors were taken by special train to Karangahake, where a most interesting forenoon was spent going over the properties of the Talisman and Crown. At Waihi the mining is straightforward. After the reefs are located shafts are sunk, and the mode of working is similar to that with which most people are familiar. At Karangahake the matter is entirely different. Owing to one of those strange freaks with which gold-seekers are familiar the precious metal is found in a spot most difficult of access. The Waitawheta Creek, which joins the Ohinemuri at Karangahake, flows through an old volcanic rent in the solid rock, which rises in places to nearly two thousand feet above sea level, and it is in the sheer sides of this narrow gorge that some of the most important works of the two mining companies mentioned are carried on.

For some eight hundred feet the Talisman property is worked from drives in the steep slope of the high peak which is the most prominent feature at Karangahake, but the time has arrived when they must get down below the level of the river, and the spot chosen for the shaft is on the Woodstock lode about half-a-mile up the Waitawheta from the battery. To reach this point it was necessary to cut a way out of the solid rocky sides of the creek, and in one place tunnel through, but the most remarkable achievement is the pumping chamber at the top of the shaft. So precipitous is the frowning chasm through which the creek rushes turbulently that they could not find a flat surface large enough to carry the machinery, so they were forced to burrow into the flint-like rock, and hew out a cave-like chamber about 100 feet long by half that width. Here they are installing a huge pumping plant, which when finished will be the largest single plant this side of the line. Lit up with electric light the place, with the enormous cogged wheels, cranks, and massive iron beds, is most weird, and the scene is just the sort of thing Jules Verne might have imagined. The machinery weighs many tons, and all had to be hauled into this ungetatable chamber through a short drive about eight feet high, so the parts had to be specially cast. Outside a narrow shelf was hewn from the adamantine cliff to house the boilers, and the whole scheme is an astonishing proof of the ingenuity of man and the apparent impossibilities he will overcome in the search for gold....

Further up the gorge the Crown Mine's shaft is come to. The engine house is perched on the top of a jutting rock, like an old castle on the Rhine, and seems every moment to be on the verge of slipping off from its precarious perch on the other wise perpendicular cliff. Across the creek from this eyrie, in a cavern cut in the rock, there is an air-compressor driven by a water turbine, the race to supply which climbs round the face of the gorge and appears to hang on nothing more substantial than thin air. It seems almost uncanny to come across these things away in this pent-up cleft in the primeval rocks, with the waters below, a fitting place for the haunt of the most romantic creation of the Maori mind [patupaiarehe or fairies].

Another striking feature of the Talisman Mine is the aerial tramway for conveying the ore from the levels on the left bank to the battery on the right bank. The cages swing over the intervening space automatically, and as there

is a difference of over a hundred feet between the ore hoppers and the battery site, the effect is all the more striking. It is when you see such marvellous and costly surmountings of apparently insurmountable difficulties as these that face the miner at the Waitawheta that you realise the power of gold.

The batteries of the Crown and Talisman were inspected by several of the parties, and the machinery at the latter was particularly admired, both for its character and the perfect manner in which it is kept.

After a most interesting morning, in which the officials of the mines vied with each other in showing the guests everything in these uncommon workings, there was a sumptuous luncheon at Lockley's Hall given by the Crown and Talisman Companies, Mr. Kitching, of the latter, presiding. The party came on to the Thames this evening, and the business sessions of the Conference were resumed in the School of Mines and the Miners' Union Hall.¹²⁰³

MINING ENGINEERS.

DOINGS OF THE DELEGATES. VISIT TO KARANGAHAKE. (BY TELEGRAPH.—OWN CORRESPONDENT.) Thames, Friday.

The delegates to the Australasian Institute of Mining Engineers annual conference visited Karangahake to-day, and inspected the Talisman and Crown gold mines, and their batteries and other mechanical equipment. The good treatment that has been meted out to them all through the trip continued under the impressive battlements of the precipitous hills, and the visit was full of interest and enjoyment. There was too much ground to cover in one morning, and the party, which included a large number of ladies, was divided up, and conducted over such works as they selected.

The Talisman underground trip, involving the descent of some hundreds of feet of steep ladders, attracted the keener geologists, who were much interested in the unusual character of the formation in which the gold exists. Everyone else explored the surface equipment of both mines and the batteries. Batteries are batteries of course anywhere, but even in places so near one another as Waihi and Karangahake considerable differences exist in the treatments, and these differences were all studied carefully. A very popular show-place at the Talisman mine was the pump chamber, which, although quite new, has already become almost famous. The visitors were astonished at the fine achievement of hewing the chamber out of the solid rock. This step was necessary to accommodate the huge pumping machinery, as the mine opens upon extremely steep rock faces descending into the river, and there is no flat ground upon which any big structure can be put. The pumping machinery now being erected is in a forward state, and the enormous plant was greatly admired. It is one of the largest individual pumps in the southern hemisphere, and its capacity is a little larger than that of the big machine at the Waihi mine.

Apart from the extensive mechanical plant and the mines the visitors were delighted with the beauties of the Waitawheta Gorge, on the sides of which the mines are situated. Those unfamiliar with mining conditions, as many were, expressed great astonishment at the drives, whose mouths could be seen high

¹²⁰³ <https://paperspast.natlib.govt.nz/newspapers/AS19110204.2.70>

Auckland Star, Volume XLII, Issue 30, 4 February 1911, Page 10

up and inaccessible in the perpendicular faces of rock. Luncheon was provided by the managements of the two mines...¹²⁰⁴

McCombie on the Cyanide Process

THE HISTORY OF THE CYANIDE PROCESS.

BY J. MCCOMBIE.

In view of the fact that we have now in our midst some of the leading mining men of Australasia, it may be opportune to briefly review the history of the cyanide process, which benefited New Zealand to such a very large extent, and revolutionised the treatment of gold and silver-bearing ores throughout the world.

Although the cyanide process was born in Glasgow, it was cradled, reared, and brought to an advanced stage of perfection at Karangahake, where it was in full operation for nearly a year before its adoption anywhere else. To the Crown Mines Company belongs the honour of introducing this process, in a practical way, to the mining world, early in the year 1889, and almost immediately after its discovery by Dr. McArthur and his colleague, Dr. Forest. It was brought about in this way: Mr. Thomas Melville, an old Auckland resident, floated the Crown Mines Company in Glasgow, and some of the ore, which he took Home for flotation purposes, was treated by the embryo cyanide process, with highly satisfactory results. Arrangements were then entered into with the McArthur-Forest people to build a plant and treat Crown ore at the mine. Pursuant to certain conditions, a staff of hands was sent direct to the mine from the experimental plant, Glasgow, their names being as follows: — John McConnell (manager), Frederick Smeaton (assayer), James Tegart (cyanider), William Dempster (engineer), and Peter McFarlane (carpenter). I give the names of these men here because there is a strong disposition on the goldfields of the Auckland province to belittle the pioneers in every branch of the gold mining industry, and to relegate such men to obscurity. Owing chiefly to want of road accommodation for the transport of machinery, there was a long delay attendant upon the completion of the treatment plant at the Crown mine, and a small plant was erected in the Woodstock furnace house, in consequence. This plant comprised one stonebreaker, one Lamberton mill - dry crushing - two vats, fitted with mechanical agitators, one stock solution vat, one sump vat, one filter press, and four small barrel towers, for precipitation purposes.

Briefly, the process was fine grinding, agitation, filter pressing, and precipitation on zinc shavings. The first parcel of ore dealt with was taken from the Maria reef in Kenilworth mine, of which I was then part-owner and manager, and which is now included in the Talisman Company's property. The plant was started early in the month of June, 1889, and I have now before me a copy of the first treatment sheet. Value of ore before treatment: Gold, £4 per ton; silver, £1 19s per toft; total value per ton, £5 19s Recovery: Gold, 89.2 per cent.; silver, 70.9 per cent. The strength of solution used was 0.5 per cent., and the consumption of cyanide was 4lb per ton of ore treated.

¹²⁰⁴ <https://paperspast.natlib.govt.nz/newspapers/NZH19110204.2.9>

New Zealand Herald, Volume XLVIII, Issue 14596, 4 February 1911, Page 4

After a series of experiments with both wet and dry crushing, dry crushing, through medium of Lamberton mills, was decided upon, and the ore was treated by upward percolation, with subsequent water washes, pulled through each charge by means of vacuum pumps. This simple process more than realised expectations in the case of the Crown ore, and it was generally adopted throughout the Dominion, where it remained in use in a good many mills for several years. As depth was attained in the mines the ore became more refractory, resulting in a high percentage of soluble sulphates being formed in the drying furnaces, or kilns, and the consumption of cyanide became a serious item in the cost of treatment. Then mill after mill went in for wet crushing, with a dilute solution of cyanide in the mortar boxes, and the first man to give the new departure a practical test, with 20 head of stampers, was Mr. H. H. Adams, at Waiorongomai. Except in the case of the Crown mines the system was not continued, and the process gradually veered round to ordinary wet crushing, amalgamation, concentration, and hydraulic classification, in the order named, followed up by percolation for the sands, with agitation and decantation for the slimes.

This brings the history of ore treatment by the cyanide process up to date, when decantation is being rapidly superseded by filter pressing, and a good many New Zealand mills now hold a front rank position in the matter of ore treatment. It seems strange, however, after trying so many variations of the cyanide process, that all hands have found it necessary to return to the starting point, by adopting the system first introduced at Karangahake in the year 1889 by the patentees. To-day the tendency is in the direction of abolishing amalgamation and concentration, and, in the mill of the future, there will only be one system of treatment, which will be confined to the cyanide process throughout, regardless of the character of the ore, provided it is all ground to an impalpable [impalpable¹²⁰⁵] paste, and dealt with subsequently by agitation and filter pressing.¹²⁰⁶

2 March

...Talisman Consolidated Company's property at Karangahake...It may be said, without the slightest hesitation, that the position underground was never better than at present, and that at no period in the history of the mine have the prospects for the future been brighter. The water difficulty which retarded development works below No. 13 level for some time, has been overcome, and tenders will be called in a day or two for the sinking of the main Talisman shaft (now down 90ft below No. 13 level) to the required depth for the No. 14 level. The distance between the levels is 200 ft, thus leaving 110 ft to be sunk, after which the shaft will have to be carried down a further 30ft to 40ft to provide for the pump, making approximately 150 ft of sinking, which should be completed in five months...

The alterations to the treatment plant have now been completed, thus making for a reduction in costs, coupled with an improved gold extraction. The foundations have been laid for a new compressor of greater capacity than the

¹²⁰⁵ Very finely ground

¹²⁰⁶ <https://paperspast.natlib.govt.nz/newspapers/NZH19110204.2.25>

New Zealand Herald, Volume XLVIII, Issue 14596, 4 February 1911, Page 5

big compressor now in commission, and the compressor which was ordered in New York is about due. This is not required for mine use, but will be kept as a stand-by in case of mishap to the existing compressors.¹²⁰⁷

7 April

COUNTY COUNCIL. MONTHLY MEETING

At the usual monthly meeting of the Ohinemuri County Council yesterday afternoon...

"Re bridge at Karangahake.—I would recommend that the new bridge be erected between the two suspension bridges and that the bridge consist of two one hundred feet spans with concrete pile in the centre of the river...

The recommendation of the engineer regarding the new traffic bridge at Karangahake was adopted on the motion of Mr Lloyd, an amendment by Mr Nathan that consideration be deferred for a month not being seconded.¹²⁰⁸

5 May

ROAD AT KARANGAHAKE. AN IMPORTANT HIGHWAY

At the meeting of the Ohinemuri County Council yesterday afternoon the following letter from Mr D. Waddell, local secretary of the New Zealand Crown Mines Co., Ltd., of Karangahake, was read :—"We have again to call the attention of your Council to the impassable state of the Hill Road [County Road], from Talisman No. 8 level to Crown Point, and to request that it be put into a fit state to carry waggon traffic at the earliest possible date. We have for some time past had the greatest difficulty in inducing teamsters to undertake the haulage of timber and other materials over this road, and as it is, at present, the only means of access to the upper workings of our mine we trust your Council will recognise the necessity of putting the work in hand at once."...

Mr Corbett said the road was in a very bad state, and some of the bends were exceedingly dangerous...

The Chairman (Mr Grace) said that if the Crown Company could not use this road they might have to reduce hands. The company was contributing revenue to the Council, and its road should be kept in repair.

It was decided that the engineer be empowered to put two men on for a month to repair the road.¹²⁰⁹

10 June

N.Z. CROWN MINES. PROGRESS OF WORK.

The following is extracted from the manager's report on operations in the Crown mine, Karangahake, dated May 8, and due to arrive in London to-day: The manager states there are two distinct reefs in the mine, upon which

¹²⁰⁷ <https://paperspast.natlib.govt.nz/newspapers/NZH19110302.2.9>

New Zealand Herald, Volume XLVIII, Issue 14618, 2 March 1911, Page 3

¹²⁰⁸ <https://paperspast.natlib.govt.nz/newspapers/OG19110407.2.21>

Ohinemuri Gazette, Volume XXII, Issue 2776, 7 April 1911, Page 3

¹²⁰⁹ <https://paperspast.natlib.govt.nz/newspapers/OG19110505.2.19>

Ohinemuri Gazette, Volume XXII, Issue 2786, 5 May 1911, Page 2

operations are in progress at present, and these are known as the Crown and Welcome respectively...

Talisman Reef: Between the No. 7 level and the No. 1 level the Talisman reef dipped out of the Talisman mine into the Crown mine for a length of 200 ft along its line. This block is still intact, and, according to measurement, it should contain 23,000 tons of ore. This section has been exploited and sampled, wherever it was possible to do so, and the average assay value of the ore is £3 11s per ton.¹²¹⁰

4 October

KARANGAHAKE DISPUTE. COOPERATIVE SYSTEM ADOPTED.

(BY TELEGRAPH.— CORRESPONDENT.) Waihi, Tuesday.

The vice-president of the Waihi Miners and Workers' Union (Mr. W. McLennan) states that the dispute at Karangahake with regard to the adoption of the cooperative system in the local mines has been settled. The system has been adopted in both the Talisman, and Crown mines, with the exception of one party in the Talisman. This party is cleaning up, and when this is completed the wages men will continue the contract on the co-operative basis.¹²¹¹

18 October

THE ESTIMATES. VOTES FOR OHINEMURI ROADS AND BRIDGES

The following votes for Ohinemuri appear in the Public Works Estimates:

Public Works Fund : —Supervision of roads, bridges, etc.—Minister of Mines: Roads on Goldfields, etc (Auckland Road District)

Crown battery and Hill Road, amount required to be voted, ,£100

Hill Road to Talisman mine, £200

Karangahake to Rotokohu, £100

Karangahake School of Mines Road, £50

Ohinemuri Bridge at Karangahake, £250 (on account of £1000) (£1 for £1)

School Road, Karangahake, ,£100

Scotchman's Gully Road, £50

Talisman Coal Hopper to Hill Road—

Talisman mine to Crown mine, £100

Waverley Road, Karangahake, £90

Bridge Road to Karangahake, £500

Bunting Road Karangahake, £80¹²¹²

¹²¹⁰ <https://paperspast.natlib.govt.nz/newspapers/NZH19110610.2.12>

New Zealand Herald, Volume XLVIII, Issue 14703, 10 June 1911, Page 5

¹²¹¹ <https://paperspast.natlib.govt.nz/newspapers/NZH19111004.2.47>

New Zealand Herald, Volume XLVIII, Issue 14802, 4 October 1911, Page 7

¹²¹² <https://paperspast.natlib.govt.nz/newspapers/OG19111018.2.6>

Ohinemuri Gazette, Volume XXII, Issue 2857, 18 October 1911, Page 2

AJHR 1912

For the year 1911

There was no C-03 volume this year? But a C-02, and a Royal Commission on Mines, C-04.

MINES STATEMENT, BY THE HON. JAMES COLVIN, MINISTER OF MINES.

Mr. Speaker,— I have the honour to present to Parliament the Mines Statement for the year ended the 31st December, 1911.¹²¹³

Page 6

ROYAL COMMISSION ON MINES.

During the year a Royal Commission was appointed to inquire into and report on the conditions relating to the health and safety of the miners of New Zealand, and the administration of the laws relating to mining, and to make recommendations as to any amendment of these laws which might be considered necessary for the better protection of the health and safety of persons working in mines. The Commission was directed to inquire more especially as to the prevention of accidents in mines; the ventilation of mines; the underground sanitation of mines; change- and bathhouses for miners; what steps should be taken to guard against miners' phthisis; and as to the profitable utilization of the soft bituminous and lignite coals of the Westport district.

The Commission entered upon its duties on the 3rd August, 1911, and on the 16th December presented its report. It is proposed to incorporate the recommendations contained therein in Bills to amend the Mining and Coal-mines Acts.

APPENDICES TO THE MINES STATEMENT.**APPENDIX A. REPORTS RELATING TO METALLIFEROUS MINES.****Mr. Frank Reed, M.Inst.M.M., Inspecting Engineer**

to the Under-Secretary of Mines. Sir, — Mines Department, Wellington, 7th June, 1912. I have the honour to present the annual reports of inspection of mines, together with reports of Wardens and other officers, accompanied by statistical information in regard to the goldfields and the metalliferous mine of the Dominion, for the year ended 31st December, 1911.

Page 21

The Waihi-Paeroa Gold-extraction Company (Limited), formed for the purpose of extracting bullion from the tailings deposited from the Waihi and Karangahake Mines into the Ohinemuri River, having completed their large treatment plant on the river near Paeroa, the first return was obtained on the 23rd March. As the result of fourteen days' operations, £1,412 14s. 10d. was obtained from 3,845 tons of tailings treated.

Karangahake Goldfield. —

The Talisman Consolidated (Limited) have again improved upon their previous annual production. From 47,550 tons treated, bullion to the value of

¹²¹³ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1912-II.2.2.2.7>

MINES STATEMENT, BY THE HON. JAMES COLVIN, MINISTER OF MINES., Appendix to the Journals of the House of Representatives, 1912 Session II, C-02

£222,058 was obtained, of which £109,307 was paid in dividends. The history of this mine during the past nine years under the superintendence of Mr. Stansfield has been a continuous success, and the developments of recent date furnish satisfactory evidence that this success will continue. At the deepest, or No. 14, level the rich ore-bodies existing in the levels above are again exposed, and carry high values. Winzes from this level have been sunk to a further depth of 62 ft. (or 762 ft. below the Waitawheta drainage adit), and drives therefrom at that depth expose high-grade ore. From the evidence obtained at the deepest workings during my recent inspection of this mine, there is every appearance of the rich shoots of ore living to a considerable depth. Sinking at the Woodstock shaft is proceeding with expedition. The new Cornish electrically driven pump is working satisfactorily, but it will be a considerable time before this shaft reaches No. 14 level, where it is proposed to make a through connection between the Talisman and Woodstock shafts.

New Zealand Crown Mines (Limited): The results obtained from this mine during 1911 show a considerable improvement when compared with the returns for the previous year. Operations during 1911 have been mostly confined to the upper levels of the Welcome and Crown reefs, and but little deep development elsewhere has been carried out. The machinery in connection with the treatment plant is now all electrically driven, and the Waitawheta main adit is lighted by electricity for 1,700 ft.

ANNEXURE A.

REPORTS OF INSPECTORS OF MINES.

The Inspector of Mines, Waihi

to the Under-Secretary, Mines Department, Wellington. Sir.— Inspector of Mines' Office, Waihi, 31st March, 1912. I have the honour to present my report on the gold-mining industry in the Hauraki Mining District for the year ended the 31st December, 1911.

Page 36

Karangahake.

Talisman Consolidated (Limited) (J. Rickard, Mine-manager).

No. 12 Level (200 ft. below Waitawheta adit-level). —The north drive has been extended to a point 1,332 ft. north of the Talisman shaft. This progress has disclosed a few shoots of payable ore, but the average for the whole distance traversed is low.

No. 13 Level (400 ft.). —The south drive was extended to a point 2,016 ft. south of shaft. The reef varies in width from 3 ft. to 10 ft., and for a horizontal length of 280 ft. the Dubbo ore-shoot gave good values. These values were followed upwards by No. 16 rise, and they persisted for 130 ft. above the level.

No. 6 winze was sunk to a depth of 135 ft. (the random of proposed No. 14 level). The vein for the distance sunk runs from 4 ft. to 5 ft. in width, and gives high values. From bottom of winze, drives have been put out north and south, showing good ore for the whole of the distance, the lode varying in width from 3 ft. to 5 ft. No. 12 winze is now 212 ft. below No. 13 level, and 62 ft. below the random of No. 14 level. The widths and values for the distance sunk during the year have been very satisfactory.

The drives off No. 12 and No. 6 winzes at the random of No. 14 level show an ore-body of good quality for a horizontal length of practically 1,000 ft.

An effort was made to sink the Talisman shaft during the latter half of the year, but after getting it down 31 ft. deeper, the water became too strong, and further sinking was stopped until No. 12 winze should get deep enough to take some of the water now making in the shaft.

The Woodstock shaft has been sunk 20 ft., and the first set of Cornish pump-workings is now practically in place. The boilers and engine for actuating the new pump are erected, and practically ready for work.

A new change-house, 30 ft. by 70 ft., has been erected at the mouth of the Woodstock No. 5 level, and will be equipped with hot and cold shower-baths and steam-heat for drying clothes.

During the ensuing year it is intended that the south drive off No. 12 winze shall be extended until the Dubbo ore-shoot is intersected. The north drive off No. 6 winze will also be carried into the Talisman section, and from this drive a crosscut will be put out to the No. 14 level chamber in Talisman shaft. (When this is finished the whole of the drives mentioned will constitute the No. 14 level.)

It is also intended that the Woodstock shaft shall be sunk to the level of No. 14 level, with a view of finally making a connection with same.

The only new treatment machinery installed during the year are two grinding-pans for fine grinding of the concentrates. These concentrates were formerly sent to London for realization, but are now being successfully treated here. An average of 360 men have been employed.

New Zealand Crown Mines (Limited) (G. N. McGreur [McGruer], Mine-manager).

The following shows the footage of development-work in this mine on the Welcome and Crown reefs : —

Welcome Reef. —From five levels above Waitawheta level and four levels (from main shaft) (450 ft.) below same, 1,586 ft. driving, 861 ft. rising, 76 ft. sinking, 491 ft. crosscutting and stoping produced 13,265 tons of ore.

Crown Reef. —From Nos. 1, 2, 3, and 4 levels above Waitawheta, 1,553 ft. driving, 1,022 ft. rising, 44 ft. sinking, 596 ft. crosscutting produced, with stoping, 6,677 tons of ore. Talisman section: In Nos. 1 and 2 crosscuts 380 ft. of crosscutting was done.

The total tonnage treated at the mill was 20,835 tons, and the yield of gold was £45,030 10s. 6d., which shows an average recovery of £2 3s. 3d. per ton.

During the year the following improvements have been carried out: —

Mine. —At the Waitawheta main adit-level the electric light has been installed for a length of 1,700 ft. along the level, and a horse is now used here for trucking purposes. In the main shaft the north skipway has been equipped from the brace down to No. 5 level, and both cages are now being run for general winding.

Mill. —All the machinery in the mill is now being driven by a 250-horse-power electric motor, which is working very satisfactorily. A transformer has been installed in the power-house, which enables the electric power to be used for working small motors, and a 9½-horse-power motor now drives all the

fitting-shop machinery. Electric power is also used for hoisting ore from the tram-line to the top of the mill buildings.

Dominion Mine (H. J. Hyde, Mine-manager).

The eastern low level has been extended a further distance of 302 ft. in hard country. A considerable amount of water is issuing from the face, which the manager considers is an indication that the reef sought for is near at hand. The western low level is being continued for the purpose of intersecting the lode followed down by a winze, and in which good value is said to have been obtained for a width of 7 ft. in the upper level. The crosscut is now in a distance of 300 ft., and should, according to survey, intersect the lode sought for in another 150 ft. of driving. The country penetrated is of a very favourable nature.

Karangahake Mine (H. James, Mine-manager).

Work was suspended in this mine in the early part of 1911, as the prospecting-work in the Taukani section did not turn out as anticipated.

The Comstock, Silver Hill, and Crown Royal mines have also ceased operations.

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Mackytown. Ascot Cinnabar Claim.

This company ceased operations early in 1911, in consequence, it is stated, of the unsatisfactory working of the reduction plant. It is now proposed to reconstruct, to enable certain alterations to be made to the plant, and a drive carried under the present workings. It is anticipated that a start will be made at an early date.

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Mr. W. Gibson, B.E., Director of the Karangahake School of Mines

to the Under-Secretary, Mines Department, Wellington. Sir, Karangahake, 5th March, 1912. I have the honour to present my report upon the work of the Karangahake School of Mines for the year ended the 31st December, 1911.

The attendance at the main school showed the number of students to be as follows: First term, 31; second term, 29; third term, 26. The class-attendance was 53 for eight classes, 59 for nine classes, and 51 for nine classes in the successive terms. This shows an average of nearly two classes per student. The attendance of students, with one or two exceptions, was very regular. The regular students showed up most prominently in the annual examinations.

Annual Examinations. —The students of this school did very satisfactory work, as is shown by the certificates gained, which are sixteen first-class, six second-class, and four third-class. The school topped the list in senior practical chemistry, junior dry assaying, senior wet assaying, junior wet assaying, surveying, junior mathematics, and drawing. In the practical examinations the results obtained were: three passed in bullion assaying, one in senior dry assaying, one in junior dry assaying, one in senior wet assaying. Two students, Messrs. G. Hyde and F. Small, are entitled to receive H.M. Customs certificates for bullion assaying. The President's (Mr. K. M. Barrance) prize was won by Mr. G. Hyde, with the highest aggregate in three classes, and the Council's two prizes for the highest aggregate in two classes were won by Messrs. John Shore and A. McLean.

The total number of gold and silver assays put through during the year was 127, of which four were done free of charge for prospectors.

In conclusion, I have to thank the members of the Council for their unremitting interest in the school's welfare, and their efforts to make it attractive to students. I have also to thank Messrs. B. C. Hurdsfield, A.M.B., Assistant Director, and H. C. Tempest, electrical instructor, for the zeal and ability they have displayed in their work.

I have, &c, W. Gibson, Director.

ROYAL COMMISSION ON MINES (REPORT ON THE).¹²¹⁴
459 pages, not included here.

¹²¹⁴ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1912-I.2.1.3.3>

ROYAL COMMISSION ON MINES (REPORT ON THE)., Appendix to the Journals of the House of Representatives, 1912 Session I, C-04

1912**27 January****TALISMAN CONSOLIDATED. WORK AT THE DEEP LEVELS. SOME IMPORTANT DEVELOPMENTS**

A visit to the underground workings of the Talisman mine (Karangahake) this morning disclosed the fact that the development of the deeper areas is being attended with highly satisfactory results...

The first set of pump workings have been installed in the Woodstock shaft and sinking will be resumed early next month...

When the shaft is down a start will be made to develop the Woodstock ore chutes back south to the Talisman ground and the Taukaui hill section going north.

THE CROWN MINES. OPENING UP OF FRESH BLOCKS.

The most interesting works now in progress in the Crown mine (Karangahake) are the exploitation of the Crown reef north on the Waitawheta level and the preparations for opening up two blocks of ore on the Maria lode.

The drive north on the Crown reef has been advanced about 680 ft, and in the last 50ft driven the ore has improved and a rise is in progress to test the lode upwards. At present the reef is about a foot wide and heavily charged with sulphides, the assay value being £5 10s per ton. Almost immediately over this point some of the best ore in the mine was won on the surface and the block is intact for a vertical height of just on 700 ft.

The No. 1 north block, estimated to contain 23,000 tons of ore of an average value of £3 11s per ton, is on the Maria reef (the Talisman Company's, main ore body) and is to be picked up at the Crown mine No. 7 level, where a drive is now being pushed out to intersect the lode. This has been advanced about 390 ft, leaving some 230 ft to be driven.

The existence of the block in the Crown mine is due to the lode having changed its underlie from west to east for a length of 200 ft and a vertical depth of 720 ft, after which it again assumed its westerly underlie. At the mouth of the drive at a point near the County road a hopper is to be erected and an aerial tram will be constructed from the hopper to deliver the quartz into a hopper alongside the Company's horse tram so that the cost of transit of ore to the mill will be comparatively small.

When this block (No. 1 north block) has been taken out a drive will be put out from No. 3 level to intersect the second block (No. 2 south block), which is 500 ft south, and also on the Maria reef. This is estimated to average 2ft in width and to contain approximately 25,000 tons of ore between the Nos. 1 and 5 levels. Owing to certain of the levels having collapsed, it is impossible so far to ascertain the value of the quartz, but as the Talisman Company worked the lode north to the boundary it is reasonably assumed by the Crown management that the block will be payable.

The battery is now running two shifts daily and a start will shortly be made to improve the mill by the addition of the new treatment plant recently authorised by the London board of directors.¹²¹⁵

“At the mouth of the drive at a point near the County road a hopper is to be erected and an aerial tram will be constructed from the hopper to deliver the quartz into a hopper alongside the Company's horse tram.” The entrance to this drive has three large eye-bolts mounted to the rock, for the cableway. At the receiving end, near the river, a large diameter pipe ore chute remains above the walkway.

This is the first, and only, aerial cableway that the Crown Company construct. They created a complicated way of dragging their ore from their river level adit to their battery in the Waitawheta gorge (the old Railey's site), and used a self-acting incline from a higher level. OK, there was a hint of a self-acting cableway from No. 4 level 1890-1, and possibly one c. 1915.



Looking upstream at the terminus of the Crown No.7 Level aerial cable, delivering ore to the Crown tramway. The cable comes from the No.7 level adit high to the right of the photograph. The large pipe between the two hoppers remains on the hillside today. This arrangement was necessary, with the higher hopper, to keep the cable up and clear of the ground.

Crown mine entrance and boiler house in distance.

Date: 1912+ (mine closed 1915). Staples Collection.

¹²¹⁵ <https://paperspast.natlib.govt.nz/newspapers/NZH19120127.2.12>

New Zealand Herald, Volume XLIX, Issue 14900, 27 January 1912, Page 5

2 February

At the monthly meeting of the Ohinemuri County Council the following contracts were let:—...

erection of a bridge over the Ohinemuri River at Karangahake, the bridge to consist of two 100 feet truss spans, with concrete piers, Kennedy and Taylor, £2487.¹²¹⁶

This is the heavy trestle bridge to be constructed beside the suspension bridge.

COUNTY COUNCIL. MONTHLY MEETING

The monthly report by the engineer (Mr C. Bray) was read as follows :—...

"To remove the present bridge at Karangahake and re-erect it over the Waitekauri Stream on the Waihi-Waitekauri Road is estimated to cost about £180.¹²¹⁷

8 February

OHINEMURI MINING.

KARANGAHAKE'S SECOND MINE. OPERATIONS IN THE CROWN.

PRACTICAL WORK IN HAND. by our SPECIAL commissioner. No. IV.

A good deal of useful and practical development work is at present being carried out in the Crown mine at Karangahake. At the same time stoping operations are proceeding, which are giving a good supply of milling ore, and the mine is more than paying its way.

An inspection of the property was made by the special representative of the Herald during his recent visit to Ohinemuri, under the guidance of the company's superintendent, Mr. J. McCombie. Summarised, the works in hand include the stoping out of a number of blocks on the Welcome reef, the development of the Crown lode at the Waitawheta main level, and crosscutting for two blocks on the Talisman Company's Maria reef, which, in both places, dips into the Crown ground.

In classifying the various levels in the Crown the letter "A" is used to signify "above water-level," and the letter "B" to signify "below water-level." This explanation is necessary to avoid confusion in dealing with details to be touched upon.

The Crown Company's main shaft is down to about 500 ft below the Waitawheta main adit level (river). None of the old levels on the Welcome lode system are at present being extended, because they have entered a zone of poor country going south. This area corresponds with the upper levels in the Dubbo section in the Talisman mine (which adjoins the Crown) though, as pointed out in a previous article, this poor zone does not appear in the Dubbo lower levels in the Talisman.

The deepest parts at which the Crown mine has been worked are in Nos. 1 and 2 winzes...

¹²¹⁶ <https://paperspast.natlib.govt.nz/newspapers/AS19120202.2.8>

Auckland Star, Volume XLIII, Issue 29, 2 February 1912, Page 2

¹²¹⁷ <https://paperspast.natlib.govt.nz/newspapers/OG19120202.2.15>

Ohinemuri Gazette, Volume XXIII, Issue 2899, 2 February 1912, Page 2

Work had to be suspended here owing to the pumps not being equal to coping with the inflow of water.

Operations cannot be resumed in the winzes here until the mine is equipped with pumping gear driven direct from the electric power-house at the mill. This would necessitate fairly heavy expenditure, which the company is not prepared to undertake at present.

Working Out Old Blocks.

In the meantime, payable blocks of ore are being broken out from several of the upper levels on the Welcome lode. It should be explained that, under the old regime, stoping operations in this portion of the mine were confined to reefs exceeding 2ft or 3ft in width. Such of these smaller bodies as were left in the ground are now being worked out, both above and below the Waitewheta main tunnel, and are producing a good average quality of crushing dirt.

From No. 5a level on the Welcome up to the surface is an unexplored area about 600 ft in height. A rise is now being put up through the centre of this block, on the hangingwall of the lode, with the object of opening it up for development. In the top of the rise at present the ore is low grade. A crosscut is being run into the footwall to see if the values are carried in that section of the lode, and to determine its size.

Comparatively little work has been done south from the shaft at No. 5b level. No permanent ore-body appears to be showing in these workings, and a crosscut is now in progress into the west wall to ascertain whether the reef is in that quarter. This crosscut has passed through two small veins of quartz and, at the time of the visit, there was a strong inflow of water in the face, which would indicate the vicinity of an ore-body ahead.

On the Crown reef to the east of the Welcome, and about 400 ft away, a drive has been extended 600 ft north at the Waitawheta main level. The values were poor until a point 60ft back from the present face, when the ore-body turned slightly to the east and became more payable. This improvement was looked for, as the drive is just beneath the prospector's old workings, 600 ft above.

The tunnel is being continued, and rising is proceeding on the rich shute, which is about a foot wide. It is of importance that the company has some thousands of feet on the line of this reef, whilst nothing has been done on it below the Waitawheta river level.

Reefs Dip from the Talisman.

Another interesting development work in hand is the crosscut for the Talisman reef, which has dipped into the Crown in two places. No. 1 block has come into the latter ground for a length of about 200 ft, and a height of 650 ft above the Talisman No. 7 level.

This block is estimated to contain 23,000 tons of ore, the average assay value of which is, £3 11s per ton. To reach it requires a crosscut about 620 ft long, 400 ft of which has already been driven in good country.

The second block on the Talisman reef is 500 ft further south than No. 1 block. The Crown Company has not been able to gain access to it, owing to a collapse of the levels north and south, but the Talisman Company worked this reef to the Crown boundary, so that it is reasonable to assume that the ore is payable.

The average quantity of ore in this second block is 25,000 tons, between the Talisman No. 1 and No. 5 levels, and it can be reached by extending the present crosscut for No. 1 block.

Other Work in Hand.

There are other reefs available to be worked by the Crown Company, including the Adeline, east of the Crown reef, and of proved values; and also the Ravenswood, situated in the hill traversed by the Karangahake railway tunnel. The latter outcrops on the range 700 ft above the Ohinemuri River and varies from 20ft to 80ft in thickness. During the past 12 months a payable ore body has also been discovered in Nos. 3 and 4 B levels in the west wall.

The directors have recently given instructions for certain improvements to be carried out at the battery to ensure the successful treatment of the ore from the Talisman blocks referred to. This ore is not free-milling dirt like the Crown Company's own lodes produce. It consequently requires different treatment.

Shareholders in the Crown will, in June next, be able to exercise the option of taking up 200,000 new shares at 4s. Should they do so this would represent to the company additional capital to the amount of £40,000 and place it in a position to prosecute further works to which those now in hand are in a sense preparatory.¹²¹⁸

8 March

COUNTY COUNCIL. MONTHLY MEETING.

Permission was given to the New Zealand Crown Mines Co. to put an aerial tramway under the Hill Track at Karangahake, subject to the requirements of the County engineer.¹²¹⁹

The County Road is being called the Hill Track. This is for the No.7 cableway.

Crown No. 7 level aerial cableway

18 March

CROWN COMPANY'S MINE.

Waihi. Saturday.

In the New Zealand Crown Company's mine good headway is being made with the development work in the Talisman section of the property, and the drive will shortly be in touch with the north block on the Maria reef, which, according to measurements and samples taken, will yield about 23,000 tons of ore worth £3 11s per ton. It is mainly with the object of treating the quartz from this section, and a further large block to be made available later on, that improvements and additions to the treatment plant are being made, as unlike the general run of Crown dirt the ore is refractory, containing about 10oz of silver to one of gold, and requiring special treatment. The machinery for the extension of the mill has been ordered, and the preparatory work, such as laying the foundations, etc., is already in hand. Other alterations have recently

¹²¹⁸ <https://paperspast.natlib.govt.nz/newspapers/NZH19120208.2.21>

New Zealand Herald, Volume XLIX, Issue 14910, 8 February 1912, Page 5

¹²¹⁹ <https://paperspast.natlib.govt.nz/newspapers/OG19120308.2.18>

Ohinemuri Gazette, Volume XXIII, Issue 2914, 8 March 1912, Page 3

been made to the company's plant, and the whole of the machinery at the mill and in the fitting shop is now being driven direct from the power house by electricity.¹²²⁰

29 March

WORKERS AT WAIHI. DEMANDS OF ENGINEERS' UNION.
ARRANGING AN AWARD.

CBY telegraph.—own correspondent.) Waihi, Thursday.

The Conciliation Commissioner (Mr. T. Harle Giles) sat at the Waihi Courthouse to-day for the purpose of hearing the dispute between the Ohinemuri branch of the Engineers' Union and the district mining companies...

Applications for the exemption of the Talisman Consolidated, N.Z. Crown Mines (Karangahake), Komata Reefs (Komata), and Paeroa Gold Extraction (Paeroa) Companies from the operations of any award that might be arrived at, on the ground that the propositions enumerated were at present working under the Thames Miners' Union award, were granted by the Commissioner...¹²²¹

3 April

The regularity or otherwise with which the street lamps in the district are lighted was referred to by Mr McWatters at the meeting of the Ohinemuri County Council yesterday, and on his motion it was decided that the lamplighters at Paeroa and Karangahake be written to and informed that the Council is not altogether satisfied with the manner in which the work is being done, and asking that better attention be given to the matter.¹²²²

Waihi Strike. 13 May - 12 November 1912¹²²³

10 June

TALISMAN CONSOLIDATED.

...Talisman shaft. As soon as the services of certificated winders can be obtained the management will be able to proceed more expeditiously with the sinking of the shaft.

... The Woodstock shaft is now being sunk at a rate of about 1ft per day, and is now 25ft below No. 13 level...

NEW ZEALAND CROWN MINES

The drive from the Hauraki level in the New Zealand Crown mine (Karangahake) to intercept the main Talisman lode (the Maria) is now in touch

¹²²⁰ <https://paperspast.natlib.govt.nz/newspapers/NZH19120318.2.19>

New Zealand Herald, Volume XLIX, Issue 14944, 18 March 1912, Page 5

¹²²¹ <https://paperspast.natlib.govt.nz/newspapers/NZH19120329.2.21>

New Zealand Herald, Volume XLIX, Issue 14954, 29 March 1912, Page 5

¹²²² <https://paperspast.natlib.govt.nz/newspapers/OG19120403.2.6>

Ohinemuri Gazette, Volume XXIII, Issue 2925, 3 April 1912, Page 2

¹²²³ Rainer, COMPANY TOWN, December 1976

with the ore body. Owing to its underlie a stretch of this reef passed from the Talisman Company's area into the Crown mine...¹²²⁴

5 July

OHINEMURI COUNTY. MEETING OF THE COUNCIL

Kennedy and Taylor, contractors for the erection of the bridge at Karangahake, applied for extension of time on their contract owing to the difficulty in obtaining jarrah timber. Mr Franklin moved, and it was carried, that two months extension of time be granted.¹²²⁵

28 August

THE STRIKE MICROBE. KARANGAHAKE TROUBLE ON STRIKE FOR A DAY. ALL OVER ONE MAN A SATISFACTORY SETTLEMENT

Karangahake up to Monday morning had escaped the strike fever, but on Monday afternoon the deadly strike microbe invaded that ordinarily peaceful little town, and for close on twenty-four hours there were signs of trouble. And it was all over one man—an engine-driver from Waihi who wandered in to Karangahake in search of a job. It appears that on Monday the man presented himself at the office of the Talisman Consolidated with a request for work. The management replied that there was a vacancy for a winder; had the applicant a "ticket?" The necessary certificate was produced, and the man went "below" to work on the afternoon shift commencing at four o'clock on Monday afternoon. But some keen person scented in this apparently innocent little affair reason for trouble. The men who should have come on shift at four o'clock declined to proceed to work, the reason given being that they would not work with the winder who was a member of the Waihi Engine-drivers' Union. No intimation was given to the Talisman Company of the objection to the man, nor were the officials of the Miners' Union consulted. The objecting miners simply "downed tools" and persuaded others to do likewise. Consequently no work was done, and the cause thereof—the engine-driver—had to go off too. The time for the night shift came—midnight—and still the men did not come to work.

Yesterday morning men from the Crown mine also declined to labour. Certainly a few miners came along to the mines, but as a meeting of the Miners' Union had been convened for mid-day, the officials thought it was hardly worth while just a portion of the men coming to work. The Talisman battery ceased working on Monday night, and the Crown battery stopped yesterday morning. Just a few men who were engaged in the cyanide department and at surface work kept on at their daily labour.

Meantime, the cause of the trouble—the winder—had quietly disappeared from the town. The mine management was quite willing to keep him on provided he could do the necessary work, but a "little bird" whispered to him

¹²²⁴ <https://paperspast.natlib.govt.nz/newspapers/NZH19120610.2.27>

New Zealand Herald, Volume XLIX, Issue 15015, 10 June 1912, Page 5

¹²²⁵ <https://paperspast.natlib.govt.nz/newspapers/OG19120705.2.15>

Ohinemuri Gazette, Volume XXIII, Issue 2963, 5 July 1912, Page 2

that for his own sake it would be well to "make himself scarce." And so an early train carried him away from the troublous waters of Karangahake. It appears that there had been threats of "boycotting" the boarding house at which he had taken up his quarters, but apparently his early departure nipped in the bud any attempt at retaliation against an unoffending boardinghouse keeper endeavouring to earn an honest living...

By four o'clock the men were back at work and the strike was over. Having lasted exactly twenty-four hours. The men went down the mine again, the batteries started working, and everybody seemed pleased that there had been such a happy termination to the strike for a day.¹²²⁶

18 September

MEETING AT KARANGAHAKE

(By Telegraph.—Special to "Star.") PAEROA, Tuesday.

As the result of a meeting held at Karangahake on Monday night most of the miners employed by the Talisman and Crown mines took the day off to attend a mass meeting which had been called for this afternoon. The mass meeting was a public one, and was open to the Press.

Mr T. Morgan (chairman of the Karangahake Miners' Union) presided, and there were about 350 present, including several ladies.

The chairman explained that the meeting had been called to protest against, the attitude taken against the strikers at Waihi. He stated that the men who had been sent to gaol had not been given a fair deal and had been treated too harshly. The Karangahake miners had taken the day off to attend this meeting and show their sympathy with the men who had been sent to gaol. He read a resolution which had been passed by the Waikato Miners' Union, and it was received with applause from a section of those present.

The meeting was addressed by Messrs. Thompson, Matthews and Fraser, of the Waihi Miners' Union. All of the speakers contended that the men sent to gaol had been treated unjustly. Mr Fraser said that in the past men who had gone to gaol through labour troubles had been a curse to the labour movement, because most of them had gone to gaol merely to win notoriety. The men of Waihi who were now imprisoned were not of that class, and they had allowed themselves to be taken to gaol on principle, and not to gain notoriety. The same speaker said that he did not approve of long strikes, as they had gone out of date and were more harmful to the workers than to the employers. He advised the men to take things easier at work, and try to reduce the output of the mines by not working too hard. Several of the Karangahake workers addressed the meeting, and the following resolutions were carried:

- (1) "That the workers of Karangahake appeal to our fellow workers and unionists throughout the Dominion to make their protest felt in such a way as to endeavour to secure the immediate release of the imprisoned strikers."
- (2) "That we, the workers and miners of Karangahake, hereby protest against the action of the authorities in drafting such a strong force of police to the

¹²²⁶ <https://paperspast.natlib.govt.nz/newspapers/OG19120828.2.14>

Ohinemuri Gazette, Volume XXIII, Issue 2985, 28 August 1912, Page 2

district, and showing such pronounced bias in favour of the Mine Owners' Association."

(3) "That we, the miners and workers of Karangahake, have ceased work for one day to enter a strong protest against the unjust imprisonment of our fellow workers of Waihi and demand their immediate release."

(4) "That copies of all resolutions carried at this meeting be forwarded to the Prime Minister, the Minister of Justice, the Minister for Mines, and the member for the district (Mr H. Poland)."

Towards the end of the meeting a woman rose in excited fashion and declared that the men would not be beaten if their wives had anything to do with it.

A feeling exists among the moderate workers at Karangahake that the mining companies will not be prepared to allow the men to resume work under present conditions. Mr Stansfield (superintendent of the Talisman Co.) refused to make any statement when asked if there was any likelihood of the mines being closed.¹²²⁷

4 October

OHINEMURI COUNTY. MEETING OF THE COUNCIL

I am pleased to be able to inform the Council that the timber for the Karangahake Bridge has arrived, and would suggest that the contractors be allowed four months from date to complete the work.¹²²⁸

Weather permitting, the Karangahake bowling green will be opened on Saturday, 26th October, and the new croquet lawn should be ready for use about Christmas time. The club has engaged Mr E. Mettam as caretaker to take charge of the green and lawn.¹²²⁹

16 October

Talisman mine closes.

AUCKLAND, Wednesday. The superintendent of the Talisman mine at Karangahake reports that owing to the interruption of coal supplies from Huntly it is necessary to reserve the present coal in stock for pumping only. He says, "We regret having to stop all operations of the mine and mill at 8 o'clock this morning until further supplies are available. All pumping operations will be continued as usual."¹²³⁰

18 October

AT KARANGAHAKE. NO WORK TILL COAL ARRIVES. By Telegraph.—Own Correspondent, Waihi, Thursday

¹²²⁷ <https://paperspast.natlib.govt.nz/newspapers/AS19120918.2.61.2>

Auckland Star, Volume XLIII, Issue 224, 18 September 1912, Page 6

¹²²⁸ <https://paperspast.natlib.govt.nz/newspapers/OG19121004.2.20>

Ohinemuri Gazette, Volume XXIII, Issue 3001, 4 October 1912, Page 3

¹²²⁹ <https://paperspast.natlib.govt.nz/newspapers/OG19121004.2.6>

Ohinemuri Gazette, Volume XXIII, Issue 3001, 4 October 1912, Page 2

¹²³⁰ <https://paperspast.natlib.govt.nz/newspapers/WT19121016.2.37>

Waikato Times, Issue 12407, 16 October 1912, Page 5

No fresh incidents have occurred at Karangahake since the cessation of operations at the mine and the battery yesterday morning in consequence of the shortage of coal. Nothing of note has occurred. Mr Stansfield, superintendent of the Talisman, was called upon by a Press representative this morning, when it was learned that pumping would be continued as long as the supply of coal hung out, but the mine and battery would remain in idleness until fresh supplies were available.

The Crown mine is in full commission. In the event of pumping being stopped at the Talisman mine it is probable that the Crown will experience a difficulty with water. Four years ago when an interruption in pumping at the Talisman occurred there was no appreciable difference in the make of water in the Crown mine, but during the interval extensive underground developments in the Talisman has altered the aspect of things, in relation to the connecting ore veins-between the two properties, hence the probability of a big increase of water in the Crown should the water in Talisman mine be permitted to rise.¹²³¹

21 October

TALISMAN STILL IDLE.

KARANGAHAKE QUIET. CROWN STILL WORKING.

The enforced holiday of the Talisman miners at Karangahake, consequent on the shortage of coal, still continues. The company is conserving its coal, supply so as to keep the pumps going as long as possible, and as a little Newcastle coal was received last week it is anticipated that the pumps will be kept in commission for a long time yet. The Crown mine employees have so far been all kept on, the water power enabling that company to eke out the coal supply.

The town itself presents much the same appearance as usual. Most of the men seem content to simply wait until the Talisman is ready to recommence operations, the general opinion being that it will not be long before the Huntly strike is over and coal coming forward as usual. There is absolutely no disturbance in the town, and it seems difficult to realise that about three hundred men are out of work. A good many of them meet in the street and discuss matters in a friendly way, while the more industrious are putting in their spare time doing work at home that married men can always find to do in attending to the garden or making necessary repairs about the house. Some of the single men are perfecting their knowledge of billiards and quoits, for both of which pastimes miners have a passion as a rule. A few of the men visited Waihi last week to witness the excitement there, but very few of them took any part in the Waihi demonstrations.

It is interesting to note that nearly all the Federation of Labour supporters at Karangahake are—or, rather, have been—Talisman employees, very few of the Crown men being "Red Feds." Perhaps the explanation is that most of the Crown employees are old residents who are generally married men who have settled down, and who have been too busy working to worry about taking part in the socialistic movement.¹²³²

¹²³¹ <https://paperspast.natlib.govt.nz/newspapers/AS19121018.2.55>

Auckland Star, Volume XLIII, Issue 250, 18 October 1912, Page 5

¹²³² <https://paperspast.natlib.govt.nz/newspapers/OG19121021.2.16>

27 November

The Karangahake Bridge had also been commenced, and although the bridge had not yet been completed, the Council's liability in connection with it was between £1200 and £1300.¹²³³

2 December**COUNTY WORKS.**

Mr H. M. Corbett, when returning thanks last week for his re-election to the position of chairman of the Ohinemuri County Council, made reference to some of the more important works that the County Council has in hand. After speaking of the new offices now occupied by the Council—and which had become a necessity rather than a luxury—he mentioned the new bridge at Karangahake that is now nearing completion. Undoubtedly this bridge was badly needed, and it is surprising how the great amount of traffic to the mines was for so long carried over the flimsy structures that did duty for a long time. It would have been a wise policy years ago to have gone in for a permanent bridge instead of spending money on what at best were only makeshifts...¹²³⁴

A large heavy trestle bridge, replacing the first swing bridge at Karangahake township was built in 1912. This remained until the mid-1950s and the present pipeline bridge was built on the same site in 1958. The concrete centre pier of the trestle bridge still remains.¹²³⁵

AJHR 1913

For the year 1912

MINES STATEMENT, BY THE HON. W. FRASER, MINISTER OF MINES.

Mr. Speaker,— I have the honour to present to Parliament the Mines Statement for the year ended the 31st December, 1912.¹²³⁶

APPENDICES TO THE MINES STATEMENT.**APPENDIX A. REPORTS RELATING TO METALLIFEROUS MINES AND STONE-QUARRIES.****The Inspecting Engineer of Mines**

to the Under-Secretary of Mines. Sir,— Wellington, 2nd July, 1913. I have the honour to present the annual reports of inspection of mines and stone-quarries, together with extracts from the reports of Wardens and other officers,

Ohinemuri Gazette, Volume XXIII, Issue 3007, 21 October 1912, Page 3

¹²³³ <https://paperspast.natlib.govt.nz/newspapers/OG19121127.2.12>

Ohinemuri Gazette, Volume XXIII, Issue 3022, 27 November 1912, Page 2

¹²³⁴ <https://paperspast.natlib.govt.nz/newspapers/OG19121202.2.6>

Ohinemuri Gazette, Volume XXIII, Issue 3024, 2 December 1912, Page 2

¹²³⁵ <https://www.ohinemuri.org.nz/journals/journal-44-september-2000/karangahake-roads-and-bridges>

Ohinemuri Regional History Journal 44, September 2000, Karangahake Roads and Bridges

¹²³⁶ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1913-I.2.3.2.12/1>

MINES STATEMENT, BY THE HON. W. FRASER, MINISTER OF MINES., Appendix to the Journals of the House of Representatives, 1913 Session I, C-02

accompanied by statistical information in regard to the metalliferous mines and stone-quarries of the Dominion, for the year ended 31st December, 1912.

Page 5

On the Karangahake Goldfield the Talisman Mine worked throughout the year with profitable results, producing its record output, value £246,569, and declaring £125,062 10s. in dividends. At the deepest, or No. 14, level (being 700 ft. below the Waitawheta drainage adit) a considerable amount of driving north and south was carried out, and the Bonanza and Dubbo shoots were proved. Driving is being continued in search of the Talisman shoot, not yet proved at this level. Development at depth has been considerably retarded during the year owing to the heavy flow of water, but short drives on the lode north and south from No. 12 winze, sunk about 45 ft. below No 14 level, show the Dubbo shoot to split at the north face, and to be inferior generally to what was found in the level above. Unfortunately, this development has been suspended for some time owing to excessive water. The Woodstock shaft, which it is proposed to utilize as the main pumping and winding shaft for the mine, had at the end of the year reached a depth of 454 ft. below the engine-chamber. After sinking a further 50 ft. it is proposed to prepare a chamber for No. 14 level and to install the Cornish pumps (in two sections). Driving will then be proceeded with to connect with the principal mine-workings.

The New Zealand Crown Mine has suffered a decline both in the value of bullion produced and in the quality of ore treated; nor has mining-development disclosed anything of importance. A vacuum filter plant has been installed, by which an improved extraction is anticipated.

The Waihi-Paeroa Gold-extraction Company have been very successful with their newly laid down gold-extraction plant, consisting of union vanners, twenty-two tube mills, pneumatic tanks, and vacuum filters installed on the banks of the Ohinemuri River near Paeroa, below the Waihi and Karangahake Mines, for the purpose of re-treating the sands discharged into this river from those mines. The Gold-extraction Company elevate the sand by air-lift from the banks and river-bed into barges of about 80 tons capacity, by which it is transported to the works, the air-lift system being generally adopted at the works. During the year 84,178 tons (of 2,240 lb.) were treated, for a return of £33,811, being an average recovery value of 8s. per ton, which is slightly less than the average return from the sand treated by the same company in their original works situated higher up the stream. The evidence supplied by this profitable reduction of the average Waihi tailing discharged into the sludge-channel is not favourable to the milling practice formerly in operation at Waihi. This company declared dividends amounting to £6,250 during the year.

ANNEXURE A.

EXTRACTS FROM THE REPORTS OF INSPECTORS OF MINES.

NORTHERN DISTRICT.

Mr. Matthew Paul, Inspector of Mines, Waihi.

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Karangahake. Talisman Gold-mining Company. —

Talisman shaft: This has made slow progress on account of the heavy flow of water. The total depth at the end of the year was 553 ft. below river-level.

When this shaft is a few feet deeper it is proposed to excavate a chamber, to install a horizontal pump of 50,000 gallons per hour capacity to raise the water to the adit above river-level, and thus avoid intermediate pumping. Woodstock shaft: This shaft is now sunk 454 ft. below the engine chamber, and it is intended to sink 40 ft. to 50 ft. deeper before opening out for No. 14 level. The first section of the Cornish pumping plant has been placed in the shaft, and the second set will be installed when No. 14 level is opened up, when the plant will be started, thus making the Woodstock the main drainage-shaft of the mine. At No. 13 level the south drive has been extended to the boundary of ore in the Dubbo section, but as the country is still favourable it is intended during the ensuing year to resume driving south, also to crosscut east and west. At No. 14 level the north drive has been advanced beyond the boundary of the Bonanza ore-shoot, with a view of picking up the Talisman shoot, which has not yet been found. The south drive at No. 14 level has passed the southern boundary of ore in the Bonanza section, and is now being advanced toward the Dubbo section, where the reef proved is of fair size, but of low value. No. 12 winze was sunk a few feet during the year, and drives from the same were put out north and south to relieve the Talisman shaft of a portion of the water. A new fitting-shop and a new change-house are the principal items in the way of construction-work for the year.

Dominion Gold-mining Company. —In this mine the eastern low level which was put in to intersect lodes found outcropping on the surface, varying from 3 ft. to 30 ft. in width, has been extended a total distance of 819 ft.

Unfortunately, at this point a large body of water was met with. Considerable time was spent in attempts to secure the face of this drive, but owing to the broken country and heavy pressure of water this work proved to be very slow and expensive. It was therefore decided to remove the men and further test the outcrops of these reefs, in order to allow the water sufficient time to drain off.

New Zealand Crown Mines (Limited). —The following development has been carried out on the Welcome, Crown, and Maria reefs at this mine during 1912: —Welcome lode, from four levels above and four levels below (400 ft.) the Waitawheta or river-level: 2,054 ft. of driving, 1,671 ft. of rising, 255 ft. of sinking, 817 ft. of crosscutting, and 17,758 ft. of stoping: produced 21,319 tons of ore. Crown reef, from three levels above Waitawheta: Driving, 453 ft.; rising, 344 ft.; sinking, 7 ft.; stoping, 362 ft.: produced 747 tons of ore. Maria reef, Hauraki section: Driving, 290 ft.; rising 123 ft.; crosscutting, 423 ft.; and stoping, 172 ft.; ore obtained, 724 tons. This section, which is being worked from a drive on what is known as the Hill track, has been connected with the main tramline leading to the mill by an aerial tram-line 1,100 ft. long [335m], with requisite hopper accommodation erected at both ends. Number of tons treated, 22,839; bullion recovered, 17,023 oz., valued at £40,798 7s. 5d. Mill: A vacuum filter plant has been installed for the treatment of slimes, and is working very satisfactorily. The slime-vats are being fitted with mechanical agitators, and it is anticipated a higher percentage of bullion will be recovered during the incoming year.

Paeroa. Waihi - Paeroa Gold-extraction Company. — The new plant commenced operations on the 22nd January, but some time elapsed before the whole of the machinery was thoroughly adjusted and put in working-condition, so that up till the 8th March only 1,500 tons had been treated. Up to

date the sands treated have been obtained from the lower river claim, which four years ago contained very little tailings, so that it is evident the material treated is a recent product from the mines above, and estimated to be the lowest grade in the river. This section, however, had to be dredged to get floating-room for the barges. Although the material treated has only yielded an actual extraction of 8s. per ton (of 2,240lb.) the profit over working - expenses has been satisfactory, owing to the very low working-costs. A dividend of 1s. per share was paid in November, and it is anticipated by the management that during the current year higher-grade sands will be obtained. The dredging and elevating plant have done excellent work in what is considered a poor section of the river, and for cheap handling it is claimed that the system adopted would be difficult to improve on. Its efficiency is best shown by the fact that 1,000 tons of tailings have been dredged and delivered into the storage hoppers in twelve hours. The air-lift system, as used on the dredge, has been installed successfully throughout the whole plant for handling the tailings and pumping the slimes. The adoption of this system is largely responsible for the low working-costs in elevators and repairs. Two extra tube mills have been installed during the year, making a total of twenty-two mills now at work. The improved system of vacuum filtration, although considered at first to be experimental, has proved to be one of the most successful features of this plant, having handled the required tonnage without difficulty and at a very low cost. One man on a shift can treat with ease 500 tons of slimes per day, and as much as 600 tons have been filtered and washed in twenty-four hours. Assays showed the washing of the cakes to be very clean, and loss of cyanide reduced to a minimum. The total consumption of cyanide in the whole treatment of the sands is considerably under 1 lb. per ton. The power section of this plant has proved most satisfactory. A spare air-compressor has been erected, and a 100-H.W. [KW] generator is now being erected. During the year 84,178 long tons of tailing was treated, yielding bullion valued at £33,811 6s. 5d.

ANNEXURE B.

Mr. Warden Burgess, Thames

to the Under-Secretary of Mines, Wellington. Sir,— The Warden's Office, Thames, 1st May, 1913. I have the honour to present my report on the Hauraki Goldfield, under my charge, for the year ended 31st December, 1912.

Page 40

At Karangahake the principal mine at work is the Talisman. Operations in this mine still continue to yield extremely satisfactory results, and the deepest works show improvements both in the average width and value of the lodes. The total yield of gold for 1912 amounted in value to £245,733, an increase of £23,675 over that of the previous year.

In the Crown Mine work is being carried on in blocks already opened up, and two fresh blocks of ore on the Maria reef have been opened up, but no developments at deeper levels have been undertaken. Gold to the value of £40,895 was obtained.

There are several other mines at work at Karangahake, but so far they have not reached the stage of gold-production.

The Gold-extraction Company, which is possessed of a very extensive and well-equipped reduction-works on the Ohinemuri River, have been steadily at

work, and during the year have treated 94,100 tons of tailings, taken from the bed of the river, for a return of £33,811 6s. 5d., and have already paid the shareholders a dividend of 1s. a share.

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Karangahake School of Mines. —

Annual Meeting, 5th March, 1913.

The annual meeting of the Karangahake School of Mines was held on Wednesday, 5th March. In the absence of the patron (Mr. H. Poland, M.P.), Mr. Barrance was voted to the chair.

The report and balance-sheet were read and adopted. The report showed the attendance to be lower than usual, owing to the Waihi strike having greatly affected the attendance at the Waikino branch school. The average number of students was twenty-seven, and the average of attendance was fifty-two.

At the annual examinations held in December fifteen students sat and obtained fourteen first-, four second-, and nine third-class certificates. Two students also passed in the practical examination. Mr. G. E. Hyde was successful in obtaining one of the New Zealand Government scholarships, and an ex-student of the school (Mr. A. H. McClean) also gained a scholarship. Mr. Hyde had an excellent average of 81 per cent, in six subjects. The Council's prizes were won by G. E. Hyde and J. McDonald, and Mr. Hurdsfield's prize was won by Mr. C. Jenkins. The students were top in no less than eight subjects, and Mr. R. Connolly deserves special mention for obtaining 100 per cent, in senior electricity.

During the year eighty-one public assays, mainly of gold, were put through. This includes a number of prospectors' samples, which, if obtained in this county, are done free.

The scholarships offered by the Council to boys of public schools were won by R. Seally and J. Short; one student also obtained his winder's certificate.

During the year several standard works have been added to the library.

The statement of accounts showed the total receipts for the year as £872 8s. 2d.; and the expenditure £591 4s. 2d., leaving a credit balance of £281 4s.

The Chairman, in a few well-chosen remarks, presented the certificates and prizes.

The election of officers for the year resulted as follows: Patron, H. Poland, Esq., M.P.; president, Mr. W. T. S. Wilson; vice-presidents, Messrs. H. Hyde, T. Hogg, and H. Croucher; Councillors, Messrs. Lewin, J. Tait, E. Patten, P. Moran, R. R. Lloyd, R. L. Birks, and Jolly.

The Council desire to thank the Mines Department, Ohinemuri County Council, Waihi Borough Council, and others for assistance and donations, also Mr. J. E. Redpath for honorary services as auditor.

1913

13 January

Good progress is being made with the construction of the new traffic bridge at Karangahake, and the structure should be completed by the end of this month.¹²³⁷

17 January

CROWN MINES. (BY TELEGRAPH. —OWN CORRESPONDENT.)
Waihi, Thursday.

Crushing operations after the holiday period were resumed at the Crown Mines Company's battery on Tuesday last, and the vacuum plant was started on Wednesday. This plant will improve the gold recovery, and in the course of a few days the tonnage of ore going to the mill will also be materially increased. To permit of the breaking-out of additional ore from the mine the north block of quartz on the Maria reef, which has hitherto been worked from the No. 7 level only, is being approached from the Talisman Company's No. 4 level. The work will be completed in about a week's time.¹²³⁸

25 January

N.Z. CROWN MINES. UNPAYABLE DEVELOPMENT WORK
ABANDONED.

(By Telegraph.—Own Correspondent) Waihi, this day.

About 60 hands all told have been dispensed with recently by the New Zealand Crown Mines, Ltd., Karangahake, it having been decided to abandon all unpayable development works at various parts underground.¹²³⁹

New truss Traffic bridge completed

3 February

The Talisman Mine.

Apart from a few days delay (indirectly due to the Waihi labour troubles) mining and milling was carried on continuously on the Karangahake section of the Ohinemuri field. The Talisman Consolidated Company's mine was easily the principal bullion-producer in the district, the output for 1912 being worth £245,733 5s 1d, compared with £222,058 1s 3d for 1911...

The cutting out of the pump chamber in the Talisman shaft is now almost completed, and as soon as the pumps are installed the sinking of the Woodstock shaft will be resumed and other development works at the low level, including driving and rising, will be put in hand...

New Zealand Crown Mines.

¹²³⁷ <https://paperspast.natlib.govt.nz/newspapers/OG19130113.2.8>

Ohinemuri Gazette, Volume XXIV, Issue 3038, 13 January 1913, Page 2

¹²³⁸ <https://paperspast.natlib.govt.nz/newspapers/NZH19130117.2.22>

New Zealand Herald, Volume L, Issue 15203, 17 January 1913, Page 5

¹²³⁹ <https://paperspast.natlib.govt.nz/newspapers/AS19130125.2.43>

Auckland Star, Volume XLIV, Issue 22, 25 January 1913, Page 8

Although the battery was not kept going at its full capacity, and only from one to two shifts daily, the New Zealand Crown Mines Company crushed and treated 20,501 tons of ore in 1912, and extracted bullion valued at £40,895, as against £44,802 for the previous 12 months...¹²⁴⁰

7 February

OHINEMURI COUNTY. MEETING OF THE COUNCIL

KARANGAHAKE BRIDGE. The Talisman Consolidated wrote asking that when the traffic bridge at Karangahake is completed the Council leave the present bridge to be used as a foot bridge. The letter stated that at the present time there are over 400 men crossing the bridge daily besides a large number of school children and that it was highly desirable for the safety of all that the bridge be left in its present position. To renew the bridge and re-erect elsewhere would cost at least £800 to £1000.

On the motion of the chairman, seconded by Mr Franklin it was decided to reply to the company stating that when the necessity for a foot bridge arose the Council could consider the matter.

HILL ROAD, KARANGAHAKE. The Talisman Consolidated wrote stating that it had been informed that nothing had been done in the matter of repairing the road and asking that some quartz metal be laid on the road. The engineer and Mr Lloyd were instructed to look at this road and report to the Council.¹²⁴¹

The bridge not completed yet?

26 February

The Ohinemuri County Council will hold its monthly meeting on Thursday, 6th March, at one o'clock. Among the business to be dealt with is the following motion of which Mr Marrinan has given notice :—"That the resolution of the Council of 1st February, 1912, dealing with the matter of removing the suspension bridge from Karangahake and re-erecting it over the Waitekauri Stream, be now rescinded and the matter reconsidered."¹²⁴²

KARANGAHAKE NOTES. (From our own Correspondent.)

On Saturday last the inanimate [clay?] pigeon-shooting match for the trophy presented by Mr G. A. Meekings (president) was held. The successful shooter was C. W. Shepherd, who, in spite of the bad weather, managed to shoot 16 birds out of a possible 21. T. J. Dare was second with 13 birds.

Saturday was an exceptionally busy day on the Karangahake bowling green. A visit was received from the Thames Club, who were entertained at a very dainty luncheon in the club's pavilion, during which President Searle proposed the toast of "Success to Bowls." President Ensoll, of Thames, replied in a very happy speech. During the afternoon the club's team—Hilton (skip), Jury, Waddell and Guthrie—who had just returned after winning the Rotorua

¹²⁴⁰ <https://paperspast.natlib.govt.nz/newspapers/NZH19130203.2.20>

New Zealand Herald, Volume L, Issue 15217, 3 February 1913, Page 5

¹²⁴¹ <https://paperspast.natlib.govt.nz/newspapers/OG19130207.2.14>

Ohinemuri Gazette, Volume XXIV, Issue 3049, 7 February 1913, Page 2

¹²⁴² <https://paperspast.natlib.govt.nz/newspapers/OG19130226.2.8>

Ohinemuri Gazette, Volume XXIV, Issue 3057, 26 February 1913, Page 2

tournament, were driven out by motor from Paeroa, and arrived in time to participate in the games. On entering the green they were welcomed by the presidents of Karangahake and Thames Clubs, while the band played, "See the Conquering Heroes Come." Play was then proceeded with, Thames winning by 12 points.¹²⁴³

31 March

HURLED TO DEATH.

TWO MINERS KILLED IN THE TALISMAN MINE.

SKIP BREAKS AWAY. FALL OF 800 FEET.

(BY telegraph.— correspondent.) Waihi, Saturday.

The most serious mining accident which has happened on the Ohinemuri goldfields during the past three or four years, occurred at the Talisman mine (Karangahake) early last evening, and resulted in the death of two men, William Hyde (married) and Thomas McBride (single).

Both were skipmen, and immediately prior to the accident were engaged filling a skip with steel drills and other tools at the Talisman incline shaft at No. 8 level for distribution among the miners at various points lower down. They had apparently just completed their work of loading and taken up their position on the skip in readiness to be lowered by the engine-driver in charge, when the wire rope on which the skips run parted, and the skip and its human freight were precipitated to the depth below.

The driver (Ryan) felt the rope slacken, but could do nothing towards saving life, as at the tremendous speed with which the skip would travel in its downward flight, and in the absence of any means of escape the unfortunate men must already have been beyond human aid. He however did all that was possible, and that was to gather together other available workers and proceed with a search for the bodies...

Speaking generally, the skips, which take the form of an elongated box, are used for the haulage of quartz from the underground workings of the mine, each skip being capable of holding upwards of a ton of quartz. They run side by side (two in number) in comparatively small compartments. Miners are prohibited from using them in travelling to and from their work as they do not provide accommodation for workers as is done by cages used in vertical shafts; it seems however that skip men make use of them from time to time when distributing stores and tools to the miners.¹²⁴⁴

HURLED DOWN A SHAFT.

FATALITY AT KARANGAHAKE

SKIP BREAKS AWAY. TWO MEN KILLED.

A fatal accident happened in the Talisman mine at Karangahake at about 5.30 p.m. last Friday whereby two miners named William Hyde and T. McBride lost their lives.

¹²⁴³ <https://paperspast.natlib.govt.nz/newspapers/OG19130226.2.25>

Ohinemuri Gazette, Volume XXIV, Issue 3057, 26 February 1913, Page 3

¹²⁴⁴ <https://paperspast.natlib.govt.nz/newspapers/NZH19130331.2.83>

New Zealand Herald, Volume L, Issue 15264, 31 March 1913, Page 8

It appears they were distributing stores to various levels from No. 8 level, and had just loaded the skip and were about to signal to the driver to be lowered when the rope snapped, and the unfortunate men and the loaded skip were hurled down the shaft...

The shaft was considerably damaged by the skip, most of the centre pieces being knocked out, and the air pipes were broken, consequently the pumps were stopped. Repairs to the pipes enabled the pumps to start at 5.30 on Saturday morning.

An inquiry into the cause of the accident was opened on Saturday at noon before Mr J. Nathan (coroner), the following jury being empannelled: P. Grace (foreman), T. Poland, E. J. Hart, J. Morgan, J. Fitzgerald, and T. Hassett. After the bodies had been viewed and identified, the jury visited the scene of the accident and then adjourned until Tuesday morning at 9.30 o'clock in Montgomery's Hall.

The two unfortunate victims of the accident were buried in the cemetery at Paeroa this afternoon, when there was a large attendance of sympathisers and friends.¹²⁴⁵

An extensive inquiry was held.

29 July

Talisman Consolidated.

(By Telegraph.—Own Correspondent.) WAIHI, this day.

...The installation of the pumping plant in the chamber below No. 11 level in the Talisman shaft has now been completed, and the unwatering of the Woodstock shaft has been resumed. The water should be out in a few days, and the sinking of that shaft to a depth corresponding with the Talisman No. 14 level will then be put in hand. This work should be carried through in between three and four months, and the exploration of the northern section of the property at depth (including Taukani Hill) will then be proceeded with. The first reef to be intersected going north will be the main ore body (Maria), and other known reefs will also be tested. Should satisfactory results attend these operations, the position of the Talisman Company will be greatly improved.¹²⁴⁶

11 August

EDGAR ROCK DRILL. AN OFFICIAL TRIAL.

An official trial of the Edgar patent rock drill took place on Saturday at Karangahake when a fair gathering assembled to witness the proceedings. Among the number present were Mr M. Paul (Inspector of Mines), Mr Fowler (the manufacturer), Mr H. Edgar (the inventor), Mr Wilson (engineer Crown Mines), Mr C. Brown (engineer Talisman G.M. Co).

The chairman (Mr C. Eady) stated the object of the gathering and called on Mrs Geo. Simons to start the patent drill, which started in fine working style.

¹²⁴⁵ <https://paperspast.natlib.govt.nz/newspapers/OG19130331.2.14>

Ohinemuri Gazette, Volume XXIV, Issue 3070, 31 March 1913, Page 2

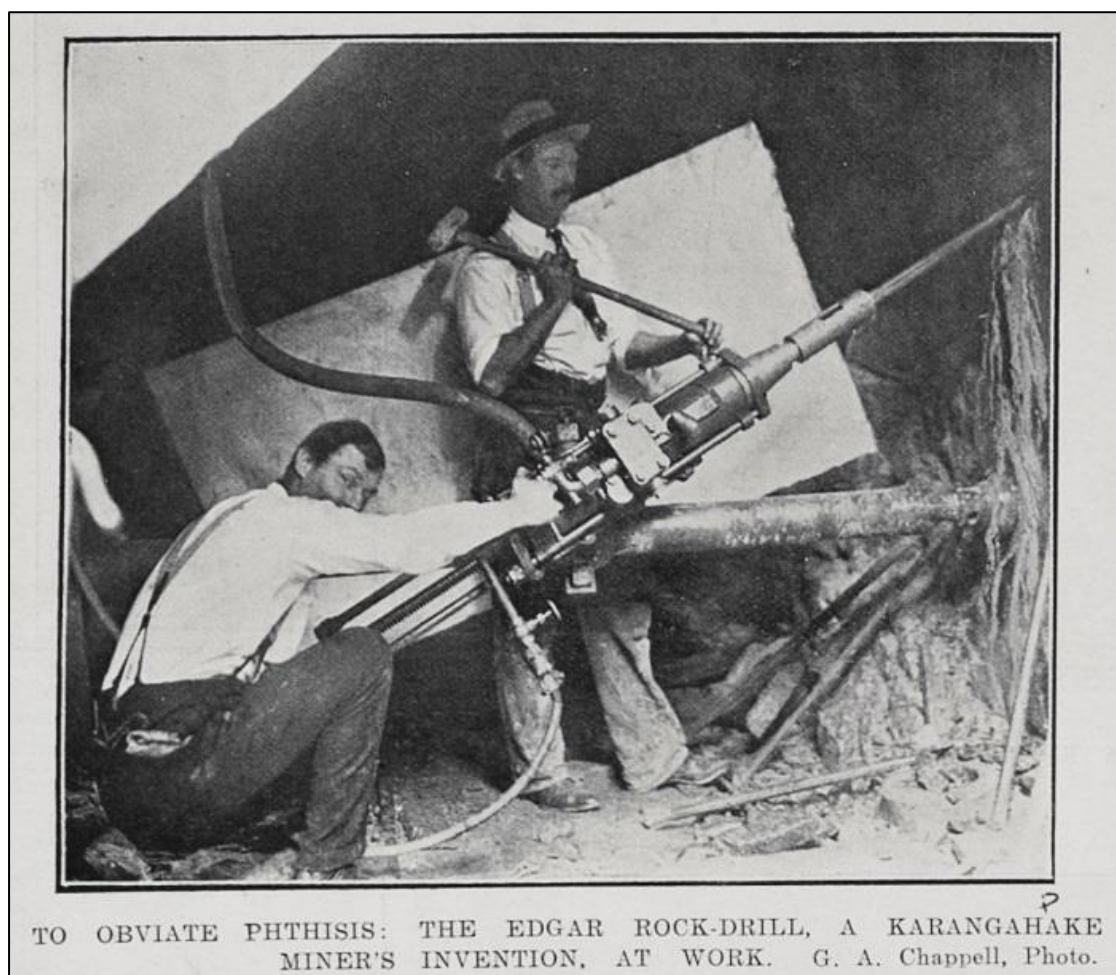
¹²⁴⁶ <https://paperspast.natlib.govt.nz/newspapers/AS19130729.2.80>

Auckland Star, Volume XLIV, Issue 179, 29 July 1913, Page 6

Mr Edgar claims that the drill he has invented will to a large extent prevent the dread disease, miner's complaint, by the water being automatically fed and forced through a longitudinal hole in the centre of the drill to the actual face being cut, thus preventing the usual dust in boring generally.

The trial proved conclusively that Mr Edgars invention was both practicable and attainable, the machine drilling rapidly and well in various classes of rock without creating the slightest dust. Numerous holes at various angles were drilled to various depths in both soft and extremely hard rock, and in all cases the inventor's claims were fully borne out. That the machine is rapid in its drilling action was fully demonstrated by the fact that nearly 15 feet of boring (included in which was one six inch hole) were drilled in 33 minutes. This time included all necessary setting and changing of the various drills.

At the conclusion of the trials the interested spectators closely inspected the rock drill and the work done, and were loud in their praise and congratulations to the inventor on the achievement of such success.—Own Correspondent.¹²⁴⁷



Photograph from Auckland Weekly News (AWNS-19130821-54-03)¹²⁴⁸

At the adit entrance to the Woodstock No. 5 level (underground pumphouse) there are many drill holes. Are these from this demonstration? This would have been a good location for a public demonstration.

Chappell photograph

¹²⁴⁷ <https://paperspast.natlib.govt.nz/newspapers/OG19130811.2.20>

Ohinemuri Gazette, Issue 3127, 11 August 1913, Page 3

¹²⁴⁸ <https://kura.aucklandlibraries.govt.nz/digital/collection/photos/id/203951>

13 September

THE MINER'S LOT. DANGERS TO HEALTH.

DESCRIBED IN THE HOUSE.

(BY TELEGRAPH. — SPECIAL CORRESPONDENT.) Wellington, Friday.

Some rather extraordinary remarks fell from certain members in the House of Representatives today during the discussion on the Mines Department estimates.

Mr. H. Poland (Ohinemuri) said there was urgent need for reform in medical inspection, so that men suffering from miners' complaint should be taken out of the mines and looked after, in order that later on they should not be at the mercy of charity. Mr. Poland told a pitiful story of the fate of miners engaged on the night shift. He quoted the opinion of the manager of the Crown Mines, Ltd., at Karangahake (Mr. McCombie), that the shift from 12 midnight to 8 a.m. was variously termed "the dog watch" and "the graveyard shift." It was a shift injurious to the health and well-being of the workers, and not profitable to the employers. Mr. Poland declared that towards the end of a week on which a miner had been on night shift he was hardly able to drag one leg after another, and that, under such circumstances, it was not fair to expect a miner to take the risk of working on such a shift. The night-shift system was altogether unnecessary, and the only argument in its favour was that it gave the mining companies 24 hours a day in which to get out a little more gold, and so swell their dividends. In the Talisman mine (Karangahake), Mr. Poland said there were 43 men on the night shift who had to go down a shaft 400 ft deep, along a level 4ft wide by 9ft high, for a distance of 1000 ft, and at the end of that distance they had to engage in arduous work, and the only air they got was pumped in to them.

Mr. H. G. Ell (Christchurch South) contrasted the lot of the miner with the man able to work "in the warm sunshine." He thought it was abominable and cruel that men should have to work on the night shift. The House should not rise without remedying the grievances of these men.

Mr. P. C. Webb (Grey) said the health of the miners was being ruined every day. He had seen men carried out of the Blackball mine sick with the smoke and bad air. The ventilation of the House, Mr. Webb contended, was good compared with the ventilation of the mines. "Improve the conditions of the miners," he said, "and you will improve industrial matters in this Dominion."

The Minister for Mines (Hon. W. Fraser) assured the members that all the questions affecting the miners' interests would be brought before the Gold Mines Committee.¹²⁴⁹

7 November

OHINEMURI COUNTY. MEETING OF THE COUNCIL.

WORK OF THE MONTH.

The report of the engineer (Mr C. Bray) was read as follows:— "Public Urinals.—I would suggest that the best places are at the end of Moresby Street, Karangahake..."¹²⁵⁰

¹²⁴⁹ <https://paperspast.natlib.govt.nz/newspapers/NZH19130913.2.99>

New Zealand Herald, Volume L, Issue 15405, 13 September 1913, Page 8

13 November

THE OHINEMURI FIELD. KARANGAHAKE MINES.

DIGGINGS OF THE SEVENTIES.

INTERESTING RETROSPECT. BY J. MCCOMBIE.¹²⁵¹

A lengthy article which appears to be a rehash of his earlier A RETROSPECT OF OHINEMURI GOLDFIELD 1897

(By Mr. John McCombie, Manager of the Woodstock Company's Mine, Karangahake.)

The New Zealand Mines Record. Vol 1 August 1897. No.1

A great summary. It is included in the document: Aboriginal.docx. Aboriginal was McCombie's early pseudonym.

A considerable number of gold diggers were camped at Cashell's Landing, Puke, in the year 1869. They were waiting for the opening of Ohinemuri as a goldfield, which it was then expected would eventuate daily. In the meantime the Maoris kept watch and ward over "the promised land," and, although some of the most daring "fossickers" managed to elude the vigilance of the dusky sentinels, others were caught in the act, and treated in a manner that was by no means ceremonious. Those who managed to run the gauntlet, and who claimed to have reached the gold-bearing territory, returned with "Baron Munchausen" tales regarding the dimensions and value of the reefs which they had discovered.

After a weary wait extending over a period of six years, it was announced, through medium of the Government Gazette, that the Ohinemuri lands would be thrown open for gold-mining purposes on March 3, 1875, when negotiations for the purchase of the property from the Maoris had been completed by Mr. James Mackay.

Karangahake was then the centre of attraction, because it was generally considered to be a perfect "Eldorado" of mineral wealth, and the undernoted men claimed to be the original prospectors; — Messrs. J. Smyth, J. Corbett, M. Coleman, T. Arnold, A. Macky, J. W. Throp [Thorp?], and J. Verrall.

At an early hour on the day of the opening there was great excitement at Mackaytown (between Karangahake and Paeroa), which sprung up mushroom-like in a few hours. It was a veritable canvastown, with a population of about 1600 people, and the main street was fringed with about 20 stores, where grog and groceries were obtainable at famine prices.

Frantic Rush for Claims.

The headquarters of the warden's department was then situated at Mackaytown, and applications for miners' rights were received by an army of clerks, who worked under the supervision of Mr. A. J. Allom throughout the whole of the previous day. Warden Fraser mounted an improvised platform at 9.55 a.m., and, after a brief address, he declared the field to be open for gold-mining purposes.

¹²⁵⁰ <https://paperspast.natlib.govt.nz/newspapers/OG19131107.2.16>

Ohinemuri Gazette, Volume XXIV, Issue 3164, 7 November 1913, Page 3

¹²⁵¹ <https://paperspast.natlib.govt.nz/newspapers/NZH19131113.2.153.29>

New Zealand Herald, Volume L, Issue 15456, 13 November 1913, Page 7 (Supplement)

The struggle to obtain the separate bundles of "rights," followed by the helter-skelter down the hill, across the Ohinemuri River, and up the opposite bank, can more easily be imagined than described. Picture 600 excited men starting out together from one place, at a given signal, the track leading down a steep hillside, across a mountain torrent, and thence up another abrupt incline, the goal being the prospectors' claim at Karangahake. The distance between the two points is about one and a-half miles, and in a few minutes after the issue of the rights the rough track was literally lined with a struggling mass of horsemen and footmen.

Soon after the breathless diggers reached the ground a perfect forest of pegs reared their heads around the prospectors claim, which had already been surveyed and the boundaries defined. Promiscuous pegging led up to numerous disputes, which would have culminated in a "free fight" but for the presence of a strong force of the armed constabulary.

The whole of the claims marked off on that particular day were located along the foothills on the north-western slope of the Karangahake main range, and here developments very soon proved that the country rock was disturbed to such a serious extent as to make mining both difficult and hazardous. The reefs occurred in isolated lenses, partaking of the character of the country rock, and they were neither defined nor continuous. Nevertheless, several full-fledged gold-mining companies were formed, a battery consisting of 16 head of stampers erected, and permanent work entered upon with great spirit. This involved an expenditure of many thousands of pounds sterling without any results worth mentioning, and things generally went from bad to worse, until the place was completely deserted.

Talisman and Crown Reefs Found.

Prospecting operations were started about the month of March, 1882, by Messrs. J. Liddell, McWilliams Brothers, and J. McCombie, somewhat higher up the mountain range than the location of the old workings. Within two months they succeeded in unearthing the gold and silver bearing reefs that are now being worked upon in the Talisman Consolidated and New Zealand Crown Mines. Here the outcrops of several reefs yielded fair pan prospects of free gold, and, when the new discovery became public property a "rush" took place. Then all the available ground in the immediate vicinity was marked off in areas ranging from five to 15 acres, and "new finds" were of daily occurrence.

Hereunder are the names of some of the men who took an active part in locating the new mining ventures:—Messrs. W. Davies, A. Hogg, R. Noble, P. C. Hansen, H. M. Shepherd, L. Melhose [Melrose?], W. Tregoweth, E. Ryan, J. W. Shaw, and M. Marrinan. The prospectors' claim named "The Hauraki" was formed into a company, which purchased the 16-stamp mill, already referred to, and the mine was connected therewith through medium of a stationary aerial tramline. Subsequently, a large tonnage of ore was reduced for a bullion return which did not liquidate the cost of breaking, leaving that of transit and treatment out of the question altogether.

Mines Named After Novels.

Mine after mine suspended work, and once more all the claims in the Karangahake district were virtually abandoned. The undermentioned gold-diggers did not join the general exodus, because they had faith in the future

possibilities of the reefs, viz. Messrs. J. Liddell, A. Shepherd, C. Davidson, M. Kelly, G. Mason, W. Fraser, and J. McCombie. This party of men marked off the Maria reel for a length of fully one mile along its line in five separate leases, and they registered their applications in the warden's office.

In the camp, during the long winter evenings, for some time before taking up the new claims, a series of Sir Walter Scott's novels formed the bulk of the reading matter¹²⁵², and all hands were more or less interested. Consequently, they named the claims Ivanhoe, Woodstock, Kenilworth, Talisman, and Peevril of the Peak.

Work in the Old Woodstock.

For the purpose of this article I must now confine my remarks to the Woodstock section of the property, which the owners worked on their own account without making any effort to enlist capital. The old 16-starap mill was again requisitioned, and crushing after crushing was dealt with for bullion returns which barely covered general expenditure. Average samples of the tailings after treatment were assayed by M. Von Bernewitz, Bank of New Zealand, Thames, and the results proved these residues to be worth £3 per ton, or thereabouts. Then the mine-owners realised that the ore was refractory in character and not amenable to ordinary battery treatment.

The New Zealand Herald devoted considerable space to the refractory ore question, and instanced the disappointing returns from the treatment of Woodstock ore as a case in point. Some of these articles attracted the attention of an American named Mr. J. D. Lamont, who was then en route from San Francisco to Sunny Corner, New South Wales, where he had contracted to erect several water-jacket ore smelters. This happened towards the end of 1885, when Lamont inspected and sampled the reefs then being worked upon in the Woodstock mine. He was well satisfied with the values resulting from the assay of his samples, and he pronounced the ore in sight to be the correct thing for smelting. Through his agent, (Mr. R. K. Davis) arrangements were speedily made with the Woodstock mine-owners for the erection of a water-jacket smelter, together with blower, refinery and all the etceteras of a complete treatment plant. A water-race and tramline connections with the mine were also provided for, and the terms were one-half the property.

This necessitated the formation of a company, and hereunder are the names of the first board of directors, who controlled the mine through all its vicissitudes for the ensuing eight years:—Messrs. W. S. Wilson, J. L. Wilson, H. T. Gorrie, W. Gorrie, J. A. Pond, and J. McCombie. Mr. D. G. McDonnell was appointed secretary, and Mr. W Littlejohn mine manager. The erection of the smelting plant, as well as that of the tram line and water-race connections, were carried out under the supervision of Messrs. Zeb. Lane and J. M. Hazlett. When the whole concern was complete the cost figured out at something like £15,000.

Early Gold-saving Processes.

Considerable difficulty was experienced in obtaining suitable material for fluxing purposes. Galena was imported from South Australia, iron ore from Whangarei, and shells, as a substitute for lime, from Thames foreshore. After

¹²⁵² These books may still be held by the Paeroa Museum.

the first month's run it was decided not to resume smelting operations because the cost of fluxing was prohibitive. Although this process failed to reduce at a small cost a highly silicious ore, which nature never intended for smelting, a lot of good emanated therefrom indirectly. It undoubtedly was the direct means of opening the eyes of miners and mine owners alike to the very important fact that the ore in question contained more bullion than was ever dreamt of in the philosophy of ordinary battery proprietors, and as a natural sequence there set in a persistent inquiry throughout the Ohinemuri goldfield for improved ore treatment appliances.

Messrs. H. M. Shepherd and P. C. Hansen installed a small pan-amalgamating plant in the Hauraki battery for the purpose of experimenting upon the ore peculiar to the place, and the results showed a much higher percentage of bullion recovered than was the case with ordinary battery treatment.

Later on - about 1886—a large pan amalgamating plant was erected by a man named Railey, in the Waitawheta Gorge, and close to the lower workings of the New Zealand Crown Mines. Here a considerable tonnage was dealt with for bullion returns, which averaged 50 per cent. of the intrinsic value of the ore, but the expense of transit to, and treatment at, the mill was so exceedingly high that a start was made shipping ore to foreign ore markets. This method of realisation was so costly that nothing but high grade ore could be handled, and the mine owners had about reached the end of their tether, when Mr.

Alexander Parks arrived on the scene. He came direct from London, where he had carried out some experiments on samples of Woodstock ore by the "matting" process, with highly satisfactory results.

The New Zealand Crown Mines.

The New Zealand Crown Mines property is situated east of the Talisman Consolidated mine, and on a parallel reef system. It was taken up originally, in the year 1883, by W. Davies, who worked it for some time on behalf of a syndicate. Then it was formed into a company, with Mr. Adam Porter as chairman of directors, and Mr. G. N. McGruer as mine manager. Exploitations were continued on two distinct reefs, which are known as the Welcome and Crown respectively, and both carry fair bullion values. Here, again, the question of ore treatment presented itself in a more or less aggravated form, and there was little or no capital available either for the erection of a treatment plant or for development purposes.

Introduction of Cyanide.

Although the cyanide process originated in Glasgow, it was brought to an advanced stage of perfection at Karangahake long before its adoption anywhere else. To the New Zealand Crown Mines Company belongs the honour of introducing this process in a practical way to the mining world early in the year 1889, and almost immediately after its discovery by Mr. J. S. McArthur and his colleague, Mr. R. W. Forest. Owing chiefly to the want of practicable roads for transit of machinery there was a long delay attendant upon the erection of the treatment plant at the Crown mine, and a small plant was constructed in the Woodstock furnace house, where experimental work was carried out for a period of six months.

After a series of experiments with both wet and dry crushing, it was finally decided to adopt the latter, using Lamberton Mills for reducing the ore to the required degree of fineness. The ore was treated by upward percolation, with

subsequent water washes, pulled through each charge by means of powerful vacuum pumps. This simple process more than realised expectations in the case of the New Zealand Crown Mines ore, and it was generally adopted throughout the Dominion, where it remained in use in a good many mills for several years. As depth was attained in the mines the ore became more refractory, resulting in a high percentage of soluble sulphates being formed in the drying furnaces, or kilns, and therefore, the consumption of cyanide became a serious item in the cost of treatment. Then mill after mill went in for wet crushing, with a dilute solution of cyanide in the mortar boxes, and the first man to give the new departure a practical test, with 20 head of stamps, was Mr. H. H. Adams, at Waiorongomai.

Since its inception, in the year 1882, the ore broken out and treated, from the mine under review, has yielded bullion valued at £868,000, and during the same period the shareholders have received £70,000 in dividends. Here, as yet, exploitations downwards have not reached the sulphide zone, where high grade ore should be met with, and the outlook, in this direction is most promising.

Talisman Consolidated Mine.

The Talisman Consolidated mine, is located on the Maria reef, and it embraces all the original licensed holdings that were marked off on the line of that ore body. In the year 1903, when Mr. H. Stansfield, the present superintendent, took charge the prospects were anything but encouraging. At that time all the known blocks of payable ore, above No. 8 level, were exhausted, and as far as developments had gone at Nos. 9 and 10 levels, the extent of the payable ore in sight was somewhat limited. Pessimists pronounced the Talisman mine to be on last legs, and, in their estimation, the sooner it closed down, the better it would be for all concerned.

High grade ore was intersected early in 1904 during the progress of No. 8 level, south of the incline shaft, where the "shute" proved to be 40ft in length, and it occurred in the shape of a wedge point looking upwards. Rising upon the reef above No. 8 level indicated very clearly that there was no continuity about the rich ore in that direction, and sinking was then started upon it. This was the first appearance of high values in the well known Bonanza block, which has been more or less continuous right down to No. 14 level, where it now is fully 1200 ft in length, and is stronger in character, and richer in bullion, than at any other stage of its development.

The outcome of systematic exploitation in this mine affords an object lesson for geologists, mineralogists, and mining experts generally. Here the occurrence of the royal metals is not in strict accordance with accepted theories, and preconceived ideas on the subject of gold and silver deposits are knocked into the proverbial "cocked hat."

During the time the Talisman mine has been in full operation all the ore broken out and treated gave a return of bullion which realised £2,076,501 17s, and the sum of £818,909 7s has been paid to the shareholders in the shape of dividends.

The Reefs of Owharoa.

In the spring of 1876 Messrs, Barrett, Arnold, and party started prospecting operations north of Karangahake, and they gradually worked their way out to

the place now known as Owharoa, where they found strong surface indications of gold-bearing reefs. This led up to the location of the Smile of Fortune, Annie, and Morning Light claims. Systematic prospecting in the Smile of Fortune resulted in discovery of payable ore, and the claim was formed into a company. Subsequently arrangements were made with Mr. J. R. Perry for the construction of a fifteen-head stamper battery, which was completed, after a long period of delay, owing chiefly to the want of road accommodation for the transit of machinery. Then the battery started, but, as is often the case the returns did not realise expectations, and as the shareholders either could not, or would not, pay calls, the manager was obliged to suspend operations.

The mine and battery were then let on tribute, and the tributers very soon ascertained that the precious metal was not confined to quartz, but that it was also diffused throughout the surrounding rock, known as "propylite." A careful examination of the different tip-heads revealed the fact that the material of which they were composed was rich in the precious metals, and some hundreds of tons of this stuff was subjected to battery treatment for bullion returns, which paid the tributers handsomely. Later on Messrs Oats and party, tributers, took out £2000 worth of bullion with one month's run of the battery, and then the concern reverted to the company, on whose account several successive dividend-paying returns were obtained. The payment of regular dividends, without any provision being made for fresh development, landed the company in difficulties a second time, and again the mine passed into the hands of tributers, who worked it profitably for several years.

Smile of Fortune Spur.

The gold occurrence at Owharoa is entirely different from that of any other part of the peninsula with which I am acquainted, and experience gleaned elsewhere is of precious little service to a gold miner in this locality. Throughout the old mine workings the gold-bearing formation partook of the character of the country rock—"propylite"—and it needed the eye of a man who was practically acquainted with the mine to determine where the auriferous stuff began, and where it terminated.

Except the Smile of Fortune spur, where the auriferous series of rock crops out, the whole country is overlaid by a lava deposit, varying in thickness, but, presenting an insurmountable obstacle to the unaided prospector, and this will account for the want of advancement on the part of the place during the many years it has been opened for gold mining purposes. At present this property is owned by the Rising Sun Gold Mining Company, who have continued the work of development for a period of 15 years, and it is quite possible that they will yet be recompensed for their faith and perseverance.

Waitekauri Mining Properties.

Whilst the pegging mania was raging at Karangahake a small party of men, led by a prospector named Leahy, wended their way in the direction of Waitekauri, where they marked off several claims, which were subsequently amalgamated, and formed what was known as the old Waitekauri Company's mine. At the time of which I write Waitekauri was so completely surrounded by an almost impenetrable forest that but few men cared to encounter the hardships which attended a visit of inspection or a prospecting tour to the district.

Shortly after Leahy and party started operations a bridle-track was cut by Government from Paeroa to the mines, which attracted a good deal of public attention when it became known that Leahy's reef, as it was then called, contained gold in payable quantities. This reef ranged from 5ft to 25ft in thickness, and the prospectors very soon demonstrated its value by intersecting it at different points with crosscuts put in at depths ranging from 35ft to 200 ft beneath the surface. This, as a preliminary work, was all very well in its way, but the "sinews of war" were required for machinery, and eventually arrangements were made with Messrs. Brown and Bleazard for the erection of a 40-stamper battery. This work was placed in the hands of Mr. E. M. Corbett, who, notwithstanding the many difficulties with which he had to contend, turned out a plant which for general efficiency was one of the best in the Dominion.

For some time after the start of the new mill the average yield was a good one, but the returns gradually fell off until it was deemed advisable to suspend operations altogether, and the mine was then cut up into blocks, and these blocks were readily taken up and worked on the tribute system. From the very outset several parties of tributers did remarkably well - notably Messrs. Butler and party and Messrs. Hollis and party, who took bullion to the value of £20,000 out of their respective tribute sections within a period of 18 months. The lode from which these rich results were obtained measured about 4ft in thickness. It was running almost parallel with and west of the main lode, and in some places the ore was fairly peppered with the precious metals.

Calcite in the Reefs.

One parcel of several hundred tons yielded bullion to the value of about £30 a ton, and then the percentage of extraction by the old system of wet-crushing and amalgamation was a comparatively low one. Eventually the blocks of ore opened up above the old levels were worked out. For some unexplained reason success did not attend the efforts made to opening new blocks, and after many ups and downs the mine gradually drifted out of the ranks of gold producers. The Welcome and Young New Zealand mines ranked next in importance to the Waitekauri mine, and at an early stage in their history the "show" was so good that Mr. H. C. Wick built a nine-stamp mill on the Maungakara Creek about one and a-half miles distant from the workings. Both properties furnished the battery with a considerable tonnage of ore, which yielded high bullion returns, but money was not available for further exploitation, and mining operations were suspended in consequence. The property remained unoccupied for some time, until it was taken up by the Maoriland Gold Mining Company, who are opening up the mine by means of comparatively low levels, and they are meeting with a fair measure of success.

The richest ore in the district was obtained from the Golden Cross mine, which was discovered by Laurie Brothers some time in the year 1893, when it was formed into a company, and the shares at once jumped beyond par value. This property turned out a considerable amount of bullion, but the reef gradually, merged into calcite going downwards, and eventually the whole concern was transferred to a new company, who have worked it intermittently with varying results.¹²⁵³

¹²⁵³ <https://paperspast.natlib.govt.nz/newspapers/NZH19131113.2.153.29>

AJHR 1914

For the year 1913

MINES STATEMENT, BY THE HON. W. FRASER, MINISTER OF MINES.

Mr. Speaker,— I have the honour to present to Parliament the Mines Statement for the year ended the 31st December, 1913.¹²⁵⁴

APPENDICES TO THE MINES STATEMENT.**APPENDIX A. REPORTS RELATING TO METALLIFEROUS MINES AND STONE-QUARRIES.****The Inspecting Engineer of Mines**

to the Under-Secretary of Mines Sir - Wellington, 30th June, 1914. I have the honour to present the annual reports of inspection of mines and stone-quarries, together with extracts from the reports of Wardens and other officers, accompanied by statistical information in regard to the metalliferous mines and stone-quarries of the Dominion, for the year ended 31st December, 1913.

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Karangahake Goldfield. —

The Talisman Consolidated (Limited) has experienced a decrease in tonnage treated, and bullion obtained, but the amount of dividends distributed—viz., £133,687 — constituted a record for this mine. The decline in output may to a certain extent be attributed to the colliery strike, which rendered this mine idle during November and December.

Development during 1913 has been somewhat disappointing; a crosscut eastward from No. 12 level south failed to intersect the Welcome lode, and the south drive and crosscuts at No. 13 level proved nothing of value in the Dubbo shoot; in No. 14 level, however, development was more satisfactory, a drive southward proved fair-grade ore in that shoot. The deepest development in the mine is by winze No. 12 in the Bonanza shoot, on the Maria lode, which is now down 135 ft. below the No. 14 level, and within 15 ft. of the random of No. 15 level. The lode, which carried high-grade ore from 110 ft. to 112 ft. down the winze and then showed a decline in value, still remains low grade, but a strong and well-defined ore-body, wider than the winze. It is proposed to carry three winzes to No. 15 level, and from thence drive north and south on the Bonanza shoot. To overcome the water difficulty, which was becoming acute, a horizontal pump of about 1,000 gallons per minute capacity has been installed in the Talisman inclined shaft, about 50 ft. below level No. 14; and the new Cornish pump, with an approximate capacity of 2,000 gallons per minute, raises water in the Woodstock shaft from below the random of level No. 14.

The connection of the Woodstock main shaft with the Talisman Mine workings at level No. 14 is being rapidly advanced from both ends; less than 18 chains remain to be driven. In the connecting crosscut 81 ft. from the

New Zealand Herald, Volume L, Issue 15456, 13 November 1913, Page 7 (Supplement)

¹²⁵⁴ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1914-I.2.1.4.10>

MINES STATEMENT, BY THE HON. W. FRASER, MINISTER OF MINES., Appendix to the Journals of the House of Representatives, 1914 Session I, C-02

Woodstock shaft a lode 7 ft. wide of low value was intersected. When the connection is completed pumping and winding will be concentrated in the Woodstock shaft installations.

The New Zealand Crown Mines have obtained small returns during the year. More capital is now being obtained, and it is proposed to confine future operations to the exploration of the property at greater depth.

The Waihi-Paeroa Gold-extraction Company have during 1913 re-treated 140,100 imperial tons of tailing for a return of £42,300, being an average extraction of 6s. per ton, a greater output but lower average return than formerly. As the operations advance downstream the average value of the tailing has declined.

ANNEXURE A.

EXTRACTS FROM THE REPORTS OF INSPECTORS OF MINES.

NORTHERN DISTRICT.

Mr. Matthew Paul, Inspector of Mines, Waihi.

Page 36

Karangahake.

Talisman Consolidated (Limited). —During the year a crosscut driven eastward from No. 12 level south intersected the Welcome reef; the lode where intersected being low grade nothing further was done on same. The south drive at No. 13 level has been advanced considerably beyond the boundary of the Dubbo ore-shoot, without finding anything of value. From the south drive crosscuts were put out east and west in search of parallel ore-bodies, but without success. The south drive at No. 14 level has disclosed considerable fair-grade ore in the Dubbo section. No. 6 winze, No. 14 level, has been sunk 40ft., at which point water was reached; the width and value of the lode is well maintained. The Woodstock shaft was sunk to the random of No. 14 level (490 ft. from collar). The chamber for No. 14 level is cut, and crosscut for the Maria reef has been started. Talisman shaft (depth, 560 ft. below Waitawheta (or river) level): A large chamber was cut out and a horizontal pump 50,000 gallons per hour capacity has been installed. This pump is doing excellent work raising water to the river-level. Owing to the coal strike at Huntly this mine was closed from the 7th November until early in January, resulting in a reduction in the value of the bullion-production of £30,927.

New Zealand Crown Mines (Limited). —Below is a summary of the mining and mine-development work done in this mine for the past year: Crown lode—Driving, 695 ft.; sinking, 111 ft.; rising, 157 ft.; tons mined, 878; total gross value, £1,640. Welcome lode—Driving, 640 ft.; crosscutting, 286 ft.; sinking, 452 ft.; rising, 548 ft.; tons mined, 11,589; total gross value, £24,910. Maria lode —Driving, 542 ft.; crosscutting, 39 ft.; sinking, 54 ft.; rising, 234 ft. , tons mined, 2,832; total gross value, £5,952. Ore treated: Number of imperial tons treated, 15,299; ounces of gold recovered, 6,625; ounces of silver recovered, 10,600; value of bullion recovered, £28,884 16s. 4d.; average value recovered per ton of ore, £1 17s. 9d.; gross value of ore treated, £31,662; average value per ton (gross), £2 1s. 5d.; average cost per ton (exclusive of development), 34.28s. During the past year the following improvements have been carried

out: Nos. 4 and 7 levels on the Maria lode have been connected by aerial tram-line, with hoppers erected at both ends. In the Crown section the change-house has been improved, and considerable additions made to the rock-drilling plant. A high-pressure pump has been installed for supplying water to rock-drills above the main adit level, and air and water services have been extended in that direction. Five slime-vats have been equipped with mechanical agitators, and consequently a considerable improvement has been effected in the percentage of bullion-recovery. Towards the end of the year the company was reconstructed, and with the capital now available it is expected that a vigorous policy of development will be pursued.

Dominion Gold-mining Company. —During the year work has been confined to the extension of the eastern low level, which has been somewhat retarded by a heavy flow of water and the disturbed nature of the ground. A good class of country is now being penetrated, and, according to the mine-plan, No. 1 reef should be intersected shortly.

Paeroa. Waihi-Paeroa Gold-extraction Company. —Owing to a protracted drought causing an exceptionally low river to the end of May, great difficulty was experienced in obtaining sufficient tailing to keep the works employed. To prevent a recurrence in any similar dry season, a permanent bridge has been constructed across the river in front of the works, and a high flume erected to convey the treated sands to a point nearly a mile downstream from the works. A good deal of trouble has been caused by buried logs, for the removal of which a Priestman dredge has since been employed. A tramway has been constructed for transport of coal and supplies from the railway-station. During the year 140,100 tons of sand treated produced bullion valued at £42,300.

ANNEXURE B.

Mr. Warden Burgess, Thames,

to the Under-Secretary of Mines, Wellington. Sir — Warden's Office, Thames, 20th April, 1914. I beg to forward herewith my report on the Hauraki Mining District for period ended 31st December, 1913.

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Talisman Mine.— This well-known mine still maintains its reputation as a steady gold producer. Last year, however, the returns were unfortunately somewhat reduced owing to the company being compelled to suspend operations in consequence of the strike in the coal-mines at Huntly. The gold produced for the year suffered a reduction of £30,927 compared with the previous year's return. During the year the Woodstock shaft was sunk to the random of the 14th level, and active development-work has been carried out in No. 14 level. The south drive on this level proved the existence of a fair-grade ore in the Dubbo section. The south drive in No. 13 level showed no payable ore, but the south drive in No. 14 revealed payable ore under the section of No. 13 where only low values were obtained. The results of lower developments in the mine show that the high-grade ore is going down, and is becoming more extensive in the deeper level.

New Zealand Crown Mine.— During the year considerable improvements have been effected by the erection of a tram-line from No. 4 to No. 7 levels, by the erection of hoppers and by the alterations to machinery and plant. No

great amount of development-work has been carried out but the company having been reconstructed, more capital is now available for expenditure in the mine, and, as a consequence, development of the lower levels of the mine will be undertaken.

There are several small claims at work in and near to Karangahake, but none of them have progressed beyond the prospecting stage.

Waihi-Paeroa Extraction Company's Works, Ohinemuri River.— The work of the company has during the past year been much hampered by the low river making it difficult for the treated material to be carried away. A bridge has now been erected over the river and a flume constructed to carry away the treated tailings nearly a mile farther down the river. A Priestman dredge has been obtained, and has proved most useful in removing old timber from the river-bed. The works have now been connected with the Government railway by a steel tramway by which all coal and goods are taken to the mill at a greatly reduced expense.

Page 71

Karangahake School of Mines. —

Mr. W. Gibson, B.E., A.O.S.M., Director of the Karangahake School of Mines, to the Under-Secretary of Mines, Wellington. Sir — Karangahake, 12th March, 1914. I have the honour to present my report of work done at Karangahake School of Mines during the year 1913.

The average number of students for each term was thirty-four, and the class attendance was sixty-eight. The Waikino branch did not show any increase, and as prospects are not in any way improved the expense of maintaining the school does not warrant the retaining of the Assistant Director's services on full time.

Examinations.— At the annual December examinations thirteen students presented themselves, and sent in thirty-four papers in the written work, obtaining eleven first-class passes, eight second-class passes, and six third-class, a very satisfactory result considering the broken attendance occasioned by the Huntly strike during the third term. One student, F. E. Smale, qualified for four subjects of the scholarship, and E. D. White, another student, is now entitled to the bullion-assayer's certificate issued by the Department of Trade and Customs. In the practical examinations, there was only one failure, and passes were three in senior chemistry, one in junior chemistry, one in senior wet assaying, and one in junior dry assaying. The president's medal was won by F. E. Smale, and the Council's prizes by E. D. White for chemistry, J. C H McDonald for mathematics and drawing, and S. Shore for junior subjects. All the candidates presented for the winder's electrical examination were successful.

Equipment.— Early in the year the electrical laboratory was enlarged and new apparatus added. These changes have been much appreciated by the lecturer and students, the latter having now increased room and apparatus for carrying on their practical work. More apparatus is on order, and should be to hand at any time.

Conference.— In September, by the courtesy of the Hon. the Minister of Mines, a conference with the Board of Examiners was held at Wellington. The

proposals by which it was hoped the status of schools of mines would be raised were, unfortunately, not agreed to by the majority of the delegates.

Library.— The thanks of the staff and the students are due to the Mines Department for the further provision to the lending library of up-to-date works in mining subjects. Additions have also been kindly made by the Council.

I have to acknowledge with thanks the receipt of twenty typical New Zealand fossils from the Geological Survey, and also some splendid representative specimens of Broken Hill district from Mr. H. Marshall, of Karangahake. I wish to express also my hearty appreciation of the zeal and enthusiasm displayed by the members of the staff, and also of the co-operation of the Council in all matters pertaining to the progress of the school. I have, &c,
Wm. Gibson, Director.

1914

7 January

KARANGAHAKE

TALISMAN RESUMES WORK The welcome sound of the Talisman horn at 7.30 on Monday morning calling men to work was responded to well, the greater number being very glad to resume after a stoppage of two months.

The Crown mine is not in full swing, part of the machinery being at the Thames for repairs, and the coal supply not yet being to hand.¹²⁵⁵

17 January

TALISMAN

...Stoppage: Owing to interruption of coal supply through strikes, mining and milling was stopped on November 7.¹²⁵⁶

OHINEMURI GOLDFIELDS.

BY J. MCCOMBIE.

...One party of men had stolen from the warden's tent the evening before a bundle comprising 40 miners' rights, believing that the early possession of such rights would give them an advantage over their fellows. In this respect they made a mistake, because their titles were not recognised by the Warden's Department, and subsequently they were known as the "Forty Thieves."

In due course several companies were formed, a battery of 16 stampers erected, and permanent work entered upon with great spirit. Early in the year 1882 Messrs. Liddell, McWilliams, and the writer started prospecting somewhat higher up the range than the prospector's old workings, where we succeeded in unearthing the gold and silver bearing lodes that have since attracted so much attention, and are now being worked upon in the Crown and Talisman mines.

Close to the embryo township of Karangahake is the confluence of the Ohinemuri and Waitawheta rivers, which are water courses for an extensive area of country. For many years after the opening of Ohinemuri for gold mining the valley of the last-mentioned stream was a terra incognita, explored only by the most intrepid gold-hunters, men who risked their lives daily in scrambling about the deep gorges and rocky buttresses that abound in the neighbourhood. Entering the gorge of this river, which has now been made easy of access by the Crown Company's tramline, carved out of the living rock, the foothills have a steep slope down to the water's edge. Passing on through the, gorge, which is not more than 100 ft across at the widest part, the cliffs rise up almost perpendicularly to a height of about 400 ft above the level of the river-bed. During the winter season, when this stream is in flood, the waves seem to be tearing each other to pieces, and flinging particles of water high in the air, while the rocks with which the bed is strewn break the force of the water, and reveal themselves in black patches relieved with streaming

¹²⁵⁵ <https://paperspast.natlib.govt.nz/newspapers/TAN19140107.2.16>

Te Aroha News, Volume XXVIII, Issue 1492, 7 January 1914, Page 3

¹²⁵⁶ <https://paperspast.natlib.govt.nz/newspapers/NZH19140117.2.16>

New Zealand Herald, Volume LI, Issue 15510, 17 January 1914, Page 5

silvery waves of spray. Towering above are these wonderful walls, formed possibly by volcanic action ages ago, when the country generally was in a state of intermittent eruption, and when there were no human witnesses to record the event. At first they rise straight up and solid, again breaking into terraces, flying buttresses and pinnacles, looking a wild confusion of the most beautiful description. Here the rich foliage of evergreen trees and shrubs, intermingled with ferns and fronds scattered over the weather-beaten rocks, combine to form an exquisite picture, and no lover of the beautiful in nature can view it for the first time without expressions of delight.

Leaving behind the most precipitous part of the gorge, the visitor passes a series of thickly-wooded ravines that slope in graceful curves down to the river bank's and every turn in the course of the serpentine stream opens out a prospect that, I venture to say, cannot be surpassed anywhere. Further afield the valley expands, quite suddenly forming a plateau of about 100 acres in extent. Here it is said, the celebrated fighting Maori chief Te Kooti and his band of marauders camped for several months to recruit their health during the Maori War, while the colonial forces were scouring the country between Taupo and Tauranga endeavouring to locate their whereabouts. To verify this story there are the remains of a large settlement, with traces of extensive cultivation, and all the coigns of vantage within easy distance have undoubtedly been used for defensive purposes.¹²⁵⁷

4 February

The Karangahake Mines.

With the exception of a brief period of enforced idleness, owing to the recent coal strike, work was carried on continuously at both the Talisman and New Zealand Crown mines at Karangahake. For the period the Talisman mine yielded gold worth £215,641 17s 2d from 39,780 tons of ore, against £245,568 9s 11d from 42,780 tons for the preceding 12 months, and this amount would have been several thousands of pounds greater, but for the suspension of mining and milling operations during the strike.

The bullion won by the Crown Company gave a money value of £29,070 from 15,299 tons, compared with £40,894 from 20,501 tons in 1912.

Talisman Consolidated.

The most important development works in progress during 1913 in the Talisman mine were at No. 14 level on the Maria reef, and the sinking of the Woodstock shaft to the random of the Talisman Company's fourteenth level...

Crown Mines. Although the Crown mines contributed £29,070 to the gold output, the company was hampered for want of money to explore the property at greater depth, but this obstacle should be removed by the reconstruction of the company, now in progress.¹²⁵⁸

¹²⁵⁷ <https://paperspast.natlib.govt.nz/newspapers/NZH19140117.2.116.7>

New Zealand Herald, Volume LI, Issue 15510, 17 January 1914, Page 1 (Supplement)

¹²⁵⁸ <https://paperspast.natlib.govt.nz/newspapers/NZH19140204.2.136>

New Zealand Herald, Volume LI, Issue 15524, 4 February 1914, Page 11

28 March

TALISMAN CONSOLIDATED. HIGH-GRADE ORE AT DEPTH.
(BY TELEGRAPH.—OWN CORRESPONDENT.) Waihi, Friday.

Although the conclusions reached by Dr. Henderson, of the Geological Survey branch of the Mines Department (based on an examination of the lodge formations and deposits of gold at Karangahake, just on two years ago), are of pessimistic character as far as the future of the field is concerned, it is gratifying to find that developments at depth in the Talisman mine continue to disclose highly satisfactory results...¹²⁵⁹

11 May

CROWN.

Although no official information has been so far given out it is understood that future operations at the New Zealand Crown mine will be confined to the exploration of the property at great depth with a view to ascertaining whether payable reefs exist below the present workings. The adoption of such a scheme would necessarily mean a larger curtailment of the working staff and the cessation of general mining and milling operations until the prospects of the mine at depth have been determined.¹²⁶⁰

13 May

The news that the Crown mine at Karangahake is likely to close down will be received with deep regret, especially by the "old hands," for the Crown is practically the pioneer of the field. For years past the company has been struggling along under difficulties, and apparently the shareholders have decided that operations must be suspended at least temporarily. It is to be hoped that the Crown is only under a cloud for the time being, and that before long it will be again one of the gold producers of the district. At the same time, it is pleasing to note that the Talisman seems to be even better than ever, and there are prospects of a considerable number of additional men being employed there at an early date.¹²⁶¹

1 June

KARANGAHAKE NOTES.

WORK IN THE CROWN. OPERATIONS SUSPENDED.

(From our Own Correspondent.)

During the month work in the Crown mine has been gradually ceasing until on Saturday practically all the various contracts have been finished and the miners have found it necessary to find pastures new. I understand that between 20 and 30 men extra have been taken on at the Talisman, and it is to be hoped this company will be able to keep them all going. Some men have gone to the

¹²⁵⁹ <https://paperspast.natlib.govt.nz/newspapers/NZH19140328.2.21>

New Zealand Herald, Volume LI, Issue 15569, 28 March 1914, Page 5

¹²⁶⁰ <https://paperspast.natlib.govt.nz/newspapers/NZH19140511.2.28>

New Zealand Herald, Volume LI, Issue 15605, 11 May 1914, Page 5

¹²⁶¹ <https://paperspast.natlib.govt.nz/newspapers/OG19140513.2.12>

Ohinemuri Gazette, Volume XXV, Issue 3240, 13 May 1914, Page

new railway excavation at Waihi, others have made for Reefton. The Crown battery ceases crushing tonight, and necessarily a few more men will be unemployed.

Business lately has been a shade lower in consequence of the mine stopping, and the men, not being certain of employment, have refrained from buying, but the falling off has not been so great as to cause alarm.

I hear that the Crown mine is to be let to parties on tribute, and this will certainly absorb quite a number of men, and no doubt in the course of a week or so Karangahake will look as bright as ever, but the noise of the Crown mill will be missed. It is possible that the parties who are to take tributes will do fairly well for there are many small gold bearing leaders that men will be able to work cheaper than taken by contract, and who can tell but that these exploitations may be the means of opening up new reefs and in a short time have the mill in full swing again.

Mr D. M. Waddell, for many years accountant at the Crown, is to be farewelled next Saturday evening. He intends to take a trip to the Mother Country.¹²⁶²

4 August New Zealand at war¹²⁶³

18 September

BOWLING. KARANGAHAKE CLUB ANNUAL MEETING

The membership had increased, and last year a very successful playing season had been held. It had been found necessary to put down a new green of four rinks, which will be ready for play late in the coming season.¹²⁶⁴

New greens added in late 1914.

25 September

KARANGAHAKE'S HELP. MONEY FOR WAR FUND.

Pay day subscriptions at Karangahake for the Empire Defence Fund were as follows :— This amount has been paid into the public account.¹²⁶⁵

	£. s. d.
Talisman Mine, wages men and contractors	103 6 6
Crown Mine (only a few employed)	10 8 6
K'rangah'ke Miners' Union	10 0 0
County Road Men	3 5 0

¹²⁶² <https://paperspast.natlib.govt.nz/newspapers/OG19140601.2.18>

Ohinemuri Gazette, Volume XXV, Issue 3247, 1 June 1914, Page 3

¹²⁶³ <https://teara.govt.nz/en/first-world-war/page-1>

<https://nzhistory.govt.nz/war/first-world-war-timeline>

¹²⁶⁴ <https://paperspast.natlib.govt.nz/newspapers/OG19140918.2.33>

Ohinemuri Gazette, Volume XXV, Issue 3295, 18 September 1914, Page 3

¹²⁶⁵ <https://paperspast.natlib.govt.nz/newspapers/OG19140925.2.24>

Ohinemuri Gazette, Volume XXV, Issue 3298, 25 September 1914, Page 2

General List—business men and citizens	44 5 0
	£171 5 0

2 October

OHINEMURI COUNTY. MEETING OF THE COUNCIL

..In regard to street lighting, arrangements have been made with Mr R. Pennell to clean and repair all lamps at Paeroa and Karangahake, and to light and extinguish those at Karangahake...

... ELECTRIC LIGHT AND POWER. Cr. McWatters moved that the Chairman and engineer have power to employ a competent person to report on the matter of procuring electric light and power from the Waihi Goldmining Company.

This was seconded by Cr Franklin, and carried.¹²⁶⁶

AJHR 1915

For the year 1914

MINES STATEMENT, BY THE HON. W. D. S. MacDONALD, MINISTER OF MINES.¹²⁶⁷

Mr. Speaker,— In presenting to the House my first annual Statement I think I can fairly congratulate the House and the country on the satisfactory position which the mining industry has maintained, notwithstanding the fact that for the half-year ended the 31st December last the nation has been engaged in the greatest war the world has ever known.

The war has had a greater effect on the mining industry than on most other industries. Not only have the miners of the Dominion found their full quota of men to go to the front and actively engage in upholding the Empire's cause, but the men who have been left behind to carry on the industry have been subject to special and peculiar disadvantages. Mining is an industry in which explosives of all kinds are largely used, and owing to the enormous demand for ammunition and other explosives for warlike purposes there has been, and still is, great difficulty in procuring a sufficient supply for the use of our miners. Then, again, our larger mining enterprises are greatly dependent on British and other imported capital for their prosecution and development; and since the outbreak of hostilities the inflow of capital to the Dominion has practically ceased. Moreover, the export of some minerals has been prohibited, and in the case of others has been greatly restricted owing to the closing of the usual markets or to the lessened demand. Notwithstanding these disadvantageous circumstances, however, the industry has held its own fairly well, and in some branches actually shows better results than during the preceding year...

APPENDICES TO THE MINES STATEMENT,
APPENDIX A.

¹²⁶⁶ <https://paperspast.natlib.govt.nz/newspapers/OG19141002.2.26>

Ohinemuri Gazette, Volume XXV, Issue 3301, 2 October 1914, Page 3

¹²⁶⁷ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1915-I.2.1.4.5>

MINES STATEMENT, BY THE HON. W. D. S. MacDONALD, MINISTER OF MINES., Appendix to the Journals of the House of Representatives, 1915 Session I, C-02

REPORTS RELATING TO METALLIFEROUS MINES AND STONE-QUARRIES.

The Inspecting Engineer of Mines

to the Under-Secretary of Mines. Sir,— Wellington, 28th May, 1915. I have the honour to present the annual reports of inspection of mines and stone-quarries, together with accompanying statistical information, for the year ended 31st December, 1914.

Page 19

At White Island, on the 11th September, 1914, at about 2.30 a.m., as the result of an earth tremor, a fall of about 4 chains of a cliff 600 ft. in height occurred, the debris blocking up the great active thermal crater known as the Blowhole, which subsequently erupted with extreme violence, considerably changing the topography of the island, and hurled out to sea all the eleven inhabitants of the island—the company's employees—no trace of whom or of the company's plant and buildings being discernible. The danger of living upon this weird island was referred to by the Inspector of Mines, Mr. Bennie, in a report shortly prior to the calamity; but being freehold property he had no legal authority to order the men to leave the island...

...was an act of God.

Page 21

Karangahake Goldfield,. —

The Talisman Consolidated Mine has produced an increased tonnage with a higher value per ton treated during 1914, but development has not been entirely satisfactory in the Bonanza section, although ore of good value has been proved in winzes Nos. 2, 6, and 8, between Nos. 14 and 15 levels. In the Woodstock section, south of the Woodstock shaft, the Maria lode at the three points where it has been intersected from the connecting crosscut appears better than at the same points in the level 250 ft. overhead, and the value, although not high-grade, is payable. The country at the bottom of the mine is also favourable, although in the Bonanza section it is not so open for drainage. The Talisman shaft has been sunk to a sump past the bottom of the 15th level, and a drive is being put out therefrom to enable ore to be stoped below No. 14 level. A considerable amount of work will be necessary in the Woodstock section, south of the Woodstock shaft, before the amount of ore available may be proved and prepared for stoping at a depth between 250 ft. and 500 ft. from the Woodstock shaft. Connection has quite recently been made between a point about 40 ft. below the No. 14 level from the Talisman shaft and the crosscut from the bottom of the Woodstock shaft, by a stairway of 73 ft., which will be of great advantage to mining operations.

At the New Zealand Crown Mine operations at the reduction-works have been discontinued, and at the mine the number of men has been greatly reduced, owing to shortage of funds.

The Waihi-Paeroa Gold-extraction Company, who operate upon the tailing deposited by the Waihi and Karangahake mines in the Ohinemuri River (sludge-channel) near Paeroa, has during 1914 treated 144,300 tons of tailing for a return of £42,950, being an average of 6s. per ton. It is stated that there

has been an increase in working-cost, owing to timber and other river-debris. To remove this a modern Priestman dredger is being obtained.

ANNEXURE A.

Page 41

Karangahake School of Mines

Mr. W. A. Given, M.A., Director of the Karangahake School of Mines, to the Under-Secretary, Mines Department, Wellington. Sir, — Karangahake, 17th February, 1915.

I have the honour to present my report on the Work of the Karangahake School of Mines for the year ended the 31st December, 1914.

Attendance. —The average attendance for the year was twenty-one, and the class attendance forty-eight.

Annual Examinations. —Thirteen students presented themselves at the annual examinations, and obtained eighteen first-class, seven second-class, and four third-class certificates. F. Smale obtained the Government scholarship, having passed his final section. In the practical examinations there were six passes and one failure. The Council's prize for dry assaying and mathematics was won by L. Prendergast. Mr. Cassels-Brown's prize for electricity and mathematics was won by T. Hassett, whilst the prize for the most persevering student was won by E. D. White.

School Library. —The books kindly supplied by the Mines Department are of great use to both students and staff.

Lecture.— In connection with a very successful open night held during the year, my thanks are due to the Government Tourist Department for the loan of a number of splendid geological slides. My thanks are due also to the Director of the Waihi School of Mines for assistance rendered in the same connection.

Laboratory. —In all seventy-eight public assays were put through during the year.

In conclusion, I wish to express my appreciation of the work done by Messrs. E. C. Hindsfield, A.S.M.B., Assistant Director, and H. C. Tempest, electrical instructor, and Master T. Hassett, laboratory assistant. I wish also to thank the school Council for the interest they have taken in the school's welfare, and for the consideration they have shown to me personally. I have, &c, W. A. Given, Director.

1915**22 January**

PAEROA WARDEN'S COURT. CROWN MINES APPLICATION. (By Telegraph.—Own Correspondent. PAEROA, this day.

At the fortnightly sitting of the Paeroa Warden's Court, before Mr. F. J. Burgess, Warden, the following applications were dealt with:—...

The New Zealand Crown Mines Co., Ltd.. applied for permission to work the Crown Mine with 14 men, instead of 34, as required by the mining regulations. The Karangahake branch of the Thames Miners' Union lodged an objection to the granting of the application. When the case was first called on, Mr. Porritt explained that the parties would like a short adjournment to enable them to discuss a method of settling the grounds of objection. When the case came on again Mr. Morgan (president of the Karangahake Miners' Union) said that there were a number of men at Karangahake who were prepared to work portions of the mine on tribute, and he asked Mr. Hopkins (Crown mines representative) if the company would allow tributers, and if they would employ sufficient men at the battery to run ten heads of stampers, the tributers to pay so much per ton for the crushing of the ore.

Mr. Hopkins pointed out that it would not altogether suit the company, because the battery had been built to treat ore by the cyanide treatment, and it would be very difficult to ascertain a fair value of the ore unless a sampling stage was erected at a cost of £50. A further sum of £300 would also be necessary to put the mill in working order.

Mr. Morgan then asked if the company would be prepared to allow tributers to use the aerial tramway in the event of them sending the ore away to be treated.

Mr. Hopkins said that the company would grant that request provided the tributers undertook to pay all maintenance expenses.

Mr. Morgan undertook the responsibility of keeping the tramway in repair.

Mr. Hopkins said that he would visit Karangahake this week, and make an agreement with the men, and would submit the agreement to the Warden.

Mr. Hopkins gave evidence in support of the company's application. He said that the company had been working at a loss during the last four years. For the three years ending December 31st, 1913, the company expended £143,453, for a return of £112,355, leaving a loss of £19,178 for the three years. During the year 1914 the company lost a further £4,735. Mr. Hopkins asked for permission to amend the application before the Court, and make the application for a reduction to six men instead of fourteen men.

The Warden heard further evidence, and then granted the application for reduction to fourteen men giving the company the right to make another application for further reduction if found necessary.¹²⁶⁸

MINING NEWS.

CROWN MINES COMPANY.MANNING OF CLAIMS.

(BY TELEGRATH. OWN CORRESPONDENT.)Paeroa, Thursday.

¹²⁶⁸ <https://paperspast.natlib.govt.nz/newspapers/AS19150122.2.21>

Auckland Star, Volume XLVI, Issue 19, 22 January 1915, Page 2

At the Warden's Court to-day before Mr. F. J. Burgess, warden, the New Zealand Crown Mines Company, Ltd., applied for permission to work the Crown Mines with eight men and the Earl of Glasgow special claim with six men for six months. An objection was lodged by the Miners' Union on the ground that it desired its members to take up tributes in the mine. Mr. Porritt appeared for the company and Mr. Moresby for the objectors.

The objection was settled by a conference between Mr. H. W. Hopkins, attorney for the company, and Mr. T. Morgan, secretary of the Miners' Union. It was agreed that tributes would be let where agreed upon between the mine manager and the union. Mr. Morgan also asked that if the tributers obtained sufficient ore to keep 10 head of stamps in the battery going for six months the company will open the battery at the tributers' expense. Mr. Hopkins agreed that if the matter was left open he would meet the men fairly. It was agreed that the tributers should be allowed to use the aerial tramway and the trucks at their own expense.

In support of the company's application Mr. Porritt pointed out that the company held 195 acres, on which there was plant and machinery of the value of £100,000. Making the allowance for plant and machinery the total number of men required to man the mine was 32. The company had been endeavouring to find fresh places at which to work, but had not done so, and had now to employ men in prospecting. The company could employ 14 men for a time, but might soon have to reduce this number to six men. Mr. Porritt pointed out that in three years the company had spent £131,433 and the bullion won amounted to £112,255. Evidence was given by Mr. Hopkins and Mr. G. N. McGruer, the mine manager.

The warden granted permission to work the two claims with 14 men for six months, saying that if the company found it could not employ that number it could make a further application.¹²⁶⁹

27 January

TALISMAN CONSOLIDATED.

Owing to shortage of water in the Ohinemuri River have had but little power from the Woodstock air compressor. This has stopped shaft sinking for the last fortnight.¹²⁷⁰

10 February

DOMINION. Good progress was made last week in the low level crosscut in the Dominion mine, Karangahake, to intersect the large ore-body, from which satisfactory assays can be obtained on the surface. The manager reports that the level is now in 1571 ft. The ground is still good, firm reef country.¹²⁷¹

¹²⁶⁹ <https://paperspast.natlib.govt.nz/newspapers/NZH19150122.2.14>

New Zealand Herald, Volume LII, Issue 15824, 22 January 1915, Page 3

¹²⁷⁰ <https://paperspast.natlib.govt.nz/newspapers/NZH19150127.2.21>

New Zealand Herald, Volume LII, Issue 15828, 27 January 1915, Page 5

¹²⁷¹ <https://paperspast.natlib.govt.nz/newspapers/NZH19150210.2.21>

New Zealand Herald, Volume LII, Issue 15840, 10 February 1915, Page 5

7 May

TALISMAN. OFFICIAL VISIT TO MINE. VALUES IN No. 15 LEVEL.

On behalf of the local directors of the Talisman Consolidated Gold Mining Company, Ltd., Dr. Prendergast Knight and Mr. R. B. Jackson, paid an official visit to the mine at Karangahake on Wednesday. They are reporting to the London board of directors as follows:—...

In the Woodstock section (No. 2 crosscut), preparations are now being made to develop at points where payable ore has been found. A hopper is being constructed on the side of the Waitawheta Stream to receive this ore, and the foundations of an aerial tramway are being laid to carry the ore from the hopper to the mill.¹²⁷²

A new cableway to be constructed to the mill. Some photographs show an extra cableway at the battery, but not this late.

Where is No. 2 crosscut? An old map suggests it is a continuation of the Woodstock No. 2 level. Is this then a revival of the earlier cableway from the east of the Blow, this time direct to the Talisman battery?

10 August

MINING NEWS. KARANGAHAKE GOLDFIELD.

CLOSING OF CROWN MINE. DISAPPOINTING RESULTS.

The closing down of the New Zealand Crown mine, at Karangahake, under a term of six months' protection granted by the warden on July 22 last, is a matter for regret in view of the past history of this old and familiar property. For some time past it had not been paying, and owing to the war the prospects of obtaining fresh capital were so poor as to render the application for protection a necessity.

In the days of the mining "boom" the Talisman, Crown, and Woodstock were the great mines of Karangahake. The Woodstock was the first to close, the mine being eventually absorbed by the Talisman. In both these properties, now being jointly worked, wonderfully rich regions have been developed in central levels. Unfortunately the Talisman has very small ore reserves - about two months supply for the battery, the running of which has been reduced to two shifts. The mine is a profitable one, however, and the company's strong finances will enable it to test Karangahake at a further depth. There having been no unfavourable change in the country at the present low level, this deeper development is warranted.

In the case of the Crown mine the circumstances are different. It has been under operation for over 30 years with occasional stoppages, such as that of virtually the whole of the year 1909, during the installation of a £20,000 pumping and electrical plant. Work was then resumed, and towards the end of 1910 a more vigorous development policy was entered upon. The company was reconstructed in May, 1910, and again in December, 1913, on both occasions the object being to raise further capital for exploration purposes. After the last reconstruction a winze was sunk to a depth of 220 ft below the bottom level of the mine on the Welcome reef, directly beneath one of the

¹²⁷² <https://paperspast.natlib.govt.nz/newspapers/NZH19150507.2.22>

New Zealand Herald, Volume LII, Issue 15911, 7 May 1915, Page 5

richest blocks in the upper levels. This winze was carried down on a substantial lode, varying from 2ft to 5ft in width, but unfortunately the average value was not payable, though occasional high assays were obtained. Levels were put out from the bottom of the winze, but the ore was low grade.

Similarly in the Talisman section of the Crown mine the reefs proved very irregular both in size and value. The failure of development works to disclose substantial blocks of payable ore, rendered it impossible to run the battery at a profit, and it was closed down on June 1, 1914. Until the company decided to apply for protection work was practically confined to the Welcome reef, but nothing of importance was opened up. Low level development, therefore, has proved the lodes in the Crown mine to be low grade and patchy, though the fact that they live downward, and, here and there, assay well should not be lost sight of. At present the only work in the mine is being done by tributers.

During its existence as a bullion-producer the Crown mine has yielded gold worth £880,883. Between May, 1910, and June 30, 1913, under the first reconstructed company, the total expenditure on the property amounted to £131,433. Of that sum about £126,000 was spent in New Zealand in connection with the actual mining and milling operations. The total value of the bullion won in the same period was £112,255, leaving a net deficit of £19,178, which represents approximately, the sum expended in exploratory work. From June 30, 1913, to July 31 last, when the mine was closed down, £32,152 was spent in New Zealand by the company, of which £25,500 represents wages paid. Bullion won in the same period was valued at £28,500, leaving a deficit of £3652. The total amount paid in wages by the company during the past six years was £113,916.¹²⁷³

17 September

CRUELTY TO A HORSE.

H. Hollowell, Karangahake, was charged with cruelty to a horse.

Senior Sergeant Wohlmann, in detailing the facts, said that accused had used a badly lamed horse in the course of conveying coal from the railway station at Karangahake to the Talisman mine. The distance was about a quarter of a mile and uphill all the way. When accused's attention was drawn to the fact, he did not take the horse out of the waggon but returned to the railway station with the intention of loading up again.

Accused pleaded guilty and was convicted and fined 20s and costs.¹²⁷⁴

CORRESPONDENCE.

BAND ROTUNDA.

Sir, —About a year ago, at a patriotic meeting held in Cornes' Paddock, Karangahake, at which the local band was in attendance, the Chairman of the Ohinemuri County Council promised that the band rotunda would be shifted from its present site and erected in Cornes' Paddock. The paddock is still given over to the cows, and the rotunda is, as of yore, ornamenting the other

¹²⁷³ <https://paperspast.natlib.govt.nz/newspapers/NZH19150810.2.29>

New Zealand Herald, Volume LII, Issue 15992, 10 August 1915, Page 5

¹²⁷⁴ <https://paperspast.natlib.govt.nz/newspapers/OG19150917.2.22.3>

Ohinemuri Gazette, Volume XXVI, Issue 3434, 17 September 1915, Page

extremity of our hamlet; therefore, the inference is that this matter has escaped the notice of the Chairman and those worthy gentleman who represent us upon the Council. In these days, when joys are few and sorrows many, an occasional dose of music is a bracing tonic. We have a capable and enthusiastic bandmaster, who has coached our budding bandsmen to a very creditable degree of efficiency. We are very occasionally favoured with a Sunday afternoon parade, owing to want of suitable accommodation for the band. Cornes' Paddock is a picturesque spot, is central, and in every way suitable for a musical gathering, and if the rotunda (our only building of any artistic merit) was erected therein, instead of being left to rot and given over to stray dogs and itinerant agitators, we have an assurance that musical treats in the forthcoming summer will not be so sparsely dealt out. Hoping that this reminder will be acted upon.—I am, etc., "Harpist."¹²⁷⁵

27 October

Karangahake Bowling Green was opened on Saturday last. There was a large attendance of members. With a beautiful green in first-class order, a very enjoyable afternoon was spent. As the match was for the Annual Challenge Cup between the two branches of the industry, a large amount of interest was taken in the event, and, needless to say, "the dwellers in the under-world" were hugely pleased at their hard-won victory. This is their second consecutive win.¹²⁷⁶

3 November

KARANGAHAKE CLUB.

The Karangahake bowling green was officially opened on Saturday in fair weather conditions. Visitors were present from Waihi, Waikino, Paeroa, and Te Aroha. Thames was unable to be represented, as a carnival was being held there in aid of the Wounded Soldiers Fund...

...returned thanks on behalf of the visitors, each congratulating the members of the Karangahake Club on the substantial amount raised by them on behalf of the "Wounded Soldiers' Fund."¹²⁷⁷

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¹²⁷⁵ <https://paperspast.natlib.govt.nz/newspapers/OG19150917.2.32>

Ohinemuri Gazette, Volume XXVI, Issue 3434, 17 September 1915, Page 3

¹²⁷⁶ <https://paperspast.natlib.govt.nz/newspapers/OG19151027.2.10>

Ohinemuri Gazette, Volume XXVI, Issue 3450, 27 October 1915, Page 2

¹²⁷⁷ <https://paperspast.natlib.govt.nz/newspapers/NZH19151103.2.8.3>

New Zealand Herald, Volume LII, Issue 16065, 3 November 1915, Page 4

MINES STATEMENT BY THE HON. W. D. S. MacDONALD, MINISTER OF MINES.¹²⁷⁸

Mr. Speaker,— I have the honour to present to Parliament the Mines Statement for the year ended the 31st December, 1915.

Owing to the abnormal conditions caused by the war and the shortage of miners, due to enlistment for military service abroad, there has been a small but inevitable decrease in the value of our mineral-production, but this has caused no appreciable inconvenience to the industries or to the welfare of the Dominion, and it affords me gratification to inform you that the mining community has answered the call to arms in a manner not excelled by those employed in any other industry.

APPENDICES TO THE MINES STATEMENT.

APPENDIX A.

REPORTS RELATING TO METALLIFEROUS MINES AND STONE-QUARRIES.

The Inspecting Engineer of Mines

to the Under-Secretary of Mines. Sir,— Wellington, 14th April, 1916. I have the honour to present my tenth annual report on metalliferous mines, together with annexures and statistical information, for the year ended 31st December, 1915.

Page 20

At the Talisman Consolidated Mine the Talisman shaft was sunk to a depth of 40 ft. below No. 15 level, and the Otis pump installed thereat. A cross-cut was driven westward from that shaft, connecting with the Bonanza section No. 15 level. Above No. 14 level all ore has been extracted in the Bonanza and Dubbo sections. In the Woodstock section the main south drive was connected with the Talisman shaft at a depth of 76 ft. below No. 14 level. Driving south on the Maria lode off No. 2 crosscut several short runs of ore were proved. It is proposed to considerably extend the east and west crosscuts from the main north drive, Woodstock section, also to continue driving south from No. 2 crosscut. In the Bonanza section winzes are now being sunk from No. 15 level and the north drive continued. On the occasion of my last inspection the deepest workings on the lode —viz., a winze from No. 15 level, exposed very poor mineral, containing a considerable proportion of galena in large crystals. The Waihi-Paeroa Gold Extraction Company having installed a large Priestman dredge is now enabled to obtain a more constant supply of old tailing from the Ohinemuri River, and to deal more effectively with timber on the river-bed. During the year 148,100 tons of tailing was raised and treated for a return of £39,700, as compared with 144,300 tons for £42,950 during 1914.

ANNEXURE B.

REPORTS OF DIRECTORS OF SCHOOLS OF MINES.

No report from Karangahake.

¹²⁷⁸ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1916-I.2.1.4.3>

MINES STATEMENT BY THE HON. W. D. S. MacDONALD, MINISTER OF MINES., Appendix to the Journals of the House of Representatives, 1916 Session I, C-02

1916

6 January

OMNIUM GATHERUM.

The sixth fire at Karangahake within nine weeks has destroyed a four-roomed dwelling, nothing being saved. The occupiers were at Thames when the mysterious fire occurred (says the Star). The insurance is £200. The police have been caused much concern by the recurrence of fires.¹²⁷⁹

18 February

PAEROA WARDEN'S COURT. Paeroa, Thursday.

The warden to-day granted the following applications...

The Crown Mines, Ltd., applied for protection and the application was recommended to the Minister. A tribute agreement in connection with this was submitted by the solicitor for the Crown mines and was agreed to by the Karangahake Miners' Union. The Dominion G.M. Company's surrender of the Dominion claim at Karangahake was accepted.¹²⁸⁰

21 February

Fatal Fire at Karangahake, Tramway Hotel destroyed

TRAMWAY HOTEL DESTROYED.

WOMAN BURNT TO DEATH. TWO MEN INJURED.

One of the most disastrous fires that have occurred at Karangahake for a long time happened at 3 o'clock yesterday (Sunday) morning. The hotel was run as a boarding house by Mr. Monsey and his wife, who are at present on a visit to Australia. During their absence Mr. Monsey's mother-in-law, Mrs. Dawson, was in charge of the house. There were only four young men boarders, and two of those were absent on the night of the unfortunate conflagration, or otherwise the consequences might have been still more serious. The two young men sleeping on the premises were both miners in the Talisman, named Griffen (Curly) and James Slevin. Mrs. Dawson, who was about fifty years of age, occupied a room up-stairs, and retired to bed about 11 o'clock. This was the last that was seen of her. At this time all in the house seemed all right, and there was no indication of fire.

Nothing further happened till a Mr. Clark, employed in the Talisman battery engine-room, observed the outbreak, and immediately sounded the Company's whistle. The fire-brigade was on the spot as quickly as possible. The company's fire appliances were also brought into requisition, but although prompt action was observed, by this time the flames had got a permanent hold of the building and extinguishment seemed impossible.

¹²⁷⁹ <https://paperspast.natlib.govt.nz/newspapers/ODT19160106.2.80>

Otago Daily Times, Issue 16584, 6 January 1916, Page 10

¹²⁸⁰ <https://paperspast.natlib.govt.nz/newspapers/NZH19160218.2.26>

New Zealand Herald, Volume LIII, Issue 16156, 18 February 1916, Page 5

Constable Capp, the local officer, appeared on the scene at 3.15. The building was then fully ablaze back and front. Only a few had gathered round, as the whistle was weak on account of a low pressure of steam at the battery.

The Constable saw Slevin standing a little from the burning premises, apparently half-dazed in his night apparel, much burnt about the arms. Slevin told the constable that he thought that Mrs. Dawson was still in the house. The latter immediately proceeded to ascertain the facts, which, unfortunately, were only too true. Nothing, however, could be done, as the building was almost by this time demolished, and any attempt to save life was impossible. He then came across Griffin. He was at the back of the house, and was also badly burnt about the face and arms. Both the men were taken to the house of Mrs. Tirney, and every attention was paid to their injuries. Griffen also informed the constable that he thought the woman was in the house, but there was no possible chance of saving her. The truth, however, soon became evident when the charred remains of Mrs. Dawson were picked out of the ruins.

The house stood by itself, so that beyond its total destruction and slight damage to the Talisman Company's office, no further injury was done, the most regrettable feature being the loss of life and the burning of the two men.

Both the young men were taken to the Waihi Hospital in Mr. Hamilton's motor-car.

We are informed there was an insurance on the furniture, but we are unable to ascertain the amount. The building is also covered, and belongs to the Montgomery Estate.¹²⁸¹

22 February

FIRE AT KARANGAHAKE.

ELDERLY WOMAN KILLED. TWO MEN INJURED.

SENSATIONAL ESCAPE FROM. DEATH. (BY telegraph. OWN CORRESPONDENT.) Waihi, Monday.

A destructive fire, accompanied by loss of life, and a narrow escape on the part of two other inmates, occurred at the Tramway Boardinghouse, a large two storeyed wooden building of between 30 and 40 rooms, at Karangahake shortly after three o'clock on Sunday morning. The victim was the acting-boardinghouse-keeper, an elderly woman named Mrs. Jane Dawson. The injured were Messrs. James R. Slevin and Griffin, and they were the only other occupants at the time of the outbreak. Both of them were burned about the face, head and arms and are now in the Waihi Hospital. Griffin's burns are very severe.

The fire was discovered by a man named Edward Ivy, but the building was then already a mass of flames. The local volunteer brigade was promptly on the scene, and its efforts, a few minutes later, were supplemented by the Talisman Company's fire-fighting appliances. So strong, however, was the hold obtained by the flames that it was impossible to make any impression on the fire.

¹²⁸¹ <https://paperspast.natlib.govt.nz/newspapers/OG19160221.2.16>

Ohinemuri Gazette, Volume XXVI, Issue 3395, 21 February 1916, Page 2

The Talisman Company's office buildings, though some 50ft distant, had already taken fire. The outbreak was extinguished and the damage was not extensive.

Inquiries were instituted as to the whereabouts of Mrs. Dawson, but nothing was heard or seen of her. When the fire had subsided, a search was made and the charred remains of the body were found in a position indicating that the unfortunate woman had made her way out of her bedroom into the passage way before being overcome.

The deceased was a widow and had been looking after the premises in the absence of her son-in-law and daughter, Mr. and Mrs. Mounsey, who are on a holiday visit to Sydney. Ivy, who saw Griffin and Slevin, the latter practically devoid of clothing, emerge from the blazing building in a half-dazed condition, describes their escape as marvellous, as flames and smoke completely enveloped the boardinghouse at the time.

Slevin states that Griffin and he slept in bedrooms upstairs and that he was awakened by Griffin bursting into his room and calling to him to get out. Grabbing some clothes, he followed Griffin through to the stairway. They were not a moment too soon as the flames were licking at the staircase. Throwing aside the clothing he had picked up, Slevin stumbled down through the smoke and sparks behind his companion, only to find the lower portion of the building ablaze. How they got clear he hardly knows. The flames were darting in on them and they were almost suffocated by the dense smoke while groping about for the point of egress. Had the warning come a few seconds later, escape would have been impossible.

The origin of the fire is not known. It is believed that the New Zealand Insurance Company has a comparatively small policy on the building and that there was no insurance on the furniture and effects. Griffin's condition this evening was regarded as somewhat serious.

An inquest was opened this morning before Mr. W. M. Wallnutt, district coroner, and after the identification of the body was adjourned.¹²⁸²

9 March

FIRE AT KARANGAHAKE.

CHEMIST'S SHOP BURNED. SERIES OF OUTBREAKS.

An outbreak of fire occurred in a chemist's shop in the main street of Karangahake about three o'clock this morning, and so strong was its hold when discovered that attempts to extinguish it proved unavailing, the building and contents being completely destroyed...

There was no insurance on the stock, owing to the insurance companies having decided to cancel risks at Karangahake, where there has been a series of fires in the past two or three months...¹²⁸³

¹²⁸² <https://paperspast.natlib.govt.nz/newspapers/NZH19160222.2.103>

New Zealand Herald, Volume LIII, Issue 16159, 22 February 1916, Page 9

¹²⁸³ <https://paperspast.natlib.govt.nz/newspapers/NZH19160309.2.38>

New Zealand Herald, Volume LIII, Issue 16173, 9 March 1916, Page 6

15 March

OMNIUM GATHERUM.

A remarkable series of fires in dwellings at Karangahake is giving the authorities much concern.¹²⁸⁴

20 July

Further particulars relative to the fatality at Karangahake, shows that Hillhouse, an engineer, employed at the Talisman mine, was engaged fixing a wire rope in the Woodstock shaft, at No. 8 level, when he missed his hold, falling down the shaft to No. 14 level, a distance of 1200 ft. The body was shockingly mutilated. Hillhouse leaves a widow and one child.¹²⁸⁵

24 July

MECHANICAL ENGINEER. Wanted—

AN ENGINEER FOR MINE WORK. Capable of taking charge of Winding Engines, Sinking Pumps, and Rock Drills.

Apply by letter, enclosing copies of testimonials, to TALISMAN CONSOLIDATED. LTD. Karangahake.¹²⁸⁶

AJHR 1917

For the year 1916

MINES STATEMENT BY THE HON. W. D. S. MacDONALD, MINISTER OF MINES.¹²⁸⁷

Mr. Speaker,— I have the honour to present to Parliament the Mines Statement for the year ended the 31st December, 1916.

APPENDICES TO THE MINES STATEMENT. APPENDIX A.

REPORTS RELATING TO METALLIFEROUS MINES AND STONE-QUARRIES.

The Inspecting Engineer

of Mines to the Under-Secretary of Mines. Sir,— Wellington, 16th May, 1917. I have the honour to present my tenth annual report on metalliferous mines, together with annexures and statistical information, for the year ended 31st December, 1916.

ANNEXURE A.

SUMMARY OF REPORTS BY INSPECTORS OF MINES. Northern Inspection District.

¹²⁸⁴ <https://paperspast.natlib.govt.nz/newspapers/ODT19160315.2.98>

Otago Daily Times, Issue 16643, 15 March 1916, Page 10

¹²⁸⁵ <https://paperspast.natlib.govt.nz/newspapers/AS19160720.2.39>

Auckland Star, Volume XLVII, Issue 172, 20 July 1916, Page 4

¹²⁸⁶ <https://paperspast.natlib.govt.nz/newspapers/NZH19160724.2.3.6>

New Zealand Herald, Volume LIII, Issue 16289, 24 July 1916, Page 1

¹²⁸⁷ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1917-I.2.1.4.3>

MINES STATEMENT BY THE HON. W. D. S. MacDONALD, MINISTER OF MINES., Appendix to the Journals of the House of Representatives, 1917 Session I, C-02

Mr. M. Paul, Inspector of Mines.

Nothing about Karangahake.

ANNEXURE C.

REPORTS OF DIRECTORS OF SCHOOLS OF MINES.

Page 44

Karangahake School of Mines

Mr. W. A. Given, M.A., A.O.S.M., Director of the Karangahake School of Mines, to the Under-Secretary of Mines, Wellington. Sir, — Karangahake, 12th March, 1917.

I have the honour to present my report on the work done at the above school of mines for the year ended December, 1916.

Attendance. —Twenty students in all attended the school during the year, and instruction was given in all the school subjects. Notwithstanding the fact that several of our best and most promising students had enlisted for active service, the work done at the school compared favourably with that of previous years.

Examinations. —Ten students sat at the annual examinations, obtaining eleven first-class, six second-class, and three third-class passes. Three students sat for the examination for battery superintendents, at which examination one student was successful, while one obtained a partial pass, having failed in one subject only.

Open Nights. —Two open nights were held during the year, one at Karangahake and one at Waikino. Short illustrated lectures were given by Mr. H. C. Tempest, electrical instructor, and myself, on "Electricity in respect to the War" and "Chlorine Gas" respectively. These lectures were well attended, and our efforts were thoroughly appreciated.

School Equipment. —A late-pattern Braun pulverizer and a 2 horse-power Fairbanks-Morse oil-engine were recently installed in the assay department. The laying of the foundation and the setting-up of this plant were done by the voluntary efforts of the Council members themselves. During the year a large specimen-case was added to the geological-museum equipment, in order to hold a number of specimens kindly presented during the past few years.

Public Assays. —In all 117 public assays were made during the year, a decided increase on the last few years. A number of mineral determinations were also made.

In conclusion, I desire to express my appreciation of the work done by the other members of the staff; also of the keen and active interest taken in the school affairs by the members of the Council. I have, &c, W. A. Given, Director.

1917**10 January****MILITARY SERVICE BOARD****SITTING AT PAEROA**

The Auckland Military Service Board held a sitting at Paeroa Monday to deal with applications for exemption lodged by members of the first division of the Expeditionary Force Reserve who have been drawn in the ballot under the Military Service Act...¹²⁸⁸

22 January**FIRES IN KARANGAHAKE.****ACTION OF THE INSURANCE COMPANIES. CORONER'S INQUIRY.**

(By Telegraph.—Own Correspondent.) WAIHI, Saturday.

Inquiry into the circumstances of the fire which destroyed Brigg's boardinghouse at Karangahake on January 2 was held at Karangahake to-day, before Mr. W. M. Wallnutt, District Coroner. Senior-Sergeant Wohlmann represented the police, and Mr. Palmer represented the Ocean Insurance Company. The evidence showed that the Royal Insurance Company held a risk of £435 on the destroyed property over twelve months ago, but, owing to the epidemic of fires which occurred in Karangahake at that time, did not renew the risk. The Ocean Company, however, agreed to accept a risk for cover of £275.

Constable Capp said that it seemed to be the belief of miners at Karangahake that work might cease at any moment, and that property was practically valueless. Two large boardinghouses in the main street were unoccupied, and the largest boardinghouse was rent free up to recently. An epidemic of fires occurred about 16 months ago in Karangahake. In consequence, a majority of insurance companies doing business in the township decided to withdraw. There had been no fires since on uninsured places, and only two on places insured.

Mr. B. Neil, secretary of the Fire Brigade, said the plant was in good order, but the staff insufficient.

The Coroner, summing up, said there was no evidence of incendiarism. He proceeded to say that he considered there was need for more vigorous inspection in the acceptance of risks by insurance companies; also for periodical inspection and readjustment of tariffs and the amount of cover in districts such as Karangahake, where property values had so rapidly depreciated. He pointed out that, according to Mr. Palmer's statement, tariff "E" was applied to Karangahake, whilst higher tariffs obtained in prosperous, go-ahead districts. He returned a verdict to the effect that the boardinghouse was destroyed by a fire, which started in a room occupied by George Burke, in a detached portion of the building, but there was no evidence to show how the outbreak originated.

¹²⁸⁸ <https://paperspast.natlib.govt.nz/newspapers/OG19170110.2.14.1>

Ohinemuri Gazette, Volume XXVIII, Issue 3717, 10 January 1917, Page 2

Mr. Palmer said he would make a special note of the evidence and of the remarks made by the Coroner, which he would submit to his association and colleagues. His visit to the district would no doubt prove beneficial to the companies interested. He commended the action of Senior-Sergeant Wohlmann in investigating the circumstances of fires in his district.¹²⁸⁹

3 February

INFLUENCE OF THE WAR.

The year 1916 was a quiet one for the mining industry on the Ohinemuri field, with prices for stores and other requisites, ruling exceptionally high in consequence of the war...

The Talisman Mine. At Karangahake the Talisman Consolidated mine was again the only gold producer apart from small quantities of gold won by tributers operating in the old New Zealand Crown Company's workings...¹²⁹⁰

28 February

NATURE STUDY. FLORA OF OHINEMURI.

WAITAWHETA GORGE

By W. A. GIVEN, M.A., A.O.S.M., Director of School of Mines,
Karangahake

...Rutaceae

Phebalium nudum (Mairehau): The Waitawheta Gorge is probably the extreme southern limit of this graceful little tree, of which the small rather narrow leaves and small white sweet-scented flowers render the tree well worthy of cultivation. It is fairly plentiful in all stages of growth within a mile radius of the Talisman Battery, being found both in the Ohinemuri and Waitawheta Gorges. Of the 28 species of *Phebalium*, 27 are restricted to Australia, and one only to New Zealand. Such apparent anomalies in plant distribution are fairly common in respect to our flora...¹²⁹¹

2 April

A MINER KILLED.

FALLS OVER A CLIFF.

(By Telegraph. —Press Association.) PAEROA, this day. A miner named John Sharman met with a fatal accident at Karangahake on Saturday night, through falling over a cliff. He was last seen at Woods' pictures, and was proceeding to his home, which is situated at a place known as Scotchman's Gully, which is only a few yards from the edge of the cliff. The track leading from the main road to where deceased was found is only a few feet wide. It is supposed he missed his footing and rolled over the cliff.

¹²⁸⁹ <https://paperspast.natlib.govt.nz/newspapers/AS19170122.2.43>

Auckland Star, Volume XLVIII, Issue 19, 22 January 1917, Page 6

¹²⁹⁰ <https://paperspast.natlib.govt.nz/newspapers/NZH19170203.2.15>

New Zealand Herald, Volume LIV, Issue 16455, 3 February 1917, Page 7

¹²⁹¹ <https://paperspast.natlib.govt.nz/newspapers/OG19170228.2.27>

Ohinemuri Gazette, Volume XXVIII, Issue 3737, 28 February 1917, Page 4

Sharman was engaged contracting at the Talisman mine, and was formerly at Waihi where he was a prominent member of the band, and took part in several contests. The deceased originally came from New South Wales. He leaves a wife and young family.¹²⁹²

4 April

KARANGAHAKE NEWS. FAREWELLING RESIDENTS.

The Karangahake bowling green presented a very busy appearance on Saturday afternoon, the occasion being a farewell given by the members of the club to Messrs. Kitching (president), Pearce (vice-president) and Johnston (secretary.) Visitors from all parts of the Goldfields were present. Eight rinks were occupied and the fine weather added to the afternoon's enjoyment.

Mr. Deane welcomed the visitors and said it was with regret that the club were losing three of their officers. In tracing the history of the club Mr. Deane stated that Mr Kitching had worked assiduously for the benefit of the club and the welfare of bowling generally. It was due to Mr. Kitching's untiring efforts that the club has been placed on a footing equal to most clubs in the Auckland Province...¹²⁹³

16 June

A copy of a very well written paper by Mr. W. A. Given, Director of the School of Mines at Karangahake, on the flora of the Waitawheta Gorge, in the Ohinemuri County, has been sent by Mr. D. Leach of Paeroa, who enthusiastically endorses Mr. Given's description of the beautiful scenery in the gorge. "The flora of Ohinemuri," Mr. Given says, "presents features of special interest. Here, within a very small geological area, we have littoral or shore formations, long raking gullies and ravines, open undulating country, precipitous bluffs and almost barren escarpments, each supporting its own congenial vegetation. Again, our country embraces the northern and southern limits respectively of a large number of species. And, finally, the section of the Waitawheta Gorge is especially interesting from the fact that it one of the least known, and at the same time one of the most interesting floral zones in New Zealand, embodying as it does a fairly wide range in altitude, all degrees of light and shade, of humidity, of slope, and of character of soil."

Downstream from Franklin Flat the Waitawheta River takes a long sweep and describes almost three-quarters of a circle before it effects a junction with the Ohinemuri River at the Talisman Battery. It is this section of the Waitawheta Gorge which is little known, and which has deeply impressed the few people who have been sufficiently energetic to enter it. The narrowness of the gorge and the precipitous nature of the sides along this section are relieved only at Dicky's Flat, a small alluvial expansion between two and three miles from the junction of the rivers. With the exception of this small area, and that occupied by the Crown race, the gorge is almost impassible without a guide to point out the shallows and the most suitable fords. Even under the most favourable

¹²⁹² <https://paperspast.natlib.govt.nz/newspapers/AS19170402.2.75>

Auckland Star, Volume XLVIII, Issue 79, 2 April 1917, Page 6

¹²⁹³ <https://paperspast.natlib.govt.nz/newspapers/OG19170404.2.19>

Ohinemuri Gazette, Volume XXVIII, Issue 3752, 4 April 1917, Page 2

condition the travelling is arduous, and not without an occasional element of risk; but with a few aids the greater difficulties at least could be overcome, and the passage of this section then, Mr. Given says, would be one of the finest walks in the country within easy distance of an industrial centre. To this Mr. Leach adds: "I have fished the Waitawheta along its whole length, and the scenery, after nine years' experience, still charms me. The Ohinemuri Acclimatisation Society hopes to make it as ideal for fishing as it is for rugged scenery. I hope that the beautiful forest will be preserved for future generations, but if this is done steps must be taken soon, before settlement increases."¹²⁹⁴

30 April

ACCLIMATISATION.

THE OHINEMURI BRANCH. ANNUAL MEETING.

The annual meeting of the Ohinemuri Branch of the Auckland Acclimatisation Society was held in the Criterion Hotel on Thursday evening last. Mr. Arch. White (president) was in the chair. ANNUAL REPORT. The secretary, Mr. .D. Leach, submitted the annual report as follows: During the past year the activities of our Society have been in the direction of increasing the fish and birds throughout the district. Eighty birds (pheasants) were received from the Auckland Society and liberated at Waihi, Karangahake, and at our sanctuary, Paeroa. Fry were liberated as follows:— 5000 in the Waitawheta River, half at Dickey's Flat, and remainder above Franklin's at Owaharoa; 1000 in the Hikutaia River which we hope to stock again next year.¹²⁹⁵

Crown powerhouse sold to Gisborne Borough

16 July

POWER-HOUSE EXTENSION. STEAM PLANT UNDER TRIAL.

... fortunately a plant was offered to the Council [Gisborne Borough Council] by the N.Z. Crown Mines, of just the capacity that was required, and on the advice of the Council's electrical consulting engineer. Mr .E. J. Fenn, negotiations for the purchase of the plant were entered into. The plant comprised two Babcock and Wilcox boilers...

In addition to the boilers and engine, a condenser, steam pumps, and steel chimney were also purchased from the Crown mines, and on tenders being called a contract was let to the Gisborne m Engineering Company to remove the plant and re-erect it in the Gisborne municipal power-house...

The dismantling of the plant at Karangahake was carried out under the supervision of Mr F. deLautour and staff...

As mentioned previously, the plant was specially designed in London for the Crown Mines Co., and in engineering circles the names of the respective makers are regarded as a sufficient guarantee of efficiency. An engineer who

¹²⁹⁴ <https://paperspast.natlib.govt.nz/newspapers/NZH19170616.2.76.8>

New Zealand Herald, Volume LIV, Issue 16567, 16 June 1917, Page 1 (Supplement)

¹²⁹⁵ <https://paperspast.natlib.govt.nz/newspapers/OG19170430.2.17>

Ohinemuri Gazette, Volume XXVIII, Issue 3762, 30 April 1917, Page 2

has a good practical knowledge of the machine states that he considers those representing the Council secured a splendid bargain in the purchase.¹²⁹⁶

23 July

HAURAKI RESERVISTS. DECISIONS OF THE BOARD

TE AROHA, Saturday. The Second Auckland Military Service Board continued its sitting to-day.

The appeal of William McFarlane, engine driver, Karangahake, was supported by his employers, the Talisman Gold Mining Company, whose representative stated that the appellant was a highly-competent enginedriver. Appellant showed that he supported his widowed mother and her family, and exemption sine die was granted.¹²⁹⁷

William McFarlane, engine driver, Karangahake, was supported in his appeal by his employers, the Talisman G.M. Co.

Mr Porritt attended as counsel, and pointed out that if any accident occurred in the mine the Mining Act threw the onus of proof that there was negligence on the mining company. Therefore it was incumbent that only good reliable men were employed. It was customary to keep qualified men in reserve, but at present they were unprocurable. Mr Farlane had served in the South African War with the New Zealand forces.

Appellant substantiated the foregoing evidence, and said he was the sole support of his widowed sister and her two children.

Exemption sine die was granted on the usual conditions.¹²⁹⁸

16 August

Letters from New Zealanders go to show that the beautiful woods of Flanders have made quite an impression on our boys' minds. They are charmed with the primroses and violets to be seen everywhere, the woods being like flower gardens. Practically the whole of France is a mass of flowers in spring. In the woods near Verdun in particular, the ground is carpeted with lilies of the valley and wild hyacinths.¹²⁹⁹

20 August

Albert A. Kennedy, grocer's assistant, Karangahake, asked for leave till October 18, to fix up affair, owing to his grandmother's death a week ago. He was drawn in June.

The Board said it could not see any grounds for the appeal. "Undue hardship" and "various reasons" were mentioned.

¹²⁹⁶ <https://paperspast.natlib.govt.nz/newspapers/PBH19170716.2.31>

Poverty Bay Herald, Volume XLIV, Issue 14350, 16 July 1917, Page 4

¹²⁹⁷ <https://paperspast.natlib.govt.nz/newspapers/NZH19170723.2.22>

New Zealand Herald, Volume LIV, Issue 16598, 23 July 1917, Page 4

¹²⁹⁸ <https://paperspast.natlib.govt.nz/newspapers/THS19170723.2.16>

Thames Star, Volume VIII, Issue 18400, 23 July 1917, Page 2

¹²⁹⁹ <https://paperspast.natlib.govt.nz/newspapers/THS19170816.2.11>

Thames Star, Volume LVIII, Issue 18422, 16 August 1917, Page 2

Appellant was cautioned as to impertinence, he having retorted that the Board could, in effect, "do as is liked for all he cared." He did not object to service.

After further examination, the appeal was dismissed...

Raymond Morrison, draper, Karangahake, asked for leave till "after Christmas," as he had only recently attained the age of 20 years. His father supported the appeal, saying he had a large family to keep, and appellant assisted him with his wages. The eldest, son went away with the fifth reinforcements. None of the other members of the family were earning wages. He was engineer in the employ of the Talisman Consolidated Co. It was purely an appeal owing to financial hardship.

He was shown that the appellant could make an allowance out of his soldiers' pay equivalent to his contribution from his wages. Exemption was granted till September 20.¹³⁰⁰

2 November

OHINEMURI COUNTY COUNCIL. ENGINEER'S REPORT.

The decking of the Karangahake traffic bridge at the Talisman battery is very much worn and will require protecting with longitudinal planking of an approximate cost of material on the ground of £16.

DOHERTY'S CREEK SWING BRIDGE. The suspension ropes on this bridge are not in a satisfactory state and will need renewing at an early date. Winding ropes suitable for the purpose can be secured from the Talisman Mine to replace same at a cost of £10.¹³⁰¹

9 November

A GLASS OF BEER.

A FIGHT AGAINST ODDS.

George Hill, a miner of Karangahake, was charged by the police with being drunk on October 17. Mr E. W. Porritt appeared for the accused, and stated that Hill was a very decent man and a first-class miner working in the Talisman, where he had been for upwards of 14 years.

Sergt. O'Grady stated that Hill had been found drunk in the street at Karangahake on Sunday morning, and friends had to take charge of him. In fact, it was a common occurrence. He was a consistent drinker, and an order against him would be for his own good. When defendant went to Hikutaia he always brought eight or nine bottles home with him, and in other ways had liquor brought to him. An order would have the effect of stopping the traffic, and would do him good, as he was wasting his estate and substance.

Mr Porritt: My client is not a drunkard, but sometimes gets on the "booze" for a couple of days.

The Bench suggested taking out an order against him, but defendant's counsel did not think this course was a wise one as it might injure his position.

¹³⁰⁰ <https://paperspast.natlib.govt.nz/newspapers/OG19170820.2.10>

Ohinemuri Gazette, Volume XXVIII, Issue 3809, 20 August 1917, Page 3

¹³⁰¹ <https://paperspast.natlib.govt.nz/newspapers/OG19171102.2.16>

Ohinemuri Gazette, Volume XXVIII, Issue 3840, 2 November 1917, Page 3

Mr Porritt wished to know what grounds there were for saying accused was wasting his estate, as he had a good banking account, and was earning 12/- to 13/- a day contracting, and had been 17 years in his present position, and his health was not impaired.

Accused stated that a glass of beer did him good. In fact, if he did not have one before his meals he could not eat anything.

Sergt. O'Grady: "You are drunk now. Where did you get the drink from?"

Accused: I have only had one, and walked in from Karangahake. I deny that I was drunk on Sunday, and object to an order being taken out against me, as it would be hard not to have a glass of beer with a friend. I don't owe a farthing in the world. I have a bad back and a drop of schnapps does me good.

Constable Tapp gave accused a good character only for his drinking habits.

The Bench deemed it advisable to issue an order against Hill, as it would be for his own good. If the glass of beer before meals stopper [stopped] at that it would be all right, and the Bench sympathised, but it did not. Defendant would be convicted and discharged on the charge of being found drunk, but a prohibition order would be issued against him for twelve months.¹³⁰²

AJHR 1918

For the year 1917

MINES STATEMENT BY THE HON. W. D. S. MacDONALD, MINISTER OF MINES.¹³⁰³

Mr. Speaker,— I have the honour to present to Parliament the Mines Statement for 1917-18. After taking into consideration the great disadvantages under which mining has been carried on during this the fourth year of the war the production of minerals has, I think, been fairly well maintained, although there has to be recorded a decline in total value. This decline is chiefly due to shortage of labour by the voluntary enlistment of miners, and to the fact that many of the smaller mines and dredges have discontinued operations owing to the increased cost of everything required in the production of gold, while the value of the gold produced has remained stationary.

APPENDICES TO THE MINES STATEMENT.

APPENDIX A. REPORTS RELATING TO METALLIFEROUS MINES AND STONE-QUARRIES.

The Inspecting Engineer of Mines

to the Under-Secretary of Mines. Sir,— Wellington, 6th. June, 1918. I have the honour to present my annual report on metalliferous mines, together with annexures and statistical information, for the year ended 31st December, 1917.

ANNEXURE A. SUMMARY OF REPORTS BY INSPECTORS OF MINES. Northern Inspection District. Quartz-mining.

¹³⁰² <https://paperspast.natlib.govt.nz/newspapers/OG19171109.2.17>

Ohinemuri Gazette, Volume XXVIII, Issue 3843, 9 November 1917, Page 3

¹³⁰³ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1918-I-II.2.1.4.3>

MINES STATEMENT BY THE HON. W. D. S. MacDONALD, MINISTER OF MINES., Appendix to the Journals of the House of Representatives, 1918 Session I-II, C-02

Mr. M. Paul, inspector of Mines

Page 31

Talisman Consolidated (Limited). —No. 16 level (1,130 ft.): Driving north and south has been carried on continuously, and a considerable amount of crosscutting has also been done, the results proving disappointing. At No. 15 level the south drive was advanced into the Dubbo section, connecting with No. 19 winze from No. 14 level, but failed to reveal anything of value.

New Zealand Crown Mines (Limited). — This mine has been in the hands of tributers, twenty-one men being employed.

Waihi-Paeroa Gold-extraction Company. —During the year this company retreated 147,700 tons of river-sands for bullion valued at £51,300, which enabled the directors to pay a small dividend.

1918

12 March

Crown Mines.

Karangahake: During February the old crosscut at No. 4 Talisman level was cleared out for 367 ft, and a start was made to continue the crosscut eastwards into the Crown Company's property. Two shifts of men are engaged in the work. The tributers crushed 41 tons of ore from the Hauraki Block, and 71 tons from the Rhoderick Dhu reef, from which the company received royalties totalling £26 13s 1d...¹³⁰⁴

8 April

OHINEMURI COUNTY COUNCIL.

SWING BRIDGE. It was decided to effect some repairs to Dougherty's swing bridge, and to close the bridge against traffic until the repairs were effected.¹³⁰⁵

15 April

MILITARY APPEALS.

SITTING OF No. 2 SERVICE BOARD.

The chairman explained that miners are entitled to exemption so long as they are actually engaged in a gold-producing mine.¹³⁰⁶

25 May

The Karangahake Croquet Club recently held a Red Cross day on its green in aid of the funds for the relief of soldiers. The total proceeds were £50, which has been forwarded to the Auckland committee.¹³⁰⁷

2 July

CROWN MINES. TRIBUTERS' CRUSHING.

The tributers in the New Zealand Crown mine, Karangahake, have had a trial crushing of 92 tons of ore from the Dubbo reef. The return from 40 tons was £125 16s or £3 16s a ton, and from the remaining 46 tons £149 10s or £3 6s a ton. The lode is from 3ft to 4ft wide in the stope.¹³⁰⁸

¹³⁰⁴ <https://paperspast.natlib.govt.nz/newspapers/NZH19180312.2.12>

New Zealand Herald, Volume LV, Issue 16796, 12 March 1918, Page 3

¹³⁰⁵ <https://paperspast.natlib.govt.nz/newspapers/OG19180408.2.12>

Ohinemuri Gazette, Volume XXIX, Issue 3903, 8 April 1918, Page 2

¹³⁰⁶ <https://paperspast.natlib.govt.nz/newspapers/OG19180415.2.12>

Ohinemuri Gazette, Volume XXIX, Issue 3906, 15 April 1918, Page 2

¹³⁰⁷ <https://paperspast.natlib.govt.nz/newspapers/NZH19180525.2.15>

New Zealand Herald, Volume LV, Issue 16859, 25 May 1918, Page 6

¹³⁰⁸ <https://paperspast.natlib.govt.nz/newspapers/NZH19180702.2.11>

New Zealand Herald, Volume LV, Issue 16891, 2 July 1918, Page 3

AJHR 1919

For the year 1918

MINES STATEMENT BY THE HON. SIR WILLIAM FRASER, MINISTER OF MINES.¹³⁰⁹

Mr. Speaker,— During the currency of the war mining interests have suffered considerably, but now that victory has happily crowned our efforts on the battlefield, and our soldiers are returning to their former avocations, we may confidently look forward to an extensive revival.

APPENDICES TO THE MINES STATEMENT,**APPENDIX A. REPORTS RELATING TO METALLIFEROUS MINES AND STONE-QUARRIES.**

The Inspecting Engineer of Mines

to the Under-Secretary of Mines. Sir,— Wellington, 15th April, 1919. I have the honour to present my thirteenth annual report on metalliferous mines and stone-quarries, together with annexures and statistical information, for the year ended 31st December, 1918.

Page 18

Talisman Consolidated. —Operations at the lowest or No. 16 level ceased during the year and pumps were withdrawn. The ore treated was obtained principally from stopes in the Bonanza section immediately below No. 13 level; little of this rich ore now remains to be stoped. Prospecting by means of a Government diamond drill is now being carried out to prove the Woodstock lode under the crosscut driven 70 ft. below No. 13 level; also the Bonanza lode from holes to be drilled at the bottom of winzes Nos. 6 and 12 respectively, being approximately from the horizon of No. 15 level. The annual production has slightly declined, but the value per ton increased from £8 12s 5d to £9 0s. 5d.

Waihi-Paeroa Gold-extraction Company. —This company, which since March, 1912, has recovered and re-treated tailings from various mines deposited in the Ohinemuri River, a proclaimed sludge channel, during the year went into liquidation and offered its extensive treatment plant for sale. Since the commencement of operations 907,138 statute tons of tailings were treated for a return of £276,211, being an average value of 6s. 1d. per ton. The total expenditure by the company was about £320,000. Dividends amounting to £25,000 were declared. The reason for the failure of this undertaking is obvious, values obtained being too low to cover costs.

ANNEXURE A. SUMMARY OF REPORTS BY INSPECTORS OF MINES.
Northern Inspection District. Quartz-mining.

Mr. M. Paul, Inspector of Mines

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Talisman Consolidated (Limited). —No. 16 level: Work at this level has been suspended and pumps withdrawn. No. 15 level: This level has also proved

¹³⁰⁹ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1919-I.2.1.4.3>

MINES STATEMENT BY THE HON. SIR WILLIAM FRASER, MINISTER OF MINES., Appendix to the Journals of the House of Representatives, 1919 Session I, C-02

disappointing as far as values are concerned, but quartz has been found to exist in a section which in the level above showed a vein fissure filled with clay. Driving south at this level in the Dubbo section has disclosed two short shoots of fair-grade ore. With a view of ascertaining whether the reefs continue at depth, and also to prove the country, it was decided to put down three boreholes—the first at the end of the crosscut at the bottom of the Woodstock shaft, the second from No. 6 winze, and the third from No. 12 winze. This work is now in progress, arrangements having been made with the Mines Department for the use of a diamond drilling plant.

New Zealand Crown Mines (Limited). —At No. 4 level a crosscut is being driven to test a block of ground situated between the Talisman and Adeline reefs. The old Talisman No. 1 level is also being cleaned out for the purpose of exploring the Talisman reef in this section of the mine. Ten wages men and nine tributers are employed.

Waihi Paeroa Gold-extraction Company. —Owing to the high cost of cyanide, and flints for the tube mills, together with low grade of river sand, this company decided to go into liquidation, and the plant is now being sold.

1919

11 January

MINING NEWS.

GOLD OUTPUT. £506,188 FOR 1918.

During war's turmoil, one of the many industries that suffered was that of gold production. The cost of materials, for one thing, seriously hampered operations, added to which many good miners went away with the tunnelling corps, and with labour scarce, living high, work plentiful at good wages, it was not to be expected that anything in the way of looking for new finds would be undertaken. As a matter of fact, outside of the Ohinemuri County, comparatively little gold production has taken place. Even with well-established mines like the Waihi Grand Junction, and Talisman, it was not an inducement to increase the output of bullion, when it was known that a heavy income tax had to be faced?

During 1918 several companies ceased operations, some of them temporarily, whilst others closed down permanently. Amongst the latter was the Waihi-Paeroa Gold Extraction Company, which had been recovering bullion from tailings in the Ohinemuri River. Since 1912, this company recovered bullion to the value of £277,961, out of which £18,700 was distributed in dividends...¹³¹⁰

8 February

Karangahake Bowling Club.

One of the most successful gatherings ever held on the Karangahake Bowling Club's green took place on Saturday last, the occasion being an "At Home" to Mr. Jury and his team in celebration of their victory in the Dominion Championship Fours. Visitors were present from Auckland, Ponsonby, Hamilton, and all the various Goldfields Clubs, including the Waikino team.

The president (Mr. D. T. Aitken), in a brief but characteristic speech, welcomed the visitors. In his remarks on behalf of the club members he congratulated Mr. Jury and team on their meritorious performance in securing the highest honours in bowling in the Dominion, at the same time making special mention of the achievements of the Waikino team. He called for three cheers for Jury and team, which was heartily responded to by all present. Play was then commenced, eight rinks being occupied.¹³¹¹

¹³¹⁰ <https://paperspast.natlib.govt.nz/newspapers/AS19190111.2.74>

Auckland Star, Volume L, Issue 10, 11 January 1919, Page 6

¹³¹¹ <https://paperspast.natlib.govt.nz/newspapers/TO19190208.2.14.2>

Observer, Volume XXXIX, Issue 23, 8 February 1919, Page 10

Crown Quarry granted by Warden

10 March

The following mining applications were granted by the Warden at the Court on Wednesday:... New Zealand Crown Mines, Ltd., mineral license, Karangahake, royalty 1d per cubic yard plus rent 2s 6d per acre ...¹³¹²

14 June

The demolition of empty houses is still going on apace, and a stranger to this burg would fancy that it had suffered from an air raid by the Huns. The better parts of the houses are being removed for re-erection in other places, mostly in the King Country.

The local quarry adjacent to the Crown battery has been fully opened up, and good bell metal is to hand, which is in great demand by various councils, etc.¹³¹³

18 June

NEW ZEALAND CROWN MINES. MEETING OF SHAREHOLDERS

...In connection with the assets he [the chairman] mentioned that there was a quarry on the property which might prove valuable, and though he did not want to sound a too optimistic note regarding the same, it was believed that 500 tons of good road-making stone could be obtained from it. "There is evidently more money in the quarry than gold in the mine," interjected a shareholder.¹³¹⁴

2 August

As an outcome of the resolution passed by the Waihi Chamber of Commerce at a special meeting yesterday, wired to the Hon. W. H. Herries, Minister of Railways, the Minister has replied as follows to the secretary, Mr J. Whitehead :—"Have your telegram urging that Waikino and Karangahake be treated as suburbs of Waihi during the curtailed passenger traffic, and this matter will have consideration." The wire to the Minister urged that as the inhabitants of Waikino and Karangahake practically depended on Waihi for their daily supplies a hardship would be inflicted if the restrictions were strictly enforced. It was pointed out that both these places might be regarded as suburbs of Waihi, and that the passenger restrictions should be lifted to enable residents to travel to Waihi by train.¹³¹⁵

4 August

KARANGAHAKE NEWS.

¹³¹² <https://paperspast.natlib.govt.nz/newspapers/OG19190310.2.6>

Ohinemuri Gazette, Volume XXX, Issue 4040, 10 March 1919, Page 2

¹³¹³ <https://paperspast.natlib.govt.nz/newspapers/THS19190614.2.46>

Thames Star, Volume LII, Issue 13910, 14 June 1919, Page 6

¹³¹⁴ <https://paperspast.natlib.govt.nz/newspapers/AS19190618.2.100>

Auckland Star, Volume L, Issue 144, 18 June 1919, Page 9

¹³¹⁵ <https://paperspast.natlib.govt.nz/newspapers/WHDT19190802.2.7>

Waihi Daily Telegraph, Volume XVII, Issue 5682, 2 August 1919, Page 2

PRESENTATION.

A large and enthusiastic gathering of the Talisman Gold Mining Company's employees took place in the Public Hall, Karangahake, last week, with the object of presenting Mr John Rickards, late Talisman mine manager, with a valuable gold watch, also a handsome silver salver for Mrs Rickards, as a token of esteem and appreciation prior to their departure from Karangahake.

Mr T. Tucker, who presided, in a few well chosen eulogistic words made the presentation on behalf of those present, and referred to the great esteem and respect in which Mr Rickards was held, and the kindly feelings that had always existed between Mr Rickards and those who had had the good fortune to work under him during his late managership of the Talisman mine...

It was with deep regret that he had, on account of ill-health, to sever his connection with the mine and to part from those with whom he had got on so well during his management...¹³¹⁶

11 August

WORKS IN THE COUNTY.

ENGINEER'S REPORT.

Re the Lighting of Karangahake Main Street. —I interviewed the manager of the Talisman, Mr Stansfield, and he will place, subject to the approval of the Talisman Board, three lights at various points in the main street for the sum of £31, providing the Council erects the brackets or poles required to receive the wires, etc. The cost thereafter would be £1 per month. I would recommend that the above be accepted and the present system be discontinued. —Cr. McGuire spoke in support.—Agreed to.¹³¹⁷

13 August

PUBLIC BATTERY.

WANTED AT KARANGAHAKE.

The erection of a public battery has been advocated by the miners of Karangahake and brought before the Minister of Mines by the member for the district on many occasions, but without success. Councillor McGuire brought the matter up again last month, at a meeting of the Ohinemuri County Council, and Mr Poland, M.P., who was present, has undertaken to again urge upon the Minister of Mines the necessity of fostering the mining industry by affording small parties of miners the means of treating the ore now lying unworked in the Karangahake hills. The Paeroa Chamber of Commerce also has decided to support the request, which should have the backing of everyone in the district. The Crown Mine has been idle for years, and is at present being dismantled. The Talisman is not at present a paying proposition, and unless some new discovery is made, must sooner or later cease crushing.

With the money in hand probably development work will be carried on, but in any case a large number of men will be out of work. It is stated by the miners

¹³¹⁶ <https://paperspast.natlib.govt.nz/newspapers/OG19190804.2.18>

Ohinemuri Gazette, Volume XXX, Issue 4001, 4 August 1919, Page 3

¹³¹⁷ <https://paperspast.natlib.govt.nz/newspapers/OG19190811.2.18>

Ohinemuri Gazette, Volume XXX, Issue 4004, 11 August 1919, Page 3

that numerous small reefs, never touched by the companies because they are unpayable, are capable of giving good returns to tributers were they able to treat their ore under reasonable conditions. At present the companies charge for crushing 25s per ton in lots of not less than 40 tons. In addition about 20 per cent of the total return is claimed by the company, besides which there is the cost of cartage to the battery. Taking ore worth £5 per ton the return to the miners is about £2 per ton. With a public battery crushing at a cost of 10s per ton and the ground thrown open to the miners, where not worked or manned by the companies, ore of the same value would return to the miner £4 per ton. It is estimated that fully one hundred men would be enabled to make a good living under the latter conditions. The expenses of running the battery will be moderate. Plenty of water power is available, and the cost of management need cost very little as the Director of the School of Mines could be placed in charge. Thus the erection of the battery would assist in maintaining the existence of the School of Mines which is so essential to the prospector and the student.

The German mining experts considered New Zealand one of the richest mineral countries in the world. If we intend to foster and develop these resources in our district we must see that the miner has every assistance. The present School of Mines, where assays can be made and advice given to prospectors and a public battery to treat the ore when mined are most necessary and indispensable. The Government has promised to assist mining discovery and development and we must see that the Ohinemuri district is not neglected.¹³¹⁸

23 September

For Sale by Tender.

THE NEW ZEALAND CROWN MINES COMPANY. LIMITED, Invite Written Tenders for the Purchase for Removal of the following Houses now erected at KARANGAHAKE: —

1. SUPERINTENDENT'S RESIDENCE— 10 rooms, verandah on two sides, rimu studs, kauri w.b., g.i. roof, 4 double brick chimneys, hot and cold water service. Principal rooms and hall ornamental panelled ceilings; electric light fittings.
2. SECRETARY'S HOUSE—6 rooms, verandah, kauri, with g.i. roof, 2 double brick chimneys, electric light fittings.
3. ENGINEER'S HOUSE—6 rooms, verandah, kauri, with g.i. roof, 2 double brick chimneys, electric light fittings.
4. MINE MANAGER'S HOUSE—6 rooms, verandah, kahikatea, g.i. roof, 1 double and 1 single brick chimney, electric light fittings.

Tenders must be received not later than SATURDAY. October 11, 1919...¹³¹⁹

¹³¹⁸ <https://paperspast.natlib.govt.nz/newspapers/OG19190813.2.15>

Ohinemuri Gazette, Volume XXX, Issue 4005, 13 August 1919, Page 2

¹³¹⁹ <https://paperspast.natlib.govt.nz/newspapers/NZH19190923.2.114.4>

New Zealand Herald, Volume LVI, Issue 17272, 23 September 1919, Page 12

3 October

OHINEMURI COUNTY COUNCIL.

MONTHLY MEETING. Gas Supply, Karangahake.

The Ohinemuri Light and Power Co. asked, in connection with the Council's intention to discontinue gas to street lamps at Karangahake, that the Council have lamps shut off or plugged, so that there cannot be any leakage. It was decided to inform the Company that the plugging of all mains had been attended to.¹³²⁰

The poles for the electric lighting for Karangahake have been placed in position and the electrician for the Talisman company is connecting the wire and hopes to have the lighting ready by the 4th prox. I made application to the engineer of the Talisman Company as to the approximate cost to connect a light from the manager's house to a Lux light pole in Scotchman's Gully. The Company has forwarded a price for same which will come before you this day, and I would recommend the acceptance of same as the light is urgently needed at this place.¹³²¹

16 October

Waihi will be represented on the occasion of the opening of the Karangahake Bowling Green on Saturday next. The official opening of the local green will be held on Saturday week.¹³²²

7 November

County Engineer's report.

"Re metal for Waitoa Roads — I have been unable to get metal since the railway cut owing to the shortage of trucks. Previous to this I was receiving two trucks per day from the Karangahake quarry. The Piako County now gets all the metal from this quarry when trucks are available."¹³²³

This is the Crown Quarry.

20 November

...The next mine in importance on the Ohinemuri field is the Talisman Consolidated, at Karangahake. This property has reached a transition stage, its ore reserves from the levels so far opened up having been exhausted. At the present time boring and sinking are in progress in order to determine whether or no the reef systems extend in a payable form down beneath the low (No. 16) level. One bore put down in the Woodstock section has revealed the presence, at a depth below that level of 250 ft. of a reef. A second bore-hole is in course of sinking in the centre section of the mine, known as the Bonanza...

¹³²⁰ <https://paperspast.natlib.govt.nz/newspapers/OG19191003.2.9>

Ohinemuri Gazette, Volume XXX, Issue 4025, 3 October 1919, Page 2

¹³²¹ <https://paperspast.natlib.govt.nz/newspapers/OG19191003.2.14>

Ohinemuri Gazette, Volume XXX, Issue 4025, 3 October 1919, Page 3

¹³²² <https://paperspast.natlib.govt.nz/newspapers/WHDT19191016.2.7>

Waihi Daily Telegraph, Volume XVII, Issue 5737, 16 October 1919, Page 2

¹³²³ <https://paperspast.natlib.govt.nz/newspapers/OG19191107.2.14>

Ohinemuri Gazette, Volume XXX, Issue 4039, 7 November 1919, Page 3

The Talisman mine has yielded in bullion to date a total of £2,933,097, and the dividends, etc., paid to the shareholders amount to £1,151,164.¹³²⁴

AJHR 1920

For the year 1919

MINES STATEMENT BY THE RIGHT HONOURABLE W. F. MASSEY, MINISTER OF MINES.¹³²⁵

APPENDICES TO THE MINES STATEMENT.

APPENDIX A. REPORTS RELATING TO METALLIFEROUS MINES AND STONE-QUARRIES.

The Inspecting Engineer of Metalliferous Mines

to the Under-Secretary of Mines. Sir, — Wellington, 1st June, 1920. I have the honour to present the annual report on metalliferous mines and stone-quarries, together with annexures and statistical information, for the year ended 31st December, 1919.

Page 18

Talisman Consolidated (Limited).— This company allowed the water to rise at No. 16 level and have confined their attention to the extension south of No. 15 level. Apart from a short length of payable values extending over 50 ft. nothing favourable was encountered, and driving was suspended when broken and soft country was entered in the Dubbo section of the mine. A rise was started where the improvement had taken place in the reef, and this disclosed values going up for 80 ft. Immediately under this rise No. 16 winze was commenced, and this showed that the reef maintained its width and carried high-grade mineralized ore for some considerable distance, but at its present depth (166 ft.) it is narrow and unpayable. The extent and value of this development, some 400 ft. south of the abandoned face of No. 16 level, cannot very well be estimated until driving north and south from the bottom of the winze is in progress. Diamond drilling operations in the neighbourhood of Nos. 6 and 12 winzes at No. 15 level are in progress. As the ore reserves had become exhausted, milling operations were suspended last October, and will not be again commenced unless the development work undertaken by the company justifies resumption.

ANNEXURE A

SUMMARY OF REPORTS BY INSPECTORS OF MINES.

Northern Inspection District. Quartz-mining.

Mr. M. Paul, Inspector of Mines.

Page 30

¹³²⁴ <https://paperspast.natlib.govt.nz/newspapers/NZH19191120.2.144.29>

New Zealand Herald, Volume LVI, Issue 17322, 20 November 1919, Page 4 (Supplement)

¹³²⁵ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1920-I.2.1.4.5>

MINES STATEMENT BY THE RIGHT HONOURABLE W. F. MASSEY, MINISTER OF MINES., Appendix to the Journals of the House of Representatives, 1920 Session I, C-02

Talisman Consolidated (Limited), Karangahake. —The principal work in progress is sinking No. 10 winze on the main lode below No. 15 level, which has now reached a depth of 130 ft. At the bottom of this winze there is a strong body of ore, 4 ft. wide, with sulphide veins showing, but the footwall is not exposed. The values over the distance sunk have varied from £1 to £7 per ton. Immediately above this winze a block of payable ore was driven through for 50 ft., and stoped to a height of 80 ft. —the average crushing-value being over £7 per ton. Boring by means of a Government diamond drill is also in progress. No. 1 borehole in the Woodstock section proved the existence of a strong body of quartz, the values, however, being low. No. 2 borehole in the Bonanza section had only been sunk a short distance when the necessity for casing became apparent. As this was not obtainable a start was made with No. 3 borehole, which has reached over 400 ft., and the core shows a good class of country at this depth. In the meantime milling is suspended and will not be resumed until the exploration work in progress at No. 16 winze, and the completion of the boring operations, show that there is a prospect of sufficient payable ore being developed to warrant it.

New Zealand Crown Mines (Limited), - No. 4 level: The east crosscut, Hauraki section, has been extended 136 ft. A small lode formation, 18 in. wide, was intersected and a few feet north and south was driven upon it, but the values were low. With the exception of keeping the levels in repair, no work has been done in the rest of the mine during the year.

1920

2 March

The Crown quarry at Karangahake notified that it was impossible to supply metal at present, as it was unable to get the railway trucks.¹³²⁶

Earlier mentions of this problem confirm that the Karangahake Quarry is the Crown Quarry.

26 May

Piako County Council. Ordinary Monthly Meeting

Metal Trucks—

Messrs Ratliff and Co., Crown Quarry, Karangahake, wrote that the Railway Department has cut the supply of trucks to three per day for some time now, and unless the company can get more trucks they will have to close down as it is not paying. They asked could the Council do anything to ensure a bigger supply of trucks...¹³²⁷

BY THE WAY.

THE DAYS OF LONG AGO. MINERS ON THE LAND.

DETERIORATING FAITH IN THE SEARCH FOR GOLD

(Our Traveller.)

Ever since the closing down of the Crown Mines some four years ago there has been a gradual decline in activity and assurance. One by one, more especially those who were employed by the Crown Mines Company, have sought fresh fields of labour, because the Talisman Gold Mining Company could not find work for all. Those who worked in the Crown Mines say, even now, the mine should never have been closed down, and to show their faith in the value of the ground would be glad to get sections of it on tribute. However, everything connected with the mine and battery is intact, and it is believed operations as heretofore will eventually be renewed.

THE TALISMAN.

This company, which has for years been working steadily with good results is, unfortunately for the district, partially disorganised pending developing works being prosecuted which have occupied some time. The battery, therefore, is not a going concern at present. Karangahake was always a discontented town from a labour viewpoint. The Socialistic element ruled strongly, and unrest and friction with the Company predominated in a very marked degree. During the big strike the company had a great deal to put up with, and on more than one occasion threatened to temporarily abandon the works till the men had regained their natural faculties. Even now it is believed that the Talisman would have continued on but for the continual discontent of the miners. The mine is still kept open and the battery is also in working order, and it has been

¹³²⁶ <https://paperspast.natlib.govt.nz/newspapers/WT19200302.2.64>

Waikato Times, Volume 92, Issue 14302, 2 March 1920, Page 6

¹³²⁷ <https://paperspast.natlib.govt.nz/newspapers/TAN19200526.2.6>

Te Aroha News, Volume XXXVII, Issue 5929, 26 May 1920, Page 2

mooted from reliable authority that it will resume work in the near future when good stone will be unearthed.

THE TOWNSHIP.

Karangahake, which once had a large population, full of life and vigour, always ready and willing to help one another as miners do, now presents a woeful appearance. The large building in the main thoroughfare, which was at one time a busy licensed hotel, has been dismantled and taken to Te Puke to be re-erected as a boardinghouse. The little shops which in the good old days did good service are for the most part gone to decay, while quite a large number of small and large dwellings have been sold and removed to other places. The whole place now seems sad and lonely all round, and many would decamp at once only for the fact that they have their own little homes and garden. The heads of some of these households are working away in different places, while others have a little cleared ground and keep cows. Some have fowl runs, etc., which keep the pot boiling, while the rest of the population is employed in and around the mine. Of course the day is coming when there will be no mining of the present-day order. Goldfields have only a limited life. We have had proof of that all over New Zealand. Even the once-famous Thames has had its day unless something unforeseen happens. Reefton, Hokitika, Dunstan, on the West Coast, are all practically dead sea fruit. Coromandel as a goldfield is also amongst the "good old has-beens," while Waitekauri, which was once a rich gold producer, is also included in the trail of withered goldfields. Maratoto has been pegging away for upwards of 40 years without even creating a name for itself. But quite recent discoveries and achievements present, according to expert knowledge, a very reassuring aspect. It is now thought that in this region of the run of auriferous country there is a deal of hidden wealth, if the proper machinery can be obtained to separate the various refractory ores.

THE WAIHI FIELD.

The Waihi Gold Mining Company can be classed amongst the world's record mines. For years it has been a steady gold producer. The company, too, has had its vicissitudes through strikes and consequent disorganised labour attitude, but withall the mines are still working and yielding sufficient of the precious metal to keep a large community employed.

MINERS AS FARMERS.

There is an old saying, "Once a miner, always a miner," but this old saying does not assert itself very accurately in the case of Waihi miners. Large numbers of them have abandoned the pick, shovel, and hammer and drills to go on the land, where there are no miners' complaint and night "shifts." They have seen the wisdom of settling on the surface of the land instead of toiling like slaves thousands of feet in the depth of the earth. During the last few years a deal of dairying land has been settled upon in the vicinity of Waihi, while many old miners have removed from the place altogether to follow up farming. The majority of the miners are beginning to realise the importance of getting on the land, and would do so in larger numbers if they could see the road clear. They realise also that there is more solidity in butter-fat, which will always remain firm and profitable, when the present mining companies will have ceased to exist, when probably by that time every ounce of gold will

have cost £5 or even more to produce. This will not be so with regard to the product of the cow.¹³²⁸

7 July

KARANGAHAKE NOTES.

The concrete bridge that is being erected over Doherty's creek is almost completed, and will be available for traffic in a few days' time. This is a much needed bridge, and will be greatly appreciated by all and sundry.¹³²⁹

11 August

The contract for the improvement of the Karangahake-Te Aroha road is finished, and will prove a great boon to all who use this short-cut to and from Te Aroha.¹³³⁰

11 September

The Waihi River Gold Extraction Company recently sent 314lb of river tailings to the Thames School of Mines. It was treated on a Wilfley table for a return of 30lb concentrates, valued at £18 3/ per ton, which shows 8 per cent concentrates per ton of sand. Mr. T. Paltridge has been appointed manager, and is erecting a plant at Karangahake.¹³³¹

17 November

PAEROA TO WAIHI.

PEEPING THROUGH THE GLASS AHEAD.

PAST AND PRESENT.

(Contributed.)

"Hop inside!" This remark from a motor-car caught my ear as I was looking in the opposite direction yesterday. I knew the owner-driver of the fine "Dodge" very well; but for all I knew he might have been going to the North Pole. But once aboard the "Dodge," I soon gleaned we were bound for the golden plains of Waihi. Now, who amongst our adult population of Paeroa has not been to Waihi? Few, if any, I trow [believe]. Of late much has been said against the place; the Cousin Jack would say it is "scattered all abroad", since the strike. But this is not true: it is the same old Waihi with a few houses less. I had been there myself long years ago, when Waihi was unapproached by railway.

The only means of transit then, was by horse power. Mr Jack Clarkin was the "top dog" teamster. He had a dozen or so 8-horse teams on the road, and the Ohinemuri Coaching Company had a similar number of four and six horse coaches running to and from the golden centre year in and year out. The

¹³²⁸ <https://paperspast.natlib.govt.nz/newspapers/OG19200526.2.15>

Ohinemuri Gazette, Volume XXXI, Issue 4122, 26 May 1920, Page 2

¹³²⁹ <https://paperspast.natlib.govt.nz/newspapers/THS19200707.2.5>

Thames Star, Volume LIII, Issue 14269, 7 July 1920, Page 1

¹³³⁰ <https://paperspast.natlib.govt.nz/newspapers/THS19200811.2.5>

Thames Star, Volume LVI, Issue 14301, 11 August 1920, Page 1

¹³³¹ <https://paperspast.natlib.govt.nz/newspapers/AS19200911.2.73>

Auckland Star, Volume LI, Issue 218, 11 September 1920, Page 12

service, which was considered the most extensive in the Colony, was, for the most part, jointly run by the late George Crosby and Charley Short, who is also dead. Those were the palmy days of the Ohinemuri Goldfields.

But how things have changed in, comparatively speaking, a few years. We speeded onward with high pressure quite up to the average railway time-table allowance. The first object of note that caught my eager eyes was the cemetery. How sad it looked, surrounded on all sides by high-standing ti-tree. Many good souls are resting there that I knew well in the days that have past and gone. A somewhat down grade from here brought us to Tarariki Creek, the beautiful clear-running water the same as that which flows into the pipes higher up the stream and supplies Paeroa with perhaps the best water to be found in any town in the Dominion.

The car reached the bottom of the rise and dashed across the bridgeless stream with the grace of an aeroplane, but not so fast that I was unable to see that a concrete bridge to the right of the ford had been erected and was only waiting for the construction of the approaches to render it fit for traffic. How strange that the creek should be bridged after the old ford had done service for upwards of 40 years or more. It was in the busy days that the structure was needed, not now, when traffic on the road is almost a thing of the past.

However, onward bound, and with a little "prompted" extra pressure, we were soon at the top of Turner's Hill and into the valley below, where stands the Mackaytown Hotel. This was once the favourite watering-place on the road for man and beast alike, but now, midst its surroundings, everything bears a dreary and lonely spectacle all round. But the bygone home of the teamster stands there like the old mill, as the song says, at the foot of the hill, untenanted and shadowed by a woebegone appearance. Then came Doherty's Creek, over which another bridge similar to that at Tarariki Creek has been finished, but lacks approaches, like its predecessor. Passing through once-busy Karangahake was the limit. I could hardly realise it was the same "Hake" as I knew of old, with its fine hotels and boarding-houses and animated main thoroughfare. If ever there was a deserted goldfield Karangahake is one. The main street is almost unrecognisable. Most of the buildings have been either burnt down, carried away, or fallen to pieces through neglect, while the Talisman battery, over the river, which was once the sole support of the town, lies dark and still, and would remind one of a haunted mill in Wales or Cornwall. Some say it will start again when the days of labour are more settled. Let us hope it will, and once more lick Karangahake into shape.

The Gorge! How beautiful it looked to-day under the fading spring sun, throwing its rays on the rugged mountain sides, covered with native bush and bramble. It was a picture no artist could paint and the river beneath rolled onward, to find its level in the Hauraki Gulf.

Owharoa! How it has changed, to be sure. Even the Rising Sun battery appeared to have ceased to sound its stampers...¹³³²

6 December

SEASONED KAURI.

¹³³² <https://paperspast.natlib.govt.nz/newspapers/OG19201117.2.16>

Ohinemuri Gazette, Volume XXXII, Issue 4193, 17 November 1920, Page 2

N.Z. CROWN MINES COMPANY Invites tenders for the purchase as one lot of 18,000 ft (more or less) Seasoned Kauri battery framing, as it lies in the Company's yard at Karangahake...

Terms: Cash before removal. N.Z. CROWN MINES CO., LTD. 60. Shortland St., Auckland.¹³³³

16 December

CLOSING DOWN.

THE TALISMAN MINE.

Development work not satisfactory. (By Telegraph.—Own Correspondent.) Karangahake, this day.

In view of the unsatisfactory nature of development work carried on up to the present the directors of the Talisman Consolidated, Limited, have decided, with a view to curtailing expenses under these circumstances, that the mine shall be closed down as soon as the material in the underground workings can be withdrawn. This will probably take a few weeks to complete.

Mr. A. W. Blanchard, chairman of directors, was at Karangahake to-day with the mine superintendent, Mr. H. Stansfield. The fact that operations are to cease at Karangahake may not mean that the company ceases work altogether on the Hauraki Peninsula. It is understood that the mine has been run for some time past at a cost of £500 per month, for no returns, and it is evident that results from prospecting have not been satisfactory, or operations would not be stopped. The Talisman Company was floated many years ago, and after giving satisfactory returns for a good while the payable run of ore ran out. The shares dropped as low as 1/6, and the company was reconstructed. The run of payable ore was again met with not far from the point where operations had been stopped. That the mine has been a good bullion producer is shown by the fact that the total returns were £2,915,861, out of which £1,151,164 was paid in dividends.¹³³⁴

17 December

CLOSING OF A MINE.

TALISMAN CONSOLIDATED. DECISION BY DIRECTORS. RECENT DEVELOPMENT WORK

...The decision to close the Talisman mine will not come as a surprise to those who have watched recent developments. The company practically ceased crushing operations at the end of August, 1919, a final clean-up at the battery being made last December. The last dividend was paid to shareholders in March, 1919, bringing the total amount paid in dividends by the company to £1,151,164. The total yield from the mine has been £2,951,160.

Early last year an impoverished zone was reached in the mine, and the ore reserves became exhausted. It was therefore decided to test the undeveloped section of the property with a view to determining whether that section was

¹³³³ <https://paperspast.natlib.govt.nz/newspapers/NZH19201206.2.108.2>

New Zealand Herald, Volume LVII, Issue 17646, 6 December 1920, Page 12

¹³³⁴ <https://paperspast.natlib.govt.nz/newspapers/AS19201216.2.63>

Auckland Star, Volume LI, Issue 300, 16 December 1920, Page 5

worth opening up. A winze was sunk below No. 15 level, and for a time satisfactory assays were obtained, but recently the assay values have been very low. Simultaneously with the winze operations three bore holes were sunk in various sections of the property for the purpose of testing the ore values. Apparently the values revealed by the boring operations have not been sufficiently good to warrant the company undertaking further expensive development work. The mine has been worked for some time at a cost of approximately £2500 a month, without any return, and the directors have evidently been forced to the conclusion that the prospects do not justify further expenditure.

The fact that operations are to cease at Karangahake does not necessarily mean that the company will cease work on the goldfields. Other properties are available for development, and the question of whether the company will undertake operations in a new locality or go into liquidation, has yet to be decided.¹³³⁵

20 December

The building for the local river tailing plant has been erected, but so far no machinery has been installed in it. Now is the time for the company to get busy to retrieve the tailings in the river during the summer months, whilst the river is low, and before the winter comes, when it is generally in flood.¹³³⁶

22 December

THE CLOSING DOWN OF THE TALISMAN MINE.

It is regrettable that the directors of the Talisman Mine at Karangahake have thought fit to close down in the course of a few weeks. This step has been deemed advisable on account of the development works, which have been carried on throughout the whole mine for a considerable time, not proving satisfactory. This we take to mean that the stone intersected is of too low a grade to pay for treatment.

The Talisman has had a long run of uninterrupted success, except for the interjection of occasional strikes amongst the miners. Probably, had these not occurred, and wages, content, and harmony remained as of old, the mine would be still working at top-hole pressure. The present step has been taken with a view to curtailing expenses, so it may now be taken for granted that the mine will shortly become dead sea fruit, and the little money now circulated in Karangahake through the medium of the Talisman will cease to flow. The little mining centre, which a few years ago was flourishing, must now have no use for the miner who depends upon the industry for his livelihood. Those who are settled there, and have their own homes and sections, and probably able to live without mining, will nevertheless find that the loss of revenue from the mine will be a severe blow, because no place can carry on without people and capital, so that under such circumstances Karangahake, on the closing down of this once famous Talisman, must follow in the steps of other worked-out

¹³³⁵ <https://paperspast.natlib.govt.nz/newspapers/NZH19201217.2.32>

New Zealand Herald, Volume LVII, Issue 17656, 17 December 1920, Page 6

¹³³⁶ <https://paperspast.natlib.govt.nz/newspapers/THS19201220.2.2>

Thames Star, Volume LVII, Issue 14435, 20 December 1920, Page 1

fields, common both in the North and South Islands of the Dominion. It is remarkable how some people have clung to the place so long in its poverty, but such is the life and custom of human nature.¹³³⁷

AJHR 1921

For the year 1920

MINES STATEMENT BY THE HON. G. J. ANDERSON, MINISTER OF MINES.¹³³⁸

Page 23

Schools of Mines. The six schools of mines on the goldfields of Coromandel, Thames, Karangahake, Waihi, and Reefton, if judged by the paucity of students who presented themselves for examination at the last annual Government examination in connection with such schools, have practically ceased to be mining schools, for no student from these schools presented himself for examination on the subjects of mining, mine-drainage, or haulage and winding, and only one student on the subjects of mine-ventilation and mineralogy; in metallurgy there were two students, and in geology three. As secondary or technical schools for children of both sexes who desire to acquire a knowledge of mathematics, electricity, and chemistry they are, in the North Island, fairly well attended...

ANNEXURE A. SUMMARY OF REPORTS BY INSPECTORS OF MINES.

Northern Inspection District (Mr. M. Paul, Inspector of Mines). Quartz-mining.

Mr. M. Paul, Inspector of Mines

Talisman Mine, Karangahake. —At the end of December, after driving 120 ft. south on main lode from the bottom of No. 16 winze with no improvement in values, it was decided to suspend mining operations. Therefore it was decided to remove the air-pipes, rails, sinking-pumps, &c. Unfortunately, one of the main rods in the Woodstock shaft broke. This was replaced, but it again carried away, and it was considered that the cost of putting in another rod and pumping out the accumulated water would exceed the selling-price of the pumps, &c. It was therefore decided to salvage all above water-level, this work being still in progress. Besides sinking a winze on this lode, three vertical and one horizontal diamond-drill holes were put down. No. 1 bore, Woodstock section (vertical), attained a depth of 424 ft., and proved the width of a vein 11ft. The cores showed zinc, iron, sulphides, and a little black flint. Assays range from nil to 14s. per ton.

No. 2 bore, No. 15 level, Bonanza section, was started 125 ft. west of No. 6 winze, and reached the vein at 332 ft., and passed through into the footwall country at 350 ft. The core carried zinc sulphides and pyrites, but no values. Estimated width, 8 ft. Owing to soft ground this hole gave a good deal of trouble. The first 201 ft. had to be cased, and several short sections cemented.

¹³³⁷ <https://paperspast.natlib.govt.nz/newspapers/OG19201222.2.11>

Ohinemuri Gazette, Volume XXXI, Issue 4208, 22 December 1920, Page 2

¹³³⁸ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1921-I-II.2.1.4.3>

MINES STATEMENT BY THE HON. G. J. ANDERSON, MINISTER OF MINES., Appendix to the Journals of the House of Representatives, 1921 Session I-II, C-02

No. 3 bore, Bonanza section, was put in horizontally from the site of No. 2 bore, and stopped at 150 ft., disclosing nothing of value.

No. 4 bore, No. 15 level, was started 170 ft. west of No. 12 winze, and put down 501 ft. From 431 ft. to 439 ft. the core was quartz carrying zinc sulphides but no values. From 468 ft. to 490 ft. the core was quartz carrying a fair percentage of pyrites and zinc sulphides, but practically no values. At a recent meeting of the shareholders this company decided to go into voluntary liquidation.

New Zealand Crown Mines (Limited), Karangahake. —During the year five men have been employed dismantling the machinery and keeping the water-races in repair.

1921

29 January

The New Zealand Crown Mines Co., Ltd., invite tenders for the working of their road metal quarry at Karangahake on tribute for a term of two years from the fourteenth day of February, 1921. All plant and machinery other than tools will be provided by the Company, the tributers to provide all labour and stores and pay all expenses...

Tenders, to be addressed to G. N. McGruer, Manager, Crown Co., Karangahake...¹³³⁹

What plant and machinery? What motive power?

1 February

The Thames Star hears on good authority that the local bowling club is going into liquidation next March, when its valuable assets, comprising three acres of nice ground, a large quantity of galvanised iron, sheds, etc., will be disposed of, and the erstwhile famous Karangahake Bowling Club will be relegated to the category of "has beens."

Ichabod.¹³⁴⁰

14 February

Saturday was quite a gala day on the Karangahake Bowling Club's green, the occasion being that of the "welcome home" function to Mr E. Jury (skip) and the members of the team which won the Fours Championship at the recent Dominion Tournament, an honour which carries with it the N.Z. Bowling Association's banner. The various goldfields district clubs were represented, and from as far away as Auckland bowlers were at Karangahake to join in the hearty congratulations extended to Jury and his fellow players, who had carried off the coveted trophy in competition with the leading bowlers throughout New Zealand. The numerous guests were most hospitably entertained and during the afternoon a series of friendly games were played. It is interesting to note that this is the second occasion upon which a team skipped by Jury has won the Dominion fours, in addition to having reached the semi-final at another championship gathering. At the recent tournament Jury also fought his way through to the semi final of the Pairs Championship. Such fine performances speak volumes for the skill of the members of this comparatively young club.¹³⁴¹

15 February

BOWLING.

CHAMPION BOWLERS RETURN. RECEPTION AT KARANGAHAKE.

¹³³⁹ <https://paperspast.natlib.govt.nz/newspapers/WHDT19210129.2.45.1>

Waihi Daily Telegraph, Volume XVIII, Issue 6130, 29 January 1921, Page 3

¹³⁴⁰ <https://paperspast.natlib.govt.nz/newspapers/FRTIM19210201.2.24>

Franklin Times, Volume 9, Issue 604, 1 February 1921, Page 5

¹³⁴¹ <https://paperspast.natlib.govt.nz/newspapers/WHDT19210214.2.7>

Waihi Daily Telegraph, Volume XVIII, Issue 6144, 14 February 1921, Page 2

A large gathering of bowlers from all parts of the goldfields, Waikato, and Auckland assembled at the Karangahake Bowling Club green on Saturday afternoon to welcome back to their home club, and offer congratulations to the Dominion champion four, Messrs. Hilton, Bell, Gallagher, and Jury (skip). The clubs who sent representatives were Waihi, Waikino, Paeroa, Te Aroha, Thames, Carlton, and Ponsonby.

The visitors were received on the green by the president, Mr. W. McLean, and members of the Karangahake Club. The occasion was a unique and memorable one, for while the visitors came from all parts to congratulate the Karangahake bowlers on winning both the Auckland and Dominion tournaments, they also came to play with their Karangahake friends on their own green for the last time.

Owing to mining operations ceasing at Karangahake many of the members are shortly leaving the district, and the club will be disbanded. It has been in existence, for about 20 years, and the members are all true sports and very hospitable, and their green has for many years been considered one of the best in the Auckland province. The club has a wonderful record, having won a great number of tournaments, including the much-coveted Dominion tournament, which they secured twice. It is the only club in the Dominion to achieve this great honour, and many expressions of regret were voiced by the visitors on Saturday that such a fine club should have to break up and its members depart for other spheres...¹³⁴²

16 February

The recent decision of the Board of Directors to cease operations in the Talisman Mine at Karangahake sounded what practically amounts to the death knell of a one-time thriving mining township, which some few years ago was turning out bullion worth between £20,000 and £30,000 per month. The raising of machinery and plant from underground is now proceeding, and this work will take some few months, after which but few workers and tradespeople will be left in the township, but doubtless a certain amount of dairying and farming will still be carried on in the district.

With the final closing down of the mining, apart from any tributing which may be continued by the venturesome few, will go the Karangahake Bowling Club, which, during its comparatively brief life, has produced many fine players. Already much of the property of the club has been disposed of, and shortly nothing will remain but the green turf, on which the bowlers and those interested in the kindred sports of lawn tennis and croquet have spent several pleasant seasons in friendly rivalry and contested many hard fought games.

—¹³⁴³Telegraph.

¹³⁴² <https://paperspast.natlib.govt.nz/newspapers/THS19210215.2.16>

Thames Star, Volume LVII, Issue 14478, 15 February 1921, Page 2

¹³⁴³ <https://paperspast.natlib.govt.nz/newspapers/OG19210216.2.15>

Ohinemuri Gazette, Volume XXXII, Issue 4229, 16 February 1921, Page 2

8 April

The town clerk of Pukekohe (Mr J. F. Deane), in a letter received by the Ohinemuri County Council yesterday, asked if the Karangahake band rotunda was for sale, and if so, what price the council wanted for it.

A similar request in regard to Karangahake fire-fighting appliances was received from the Mananui Volunteer Fire Brigade. Cr. P. Grace said he did not see the usefulness of the rotunda, and if the council could get a reasonable offer for, it a sale could be effected. The matter was left in the hands of the engineer to deal with. In regard to the fire-fighting equipment, Cr. Grace said the material was provided by public subscription, and he did not know if the council could dispose of it. —Decided to refer the matter to the riding member (Cr. A. D. McGuire) who was absent.¹³⁴⁴

27 July

The Paeroa Beautifying Society has secured an option over the Karangahake band rotunda. If secured, the rotunda will be erected in the vicinity of the junction of Belmont and Normanby Roads and Wharf Street.¹³⁴⁵

DISMANTLING IN PROGRESS.

The process of dismantling of the Talisman Consolidated mine at Karangahake is still going on, though it will not be completed for some considerable time yet.

The Talisman has had an interesting history. It was discovered by Mr John McCombie, who had an American, Mr Lee, as a partner, the latter being the discoverer of the Waihi mine.

In 1899 the mine, which had been under various owners, including the Talisman Syndicate and the N.Z. Talisman, was taken over by an English company, and called The Talisman Consolidated, Ltd., from the circumstance that it consolidated the new and the old interests.

The present superintendent, Mr H. Stansfield, has been in charge since 1903, and in conversation a representative of the "Gazette" gleaned some interesting facts from him.

The best period of the mine was from 1906 to 1914, when the mine was turning out values to the tune of £20,000 per month, and employed from 250 to 350 hands.

The total output was valued at over two millions sterling, and over a million has been paid out in dividends. The Talisman has been a small, but high-grade, mine, superior, in fact, to anything else in Australasia for the values per ton of ore, averaging £7.

But it seems that the days of the Talisman are definitely done, all the probabilities having been exhausted. The Company has searched two levels below the payable ore strata, and drilled 400 feet below that. The reef continues even beyond this depth, but contains no values in the quartz. The locality is very awkward to work, as it is necessary to drive down to the

¹³⁴⁴ <https://paperspast.natlib.govt.nz/newspapers/OG19210408.2.15>

Ohinemuri Gazette, Volume XXXII, Issue 4249, 8 April 1921, Page 2

¹³⁴⁵ <https://paperspast.natlib.govt.nz/newspapers/OG19210727.2.10>

Ohinemuri Gazette, Volume XXXII, Issue 4296, 27 July 1921, Page 2

desired level and then tunnel for 2000 feet into the hill; also, there is much water to contend with.

The plant, which cost enormous sums, is not easily realisable, as it is too large for ordinary requirements, being about ten times too powerful for other industries. For example, the giant air-compressors, which cost £3500, are now only of use for scrap iron.

A GOLD "RUSH."

When the Talisman field was thrown open the late Mr James Mackay, the famous Warden of the Hauraki Goldfields (whose booklet the "Gazette" has been reprinting recently) had a gun fired at Karangahake, which was the signal that claims could be pegged out. There was a wild rush across the Ohinemuri River and up the mountain sides by miners to peg out claims. Yes, they were stirring days. Maybe they will come again!¹³⁴⁶

5 August

OHINEMURI COUNTY.

THE MONTH'S WORK. — County Engineer E. Shaw reported as follows to the Ohinemuri County Council yesterday:

...The band rotunda at Karangahake which was left in the hands of Cr. McGuire and myself to dispose of was sold to the Paeroa Beautifying Society for the sum of £50.

The foot-bridge over the Ohinemuri River at Karangahake known as Docherty's Creek bridge has become unsafe for traffic through one of its anchors giving way, and as it is not urgently required I would not recommend any expenditure in repairing same.¹³⁴⁷

RIVER COMMISSION

Preliminary Sitting at Paeroa

RESUMES TODAY AFTER INSPECTION

The Waihou and Ohinemuri Rivers Commission, 1921, commenced its sittings at Paeroa yesterday, in the County Chambers, at 10 a.m...

The Commission will inquire into and report upon the allocation of the cost of providing the funds required under the Waihou and Ohinemuri Rivers Improvement Act, 1910, and kindred matters...¹³⁴⁸

12 August

RIVERS COMMISSION.

...Between 10,000 and 20,000 tons of rock had been put into the river at Karangahake as the result of railway and road operations...¹³⁴⁹

¹³⁴⁶ <https://paperspast.natlib.govt.nz/newspapers/OG19210727.2.6.1>

Ohinemuri Gazette, Volume XXXII, Issue 4296, 27 July 1921, Page 2

¹³⁴⁷ <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19210805.2.17>

Hauraki Plains Gazette, Volume XXXII, Issue 4300, 5 August 1921, Page 2

¹³⁴⁸ <https://paperspast.natlib.govt.nz/newspapers/TAN19210805.2.2>

Te Aroha News, Volume XXXVIII, Issue 6110, 5 August 1921, Page 1

¹³⁴⁹ <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19210812.2.2>

Hauraki Plains Gazette, Volume XXXII, Issue 4303, 12 August 1921, Page 1

24 August

On Monday the Farmers' Auctioneering Company conducted a sale of the Talisman Gold Mining Company's house properties and household and office furniture. Buyers were present from Thames, Te Aroha, Paeroa and Waihi. The secretary's house was knocked down to a Paeroa purchaser at £350. The battery manager's house of seven rooms was bought for £175, for removal to Matamata. The engineer's residence of five rooms brought £130. A house of six rooms, above the Karangahake railway station realised £180. The engineer's office of two rooms was bought for £29 for removal. A stable, together with a three-roomed cottage (very much out of repair) brought a nominal figure. The total proceeds amounted to somewhere in the vicinity of £1000.¹³⁵⁰

The auction sale of the houses and furniture of the Talisman Consolidated Limited (in liquidation) on Monday last at Karangahake was well attended, and good prices were reached for almost every line offered. The accountant's house of eight rooms at Mackaytown was bought by Miss Bluck, of Paeroa, for £340. A six-roomed house at Karangahake was sold to Mrs Fitzgerald, of Karangahake for £170. The battery manager's house of eight rooms reached £200, and was bought by Mr Claud McMillan, Ngatea. The engineer's house of five rooms was knocked down to Mr Walters, of the Plains, for £135. The engineer's office was purchased by Mr S. Heslop for £29, and the stable and feed-room by Mr Hayward, of the Plains, for £13. The sale was successfully conducted by the popular knight of the hammer, Mr Bert Dunlop, of the Farmers' Auctioneering Company, Hamilton.¹³⁵¹

5 September

ACCLIMATISATION.

The fishing season in the Ohinemuri and other districts under the control of the Auckland Acclimatisation Society opens on October 1. Paeroa anglers will be looking forward with pleasure to the sport afforded in the local streams. The Waitawheta, being the largest stream, will no doubt prove most attractive. This river abounds in beauty spots, and although large bags are the exception, the scenery appeals to the eye of the visitor and the river is easily the most attractive fly-fishing stream in the Auckland district. Access can be had through Karangahake by means of the tramline running to the Talisman and Crown mines, thence along the Crown water-race, through the upper gorge into Dickey's Flat. Good fishing water extends the whole way and, if desired, the river can be negotiated higher up by tracks along the side of the river to the junction of the Maungakino stream. Dickey's Flat is also connected by road to Owaharoa....¹³⁵²

¹³⁵⁰ <https://paperspast.natlib.govt.nz/newspapers/THS19210824.2.20>

Thames Star, Volume LVII, Issue 14743, 24 August 1921, Page 4

¹³⁵¹ <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19210824.2.7>

Hauraki Plains Gazette, Volume XXXII, Issue 4308, 24 August 1921, Page 2

¹³⁵² <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19210905.2.10>

Hauraki Plains Gazette, Volume XXXII, Issue 4313, 5 September 1921, Page 2

AJHR 1922

For the year 1921

MINES STATEMENT BY THE HON. G. J. ANDERSON, MINISTER OF MINES.¹³⁵³

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¹³⁵³ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1922-I.2.1.4.3>

MINES STATEMENT BY THE HON. G. J. ANDERSON, MINISTER OF MINES., Appendix to the Journals of the House of Representatives, 1922 Session I, C-02

1922

18 February

... Mr. H. Stansfield, formerly general manager of the Talisman Consolidated, at Karangahake who is now acting as consulting engineer to the Grand Junction Company...¹³⁵⁴

18 May

One of the best-known New Zealand mines, the Talisman, of Karangahake, will soon be a thing of the past, as the company is now being finally wound up. The whole of the assets have been sold to R. M. Aitken [manager of the Waihi Gold Extraction Co.] and Son, of Auckland, who intend to dismantle the plant and machinery.¹³⁵⁵

24 June

It is officially announced that Mr H. Stansfield, late general manager of the Talisman Consolidated mine at Karangahake, who is now acting as consulting engineer to the Waihi Grand Junction Gold Company, has accepted a similar position with Muir's Te Puke Reefs, Ltd. As the company contemplates a comprehensive scheme of exploration work the benefit of Mr Stansfield's wide experience and his advice generally at this juncture will be warmly welcomed by the management. - Waihi Telegraph.¹³⁵⁶

25 August

MINING CASE. CLAIM FOR FORFEITURE

...George Norman McGruer, mine manager, N.Z, Crown Mines, said he had been living in that locality since 1882. He had been in the mine continuously for the last 40 years, the last 26 years of which was with the present company. He knew the mines well...

The company's plant was being kept in order, ready to start work when he got authority. The new battery had not been dismantled, and was ready to work. There had been a number of tributors working on the property for the past few years. During the protection no tributing had taken place but work had been done on the ground. A 20-stamp plant was sufficient for the company's requirements at present.

In reply to Mr Hanna, witness said that the workings were efficient at the time put in, but were not efficient now, as they were flooded.¹³⁵⁷

¹³⁵⁴ <https://paperspast.natlib.govt.nz/newspapers/NZH19220218.2.39>

New Zealand Herald, Volume LIX, Issue 18019, 18 February 1922, Page 8

¹³⁵⁵ <https://paperspast.natlib.govt.nz/newspapers/WAIP19220518.2.11>

Waipa Post, Volume XX, Issue 1244, 18 May 1922, Page 3

¹³⁵⁶ <https://paperspast.natlib.govt.nz/newspapers/BOPT19220624.2.4>

Bay of Plenty Times, Volume L, Issue 8018, 24 June 1922, Page

¹³⁵⁷ <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19220825.2.11>

Hauraki Plains Gazette, Volume XXXIII, Issue 4458, 25 August 1922, Page 2

26 August

MINING NEWS.

CROWN MINES CLAIMS. CONTESTED APPLICATIONS.

A case of unusual interest to the mining community was heard at the Paeroa Warden's Court, before Mr. H. J. Salmon, warden, yesterday, when the New Zealand Crown Mines. Ltd. (Mr. E. W. Porritt), applied for protection over their claims at Karangahake. They further applied to surrender 117 acres, being a portion of their claims, and also applied for reduction of men on the remaining portion. John McCombie, late manager of the Crown Mines, Ltd., and late underground manager of the Talisman Consolidated (Mr. J. L. Hanna), lodged an objection to the granting of protection, and also lodged a plaint for the forfeiture of the claims on the grounds that no work was done on the property between June 6 1922, to June 27, 1922, and on until July 11, 1922....¹³⁵⁸

15 September

MINING. ACTIVITY AT KARANGAHAKE.

During the last four or five months there has been renewed mining activity at Karangahake, and an attempt is being made by Auckland mining men to obtain ground for future prospecting. The opinion seems to be that the Crown Company is holding a large tract of country which is not being worked. Besides this, there is a big area of mining land which probably only requires prospecting to develop payable ore. On the property of the old Talisman Company, now under the ownership of Messrs R. M. Aitken and Sons, there are at present two parties of tributers, Rackham and party, and Ratcliffe and party. Both these parties are reported to be working on payable ore. We understand, that Messrs Aitken and Sons intend utilising the old Talisman battery plant to treat this ore...¹³⁵⁹

27 November

TENDERS. KARANGAHAKE SCHOOL OF MINES

TENDERS are invited for the Cash purchase of the buildings and contents of the above School of Mines situated at Karangahake, either separately or as a whole.

Approximate Dimensions of Main Building. 42 feet by 33 feet, divided into 5 main rooms, 30 feet by 16 feet 6 ins, 15 feet by 16 feet 6 ins, 14 feet by 16 feet 6 ins, 26 feet by 12 feet 3 ins, and 9 feet by 7 feet, respectively.

Attached to Main Buildings are two rooms, 24 feet 6 ins by 12 feet, and 10 feet by 12 feet 6 ins, respectively.

Main Building, Kauri, lined and ceiled, additions Rimu, all roofed with iron.

Contents: 1 table, 8 feet by 2 feet 8 ins, 8 students' tables, 3 feet 6 ins by 2 feet, one gas radiator. 1 heating stove, 48 feet of 1½in Kauri varying widths, 2 pieces Kauri 8 feet by 1 foot 6 ins by 1½ins, also gas lighting fittings.

¹³⁵⁸ <https://paperspast.natlib.govt.nz/newspapers/NZH19220826.2.15>

New Zealand Herald, Volume LIX, Issue 18179, 26 August 1922, Page 7

¹³⁵⁹ <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19220915.2.10>

Hauraki Plains Gazette, Volume XXXIII, Issue 4467, 15 September 1922, Page 2

Plan of the Buildings may be inspected at the Office of this paper.

Highest or any tender not necessarily accepted.

Tenders close on December 16th, 1922, and are to be addressed to — E. JOHNSON, Secretary Karangahake School of Mines, Waikino.¹³⁶⁰

7 December

WILL KAKANGAHAKE COME AGAIN

... we pass through the once busy township of Karangahake, now almost entirely deserted, a melancholy relic of past prosperity, set in weird loneliness between the awesome hills by the discoloured water of the silted Ohinemuri. The river is shallowed and dirty from the discharge from the batteries upstream, but it appears to be a pollution for which there is no present remedy, as it is legally a "sludge channel." Karangahake is both dead and dirty. But even yet there are those of "an abounding faith" who declare that it will "come again." There is a wonderful optimism about mining people.¹³⁶¹

AJHR 1923

For the year 1922

MINES STATEMENT BY THE HON. G. J. ANDERSON, MINISTER OF MINES.¹³⁶²

ANNEXURE A. SUMMARY OF REPORTS BY INSPECTORS OF MINES. Northern Inspection District (Mr. M. Paul, Inspector of Mines). Quartz Mining.

Mr. M. Paul, Inspector of Mines

Page 18

New Zealand Crown Mines, Karangahake (G. N. McGruer, Manager).— Mining operations for the past seven months were confined to surface prospecting and the upkeep of the mine and plant. Early in July a start was made to extend the Rose low-level crosscut, which will intersect most of the known reefs in the Karangahake Hill.

¹³⁶⁰ <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19221127.2.19.4>

Hauraki Plains Gazette, Volume XXXIII, Issue 4496, 27 November 1922, Page 3

¹³⁶¹ <https://paperspast.natlib.govt.nz/newspapers/AS19221207.2.125>

Auckland Star, Volume LIII, Issue 290, 7 December 1922, Page 9

¹³⁶² <https://paperspast.natlib.govt.nz/parliamentary/AJHR1923-I-II.2.1.4.3>

MINES STATEMENT BY THE HON. G. J. ANDERSON, MINISTER OF MINES., Appendix to the Journals of the House of Representatives, 1923 Session I-II, C-02

1923

5 January

Mr Aitken states that a syndicate is taking the property over from him, with the object of raising sufficient capital to develop the parallel reef system of the Crown and Talisman Mines. Our informant places considerable store on the parallel reef system at Karangahake.¹³⁶³

6 January

GOLDMINING REVIVAL.

NEW TALISMAN COMPANY. OHINEMURI OPERATIONS. (By Telegraph.—Own Correspondent.) WAIHI, this day.

An important revival of mining is indicated at Karangahake, where a syndicate is taking over the Talisman property (wound up by voluntary liquidation), with the object of raising capital to develop the parallel system of the Crown and Talisman mines. Since the Talisman Company ceased operations tributing on a big reef formation from an adit level has been carried on. Much is expected from development of the parallel reef system at Karangahake.¹³⁶⁴

3 February

MINING. ACTIVITY AT KARANGAHAKE. PROSPECTING OPERATIONS. PARALLEL REEF SYSTEM. (BY telegraph.—correspondent.) PAEROA, Friday.

Mining operations in Karangahake had practically ceased up to six months ago, following upon the closing down of the Talisman Consolidated mine, with the exception of some prospecting work in the Crown Mines property. During the last six months, however, numerous applications have been made through the Warden's Court for fresh mining leases in that district, where there are now several prospecting parties at work.

The most important development work proceeding at Karangahake at present is that being done by a recently-formed syndicate which has secured an option over 230 acres of ground to the west of the Talisman and Crown lode systems. For some time past this syndicate has had a number of men engaged in opening up old workings and systematically sampling and assaying various reefs and new outcrops existing on these properties. Up to the present five distinct lodes, running parallel to the Crown and Talisman reefs, have been prospected. Owing to the broken surface and the precipitous nature of the country, it is impossible to test these reefs in the goldbearing zone without extensive driving. Consequently operations are confined to a zone of country similar to that which in the Talisman and Crown did not give remunerative values. The principal lode on which the syndicate is now working is called the Mammoth. The formation is about 90ft. wide, with stone carrying values on

¹³⁶³ <https://paperspast.natlib.govt.nz/newspapers/WHDT19230105.2.6>

Waihi Daily Telegraph, Volume XXI, Issue 6805, 5 January 1923, Page 2

¹³⁶⁴ <https://paperspast.natlib.govt.nz/newspapers/AS19230106.2.37>

Auckland Star, Volume LVI, Issue 5, 6 January 1923, Page 6

the footwall and hangingwall. At about the centre of the formation an entirely new reef has been developed. This is a strong body of ore, about 8ft. wide, and highly mineralised. Though in the poor zone, it carries payable values. With about 500 or 600 ft. of driving this lode should enter the gold-bearing zone. The lode is within a few chains of the Talisman battery. The drive on it will be at the water level, and there will be from 400 ft. to 1200 ft. of backs as it proceeds. It is understood that the syndicate has secured an option over the battery named.

The New Zealand Crown Mines have a few men engaged in crosscutting for the extension of the Crown and Welcome reefs in favourable country. Messrs. D. Sheehan and party are developing a lode on the Imperial lease secured from the Talisman Company, and have struck payable ore. It is their intention to erect a small plant for its treatment. Messrs. Ratcliffe and party have secured the Woodstock lease from the Talisman Company, and are also opening up blocks of payable ore. A trial crushing at the Crown battery recently gave a satisfactory return. Messrs. Rackham and party, tributers, are working a block of stone in the Talisman lease, and have extracted about 45 tons of ore which assays satisfactorily. They have a large tonnage of quartz to mine, and will resume work when the Talisman mill is ready to crush for tributers.¹³⁶⁵

12 March

QUARRY TRIBUTE.

THE New Zealand Crown Mines Co., Ltd., invite tenders for the working of their road metal quarry at Karangahake on tribute for a term of one year from the 20th day of March, 1923. The Tributers to provide all labour and stores, and pay all expenses of the working, including maintenance of plant and machinery...

Tenders, to be addressed to G. N. McGruer, Manager, Crown Coy., Karangahake, will close at 5 p.m. on Saturday, 17th March.¹³⁶⁶

6 April

OHINEMURI COUNTY. MEETING OF COUNCIL.

WATER RACE. Mr E. W. Porritt enclosed an application from T. M. Shore for a water race at Doherty's Creek. He pointed out that it was necessary for the water pipe to cross the main road, and asked the Council to consent to this being done. —Granted, subject to the engineer's approval.

REMISSION OF RATES. Messrs Ratliff and Son, of the Crown Quarry, Karangahake, drew the Council's attention to the fact that they had assisted it by repairing a portion of the road, and had supplied metal and screenings free of charge for the footpaths in the township, and asked if the Council would be prepared to allow them a rebate on the rates owing by them in return for the work done and metal supplied.

¹³⁶⁵ <https://paperspast.natlib.govt.nz/newspapers/NZH19230203.2.14>

New Zealand Herald, Volume LX, Issue 18315, 3 February 1923, Page 7

¹³⁶⁶ <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19230312.2.19.1>

Hauraki Plains Gazette, Volume XXXIV, Issue 4538, 12 March 1923, Page 3

Cr. McGuire moved that the Council could not see its way clear to allow a remission of rates, as requested.—Carried.¹³⁶⁷

18 May

MINING NEWS.

NEW VENTURE LAUNCHED. A KARANGAHAKE PROJECT.

A new mining venture is shortly to be launched for the exploration of ground on the Karangahake mining field, near to the well-known Talisman property. For this purpose a local company is being formed under the name of the New Talisman. The capital is £50,000. The property to be worked adjoins the Talisman property, and the object of the new company is to prospect well-defined lodes and prove their value. An option has been secured over the Talisman crushing and treatment plant. This option is free for nine months from the commencement of mining operations, so that the company can test the value of the reefs before deciding to exercise the right of purchasing the battery at £15,000.

Up to the present no attempt has been made to prospect certain well defined lodes to the west of the worked areas in the old Talisman and Crown mines. The object of the new company is to prove the value of those reefs in what is known as the payable zone. It is proposed to drive a main adit level in a southerly direction on a lode called the Mammoth. This has recently been opened up and two distinct [distinct] reefs, 6ft and 8ft wide respectively, have been discovered. It is proposed to drive the main adit level 3500 ft, but it is anticipated that the payable zone should be reached between 500 ft and 1000 ft. The provisional directors of the new company are Messrs W. D. Holgate, C. W. Anderson, and E. J. Vallentine.¹³⁶⁸

29 October

THE MINING INDUSTRY.

GOVERNMENT PROSPECTING. MR POLAND'S VIEWS.

In a discussion on the Mines Statement in the House Mr. Poland, member for Ohinemuri, expressed the following views :—...

In Karangahake, as the Minister knows, we have had some very prosperous mining in past days, but the two principal companies—the Crown and the Talisman —closed down in recent years, and notwithstanding that fact there are a number of good men in the district who are satisfied there is any amount of payable ore in the Karangahake field to-day. There are not only mining experts, but ordinary miners of experience, who to-day are spending their money in prospecting and investigating that field. Those men deserve encouragement, and the Minister, within the limit of the Mining Act, is prepared to help them, but I hold that something further is required if the Government really desires results.

¹³⁶⁷ <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19230406.2.11>

Hauraki Plains Gazette, Volume XXXIV, Issue 4547, 6 April 1923, Page 2

¹³⁶⁸ <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19230518.2.2>

Hauraki Plains Gazette, Volume XXXIV, Issue 4565, 18 May 1923, Page 1

The Talisman battery of forty heads has been dismantled all but ten stampers, which have been retained, and the man who owns the plant and the water power, also the whole of the works in connection with the Talisman mine, is prepared to sell the plant at a very low price to the Government for an experimental plant or to enable parties of prospectors to have their ore treated at cost price, so that there will be no loss to the State, but also that there will be no profit. If they could do that there would be a big incentive provided for prospecting in that district. There is no doubt that there are millions of pounds' worth of gold and silver in the Karangahake and Waihi fields unprospected and undiscovered...¹³⁶⁹

21 November

Karangahake. Tennis.

Owing to the cricket match, Kopuarahi v. Karangahake, being played on Saturday last the opening day of the tennis club was postponed until Saturday next. A working bee was busily engaged on Monday evening clearing the courts, so the opening day should prove an enjoyable outing.¹³⁷⁰

Tennis courts still operating.

12 December

CRUSHING BATTERY

In reply to the Chamber's request to the Hon. Minister for Mines to visit Karangahake and receive a deputation from miners asking for Government assistance to establish a stamp battery, so that prospectors with small samples could have their ore treated, and also in view of the possible dismantling of the Talisman battery, the Hon. J. G. Anderson replied that he regretted he was unable to visit the district as requested.¹³⁷¹

Karangahake School.

About 1923 two now spare rooms of the Karangahake School were taken to replace the Waikino School which had been burned following a tragedy there.¹³⁷²

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¹³⁶⁹ <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19231029.2.15>

Hauraki Plains Gazette, Volume XXXIV, Issue 4618, 29 October 1923, Page 4

¹³⁷⁰ <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19231121.2.2>

Hauraki Plains Gazette, Volume XXXIV, Issue 4628, 21 November 1923, Page 1

¹³⁷¹ <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19231212.2.8>

Hauraki Plains Gazette, Volume XXXIV, Issue 4637, 12 December 1923, Page 2

¹³⁷² <https://www.ohinemuri.org.nz/historic-texts/karangahake-school-70th-jubilee/school-history>

School History. Karangahake School and District 70th Jubilee 1889-1959

MINES STATEMENT BY THE HON. G. J. ANDERSON, MINISTER OF MINES.¹³⁷³

ANNEXURE A. SUMMARY OF REPORTS BY INSPECTORS OF MINES.
Northern Inspection District (Mr. M. Paul, Inspector of Mines). Quartz-mining.

Mr. M. Paul, Inspector of Mines

Page 18

New Zealand Crown Mines (Limited), Karangahake (G. N. McGruer). — Eight men employed. The Rose low-level crosscut was extended 284 ft., making the total distance 608 ft. At 245 ft. the crosscut passed through what is known as Sheehan's leader —width, 1ft.; values low. At 402 ft. a reef formation 14 ft. in width was passed through; assay value, 9s. per ton. At 607 ft. a leader 1 ft. in width was intersected; average value, 14s. per ton.

Imperial Claim, Karangahake (E. D. White and party). —Half a ton of ore treated produced bullion valued at £58 11s. 6d.

Woodstock, Karangahake (Ratcliff and party).—Operations by this party have been confined chiefly to prospecting in No. 5 Woodstock level: 93 tons of ore treated yielded bullion valued at £129 12s. 9d.

New Talisman Gold-mining Company, Karangahake (R. M. Aitken, Owner). —Area, 62 acres, which includes the richest portion of the late Talisman Gold-mining Company. During the year an effort was made to raise further capital to drive on a large reef formation exposed on the tramway, but, owing to the depressed state of mining, Mr. Aitken was unable to raise the capital required for this purpose.

¹³⁷³ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1924-I.2.2.3.3>

MINES STATEMENT BY THE HON. G. J. ANDERSON, MINISTER OF MINES., Appendix to the Journals of the House of Representatives, 1924 Session I, C-02

1924

12 March

During the last three weeks the staff engaged at the Talisman battery, under the supervision of Mr A. Aitken, has been occupied in removing one of the large air compressors formerly used by the company. The weight of the machine may be gauged from the fact that Messrs Brenan and Co's eight-horse teams were brought into strenuous action in transporting certain parts to the railway yards. The compressor is to be assembled at the Huntly coal mines.¹³⁷⁴

17 July

The Auckland Education Board has decided to erect the new public school at Waikino with its own workmen, part of the building will use two of the class rooms from the school at Karangahake, where the accommodation is now well above requirements owing to the shrinkage in population, following the closing down of the Talisman mine. The men are now at work dismantling these rooms.¹³⁷⁵

The Waikino school was burnt down after the fatal shootings of 19 October 1923. A new school was built.

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MINES STATEMENT BY THE HON. G. J. ANDERSON, MINISTER OF MINES.¹³⁷⁶

ANNEXURE A.

SUMMARY OF REPORTS BY INSPECTORS OF MINES. Northern Inspection District (Mr. M. Paul, Inspector of Mines). Quartz-mining.

Mr. M. Paul, Inspector of Mines

Page 21

New Zealand Crown Mines, Karangahake (G. N. McGruer). —The Rose low-level crosscut has been extended a total distance of 779 ft. At 672 ft. a quartz vein about 9 in. in width was intersected, assay value £2 17s. 4d. per ton. This crosscut is being continued to intersect the Crown and Welcome lodes. A considerable amount of surface prospecting has also been done without locating anything payable.

¹³⁷⁴ <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19240312.2.5>

Hauraki Plains Gazette, Volume XXXV, Issue 4673, 12 March 1924, Page 2

¹³⁷⁵ <https://paperspast.natlib.govt.nz/newspapers/WHDT19240717.2.9>

Waihi Daily Telegraph, Volume XXII, Issue 7088, 17 July 1924, Page 2

¹³⁷⁶ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1925-I.2.2.2.3>

MINES STATEMENT BY THE HON. G. J. ANDERSON, MINISTER OF MINES., Appendix to the Journals of the House of Representatives, 1925 Session I, C-02

Woodstock Claim, Karangahake.—This was formerly a portion of the Talisman Gold-mine and was taken up by J. B. Morris and others, who have been prospecting the surface, but so far the results have proved disappointing.

Imperial Syndicate, Karangahake.—This claim was recently taken up by a local syndicate with the object of testing a reef said to have been intersected in an old crosscut in the early days of this goldfield and to have carried payable assay values, but owing to a dispute between the owners nothing further was done to test the extent of these values.

Talisman Claim, Karangahake.—A portion of this claim was let on tribute at and above No. 8 level to Rackham and party, who crushed 39 tons of ore for a return of bullion valued at £173 3s. 9d.

1925

4 March

KARANGAHAKE MINES.

TALISMAN AND CROWN. THE OUTPUT OF GOLD.

The goldmining jubilee of the Ohinemuri field raises an interesting point in regard to the yield of bullion from the Karangahake mines. It was on March 3, 1875, that the Karangahake rush took place and since then gold of some millions of pounds has been yielded. Although exact figures are not available, the total yields of the two notable mines, the Talisman and Crown, give a good indication of the rich gold deposits at Karangahake. The Talisman Consolidated mine, up to March, 1921, had put out gold to the value of £2,951,315, equal to £7 5s a ton. The total dividends paid amounted to £1,151,164, or about £4 17s 6d a share. The Crown mine has yielded £871,386, the total dividends bring £70,000. From these two mines the total output was, therefore, £3,822,701, the combined dividends amounting to £1,221,164. The end of the Talisman Company came by voluntary liquidation in March, 1921. The Crown is now the only company on the Karangahake field, and although its batteries are not now crushing for gold, prospecting is being carried on in the mine itself.¹³⁷⁷

3 July

OHINEMURI COUNTY. MONTHLY COUNCIL MEETING.

REMOVAL OF DAM.

The Mines Department, replying to a request for permission to remove a dam constructed in the Ohinemuri River by the Talisman Gold Mining Co. many years ago, advised that after consultation with the Railway Department no objection would be made to the removal of the dam provided the council was prepared to take all responsibility for any damage resulting both to the railway property and any other property, and that it was removed entirely at the risk of the council.

In reply to Cr. Morgan the engineer said that it was not possible to remove the dam until the summer, when there would be no damage.

Cr. Morgan thought that some of the centre boards might be taken away when the river lowered sufficiently.

The matter was referred to the engineer, Cr. Robinson remarking that it was necessary to choose carefully the state of the river before removing the dam.¹³⁷⁸

23 July

N.Z. CROWN MINES MEETING

¹³⁷⁷ <https://paperspast.natlib.govt.nz/newspapers/NZH19250304.2.39>

New Zealand Herald, Volume LXII, Issue 18958, 4 March 1925, Page 8

¹³⁷⁸ <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19250703.2.14>

Hauraki Plains Gazette, Volume XXXVI, Issue 4848, 3 July 1925, Page 3

"USELESS TO GO ON SPENDING MONEY."

The annual meeting of shareholders in the New Zealand Crown Mines, Karangahake, held in London, was presided over by Mr John Cutcliffe.

The directors' report was as follows: —...

The chairman said the directors considered it was useless to go on spending money. They might just as well take a venture in some other concern. He stated the stone quarry had shown a profit of £278, £127 and £746 respectively for the last three years. Sales of machinery in New Zealand had mitigated the mining loss...¹³⁷⁹

21 August

VISIT TO THE IMPERIAL MINE

BEAUTY OF WAITAWHETA GORGE.

Yesterday morning a party of local shareholders in the Imperial Gold Mining Co., Ltd., Karangahake, left Paeroa on a tour of inspection of the company's property. From a scenic point of view the trip might well be regarded as second to none in New Zealand, and with a bright, fine morning, and the thought of seeing an actual gold-bearing reef, made the outing doubly pleasurable.

Leaving Paeroa, the run to Karangahake was made in a few minutes. A halt was made at the mining township for the purpose of picking up Mr M. Paul, mining inspector, who arrived by train from Waihi.

Leaving the Crown Company's crusher the cars proceeded up the Karangahake hillside as far as the old No. 8 level of the Talisman mine. Here the party got out of the cars, and, doffing overcoats and superfluous clothing and donning old clothes and heavy boots, a start was made on the tramp further up the mountainside. The route followed was up the old county track past the Maria lode, Talisman hopper, for a considerable distance. The view obtained from the track as the climb was made was a wonderful one, full of beauty and charm. Looking down, Paeroa is seen and many points of interest are discernible. Stretching away to the north the town of Thames can be seen, with the sea beyond, and farther round in a north-westerly direction the famous fertile Hauraki Plains unfolds itself in all its wealth of dairy country. Looking directly below, the beautiful Waitawheta Gorge, with the river rushing along in the sunlight, immediately attracts attention and calls forth admiration from those privileged to witness the sight. Turning to a more south-easterly direction the scattered townships of Waikino, Waitekauri, and, farther beyond still, the outline of Waihi can be seen. Cultivation of the Waihi Plains is also discernible. With the beautiful bush in the foreground, a wonderful panorama unfolds itself.

The scene is a truly beautiful one, and, for a wonder, the grandeur and beauty have not been destroyed by man, in-fact, so far as the gorge is concerned interest has been added by the construction of the Crown Company's water-race, which winds round the foot of the gorge to the Crown battery. Aerial and underground tramlines and disused machinery add interest to the beauty and

¹³⁷⁹ <https://paperspast.natlib.govt.nz/newspapers/NZTIM19250723.2.75>

New Zealand Times, Volume LII, Issue 12197, 23 July 1925, Page 6

charm of the journey. However, as the party had more serious business ahead, and the sun was getting higher in the heavens, little more than a cursory glance could be spared for the wondrous view.

The climb upwards along the track continued for about another twenty minutes, when without warning the guide led the party down the steep mountainside along a little-used track [track to Raileys?], which in many places was cut out of the solid rock. The descent was easier going, and afforded a welcome respite from the ascent, but care had to be taken to keep on the track and retain one's foothold. In a short time a corrugated iron shed was seen farther down the hillside. This building marks the entrance to the Imperial mine.

On arrival at the tunnel the party was met by a perspiring miner pushing a small truck of mullock ahead of him. After being supplied with lighted candles the journey into the bowels of the earth was begun. Still keeping close up to the guide, and following the centre of the tram tracks, the party continued along the sh cmfw [?] party continued for a distance of some 340 ft. At this point the tunnel took a turn to the left and, continued on for another 130 ft to the present head of the mine. This latter stretch has been tunnelled through by the local company, and runs through virgin country. Each of the party took a turn at using the small short handled miners' picks and loaded themselves with samples of gold-bearing quartz. It is not proposed to give an expert opinion on the value or prospects of the reef, which is at present being worked. Suffice it to say that it is about a foot wide, and the quartz is well streaked with sulphide and silver. The reef, so far as observation goes, is running almost east and west, and is a cross-cut from the main drive.

After the billy had been boiled and a picnic luncheon disposed of by the hungry, and not a little weary, party, the climb back on to the track commenced. The return trip was very interesting, and the stately nikaus and pungas and refreshing green undergrowth made a setting which was enjoyed to the full, and the beauty of the trip was freely commented upon.¹³⁸⁰

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MINES STATEMENT BY THE HON. G. J. ANDERSON, MINISTER OF MINES.¹³⁸¹

ANNEXURE A. SUMMARY OF REPORTS BY INSPECTORS OF MINES.
Northern Inspection District (Mr. M. Paul, Inspector of Mines). Quartz-mining.

Mr. M. Paul, Inspector of Mines

Page 18

New Zealand Crown Mines, Karangahake (G. N. McGruer, Manager).—The Rose crosscut has been extended a total distance of 824 ft. Several lodes and

¹³⁸⁰ <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19250821.2.13>

Hauraki Plains Gazette, Volume XXXVI, Issue 4868, 21 August 1925, Page 3

¹³⁸¹ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1926-I.2.1.4.3>

MINES STATEMENT BY THE HON. G. J. ANDERSON, MINISTER OF MINES., Appendix to the Journals of the House of Representatives, 1926 Session I, C-02

numerous veins of quartz of low grade were intersected, and some driving was also done on a reef formation 14 ft. in width at 202 ft., with no better results.

Woodstock Claim, Karangahake.—A considerable amount of surface prospecting has been done by J. B. Morris and party, and several lodes of varying width have been located, but samples sent for assay are erratic in value.

Imperial Gold-mining Company, Karangahake.—Two men have been continuously employed extending crosscut to intersect the Imperial lode. Several small leaders have been passed through, ranging in value from a few shillings to £2 8s. 6d.

1926**8 January**

THE TALISMAN DAM.

DEMOLITION BY DYNAMITE. WATER RELEASED SAFELY.

After functioning for nearly twenty years the Talisman dam, situated in the Karangahake Gorge across the Ohinemuri River, was freed by Mr E. Shaw, Ohinemuri county engineer, and his staff on Wednesday.

Owing to the heavy damage done to the adjacent road and railway line by the dam overflowing at its wings whenever there was a fresh on in the river in the past, representations were made by the Ohinemuri County Council to the owners, Messrs R. M. Aitken and Son, for its removal. Having no further use for the structure, the owners were agreeable to the council effecting the demolition, with the consent of the Mines Department. The necessary permission having been obtained, Mr Shaw took advantage of the fine weather and the low state of the river to carry out the work. The task of releasing the water from the dam, which measured about two chains across, and varied in depth up to 12 feet, was no easy task. After certain preliminary work had been done Mr Shaw laid several charges of dynamite in front of the main dam gateway and several more charges round various parts of the dam. At a given signal these charges were exploded, the result being highly satisfactory. The pent-up water got away with a rush, but the river-bed provided ample space for the sudden volume, and no damage was caused.

Much valuable timber will be taken from the dam when it drains sufficiently. This has been purchased by the county council, and will be useful for bridge repair work.¹³⁸²

1 May

KARANGAHAKE MINERS.

PUBLIC BATTERY DESIRED. MINISTER TO INVESTIGATE. (BY TELEGRAPH. —OWN CORRESPONDENT.) WAIHI. Friday.

The Minister of Mines, Hon. G. J. Anderson, will pay a visit to the Ohinemuri district in the course of a few days, the main object of which will be to receive a deputation of miners who are asking for the erection of a public battery at Karangahake.

Since the closing down of the Talisman Company's mill no crushing plant has been available in the district, and in making representations to the Government on the subject through the member for Ohinemuri, Mr. A. M. Samuel, recently, those advocating the provision of a battery stated that quite 100 miners would commence work on tribute in the present mines at Karangahake, or proceed with the exploration of other known reefs in the district if the request was acceded to. The upshot was that Mr. Samuel interviewed the Minister, who promised to come to Karangahake to meet the applicants and

¹³⁸² <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19260108.2.18>

Hauraki Plains Gazette, Volume XXXVII, Issue 4923, 8 January 1926, Page 2

investigate their claims. The executive committee of the Waihi Miners' Union carried the following resolution at a meeting held last evening:— "That this meeting of the executive of the Ohinemuri Mines and Batteries Union views with great satisfaction the proposal for the erection of a public battery at Karangahake. We are of the opinion that the provision of such a plant would prove a great boon to a large number of miners, and in all probability would lead to a revival of the industry in the district."¹³⁸³

14 May

TREATMENT OF ORE.

REQUEST FOR PUBLIC BATTERY. Deputation to Minister of Mines.

CLAIMS OF KARANGAHAKE MINERS

Believing that the provision off a public crushing battery for the treatment of ore was warranted at Karangahake, and realising that the progress of Paeroa was closely allied to the mining industry, the Paeroa Chamber of Commerce, has interested itself in the matter of obtaining such facilities. At the request of the chamber Mr A. M. Samuel, M.P., who has also taken a keen interest in the project, obtained a promise from the Minister of Mines that he would visit Karangahake and obtain first-hand information from the miners.

On Wednesday night the Minister (the Hon. G. J. Anderson) received a large and influential deputation of miners and others prominently connected with the industry at Karangahake...

In introducing the deputation Mr Samuel said that he believed the Minister was quite familiar with the request, and the miners that night, he believed, would convince the Government that a public battery was not only warranted but an absolute necessity...

Because the industry was languishing was no excuse for neglect...

Karangahake had been a rich district, and it was still a rich district. The population of the township had gone down simply because, through the lack of a crushing plant, the miners had been forced to seek a living elsewhere. The Minister might argue that the Government could not afford a battery, but he contended that it could afford it, and money was being spent in many less deserving directions. Mr Samuel instanced how, with a battery available, small parties could work ore profitably where the large companies had failed...

The first speaker for the deputation was Mr J. B. Morris, who said that of his intimate knowledge, there were many reefs, running parallel to older and profitable workings which had not been worked, but which, taken out on tribute, had been paying propositions. He referred to the Roderick Dhu and other claims. It was possible to considerably increase the parties if crushing facilities were available...

Mr R. Aitken said that he had been connected with mining all his life, and detailed his experience with the Talisman mine. He foresaw the policy of mining the Talisman after the company had abandoned it by small mining parties. He had found that in gold-bearing country payable lodes usually ran at right angles to a reef. He was quite satisfied if cross-cuts were put into the

¹³⁸³ <https://paperspast.natlib.govt.nz/newspapers/NZH19260501.2.88>

New Zealand Herald, Volume LXIII, Issue 19316, 1 May 1926, Page 12

Talisman and Crown mines above water-level that the ore produced would pay small parties. Round the incline shaft of the Talisman there were about two thousand tons of ore which, if crushed, would average about £6 a ton. Two pounds a ton would not pay a big company, but would undoubtedly a small party. The effect of a public battery would be an inducement to get miners to return to work. Once this was done, there was no doubt that the impetus would open up afresh and develop the industry...

Mr G. N. McGruer, manager of the N.Z. Crown Mines, Ltd., explained that there were numbers of reefs that had not paid his company, but which would certainly pay parties of two to four men if crushing facilities were available. He had no hesitation in saying that there was more gold in Karangahake than was ever got out, and that was over three and a half millions sterling.

MINISTER'S REPLY.

"So far as giving you a battery is concerned, you are asking me to buy a pig in a poke," continued the Minister. There had been a lot of gold won at Karangahake, but he had been reliably informed that there was very little gold left. The optimism of miners was hard to kill, and nearly all the speeches that night were characteristic of the miners. There might still be sufficient gold to warrant a battery, but a commonsense business view had to be taken of the matter. Too much money was being wasted in developing the industry, and it was not on the business footing that it ought to be. He was familiar with the claims of Karangahake, and knew all about the statements made by the Hon. R. McKenzie in 1909...

It was hardly reasonable to suggest that sound business men and competent engineers would have ceased operations at Karangahake if the mines had been payable or the prospects glowing. The information that he required was an estimate of the amount of ore available for crushing, the number of genuine miners who would return if a plant was erected, and the approximate relative values of the ore to be produced...

If he went to Cabinet with a request for a battery on the basis of the information supplied that night he would be laughed at. Figures were what counted, and not mere talk and sentiment. He could not depend on what he had heard from the deputation. All he asked was evidence to show that the provision of a battery was a good proposition, and he would undertake to use his best endeavours to give effect to the project. In ten years' time a battery at Karangahake would be a white elephant, but he was alive to the fact that a rich reef might be struck and outlay reimbursed many times over. "Send me facts, figures, plans, of the gold-bearing areas; and all available data and I will promise to give the matter very careful consideration," the Minister concluded. In reply to Mr Gwilliam Mr Anderson said he had been advised by his officers that the cost of a suitable battery would be £7500, and about £1200 a year would be required to pay running expenses, wages, interest, sinking fund, and depreciation...¹³⁸⁴

¹³⁸⁴ <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19260514.2.9>

Hauraki Plains Gazette, Volume XXXVII, Issue 4974, 14 May 1926, Page 2

4 September

OBITUARY.

MR. JOHN McCOMBIE.

Closely identified with mining in New Zealand for over 50 years, Mr. John McCombie died at his residence, 52, Clonbern Road, Remuera, yesterday, at the age of 76 years, after a short illness. Mr. McCombie was the only son of the late Mr. Alexander McCombie, of Aberdeen, Scotland, and he was born at Epsom, Auckland, in 1850. He commenced goldmining at the Thames in July 1867, when he was seventeen years of age. Thence he went to the West Coast alluvial diggings, and for some time travelled to and fro between the different mining centres in the South Island, dividing his time between mining and cattle trading. In 1875 he returned to Auckland when Ohinemuri was opened for gold mining. The deceased was one of the first on that field, and took part in the celebrated "rush" to Karangahake. In 1878 he discovered, opened up, and took out the first crushing from the now famous Waihi Company's lode, and subsequently located the Silverton mine, in the same district. He also went prospecting at Karangahake, and, in the year 1882, unearthed the lodes afterwards worked upon in the Woodstock mine. When the Woodstock was floated into a company, the deceased was appointed managing director, and later on general manager, a position which he held until May, 1898, a period of ten years. He was also managing director of the Maratoto Gold Mining Company's property, upon which a mill comprising 15 head of stampers had been erected. Throughout his career, the late Mr. McCombie was a constant contributor to the Press over the pen-name of "Aboriginal," and also under his own name. His articles have been devoted chiefly to mining subjects, upon which he was a recognised authority, and he has occasionally written short stories and sketches of life on the goldfields. The deceased was for years a member of the Thames County Council, in which he represented Ohinemuri when that district was governed by that body. He was a foundation member of the Australian Institute of Mining Engineers, and also of the New Zealand Institute of Mining Engineers. During the latter years the deceased was for some time underground manager for the Talisman Gold Mine, and afterwards general manager of the New Zealand Crown Mines, both of which are at Karangahake. For a short period during the war he was manager of the Waihi Extended. Since then he was mostly engaged as a consulting engineer to various mines and companies, and reporting on propositions. There was not a mine from Coromandel to Waihi that he had not been associated with at some time or other. He was a familiar figure in all mining districts, and a man whose knowledge and judgment in all things pertaining to mining was greatly esteemed by those who valued an honest opinion. His optimism with respect to the possibilities of mining was unbounded, and his one wish was to live to see a revival of the old days which, from his intimate knowledge of the field, he felt sure must come. The late Mr. McCombie is survived by his wife and six children, who are: Mrs. E. A. Wilson (Waihi), Mrs. W. C. Whitney (Auckland), Miss G. McCombie, Messrs. C. A. McCombie (Wellington), R. S. McCombie (Valparaiso), and J. S. McCombie (Auckland).¹³⁸⁵

¹³⁸⁵ <https://paperspast.natlib.govt.nz/newspapers/AS19260904.2.158>

Auckland Star, Volume LVII, Issue 210, 4 September 1926, Page 19

20 December

CROWN MINES COMPANY. LONDON, 16th November.

The report of the directors of the New Zealand Crown Mines Company shows that expenditure in New Zealand amounted to £1214; development and prospecting, £642; total, £1856. Receipts from quarry £427, less Government royalties and charges £68, equalling £358; total, £1497...

There was a heavy expenditure in New Zealand, mitigated to some extent by profits on the quarry, still totalling £ 1500...

The position at present was that the new expenditure in New Zealand had now reached a total of £7785. Exploratory work was going on, and the manager still saw various formations which were worth further exploration. The quarry was still working satisfactorily with the assistance of the company's plant, which was necessary for its success...¹³⁸⁶

What sort of assistance? Machinery, power...?

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For the year 1926

MINES STATEMENT BY THE HON. G. J. ANDERSON, MINISTER OF MINES.¹³⁸⁷

ANNEXURE A. SUMMARY OF REPORTS BY INSPECTORS OF MINES.
NORTHERN INSPECTION DISTRICT (Mr. M. Paul, Inspector of Mines).
Quartz-mining.

Mr. M. Paul, Inspector of Mines

Page 21

New Zealand Crown Mines, Karangahake (G. N. McGruer, Manager).—No work has been done in this mine during the year, and with the exception of the Earl of Glasgow section the whole of the area formerly held by this company has been abandoned.

Talisman Dubbo Claim, Karangahake (Williams and Party).—A considerable amount of trenching and prospecting work has been done, with encouraging results.

Imperial Gold-mining Co., Ltd., Karangahake.—The crosscut eastward from Howard's level has been driven a total distance of 563 ft. and eleven reefs and veins intersected; unfortunately, all are of low value.

¹³⁸⁶ <https://paperspast.natlib.govt.nz/newspapers/EP19261220.2.103.3>

Evening Post, Volume CXII, Issue 148, 20 December 1926, Page 13

¹³⁸⁷ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1927-I.2.2.2.3>

MINES STATEMENT BY THE HON. G. J. ANDERSON, MINISTER OF MINES., Appendix to the Journals of the House of Representatives, 1927 Session I, C-02

1927**Electricity in Karangahake****11 January**

Electricity for lighting and power purposes has now been installed at Karangahake by the Thames Valley Power Board. The only person at present using power is Mr J. Patterson, a farmer, who is driving his milking plant with electricity.¹³⁸⁸

10 March

WARDEN'S COURT. PAEROA, Wednesday.

J. B. Morris, holder of a water-race license, was granted permission to lay 200 feet of 4in iron piping between the Rose Crosscut and Earl of Glasgow battery at Karangahake. The same applicant was granted a special machine site of five acres on the Earl of Glasgow special quartz claim at the junction of Twig [Trig?] Road, Karangahake.¹³⁸⁹

20 May

At Karangahake a miner named Morris has erected a primitive five-stamper battery, driven by an old engine, and is ready to start work crushing quartz from some leaders at the back of the Crown Hill.¹³⁹⁰

7 June

FURTHER VENTURES AT KARANGAHAKE. SMALL MILL ERECTED
(By a Correspondent)

During the past nine months Mr J. B. Morris, with a party of men, has been engaged in erecting a five head battery about three miles along the Trig Road, with the object of crushing quartz from a reef known as the Pewaka. A start was made a week ago to crush, but unfortunately the engine that had been installed to drive the plant was not powerful enough to lift the full complement of stamps and operations had to be carried on with three head. Although small, it is believed that the lode carries rich ore, and hopes are held out that the venture will place Karangahake on the map again as a gold producing district.¹³⁹¹

27 June

EARLY PAEROA HISTORY.

¹³⁸⁸ <https://paperspast.natlib.govt.nz/newspapers/WHDT19270111.2.6>

Waihi Daily Telegraph, Volume XXIV, Issue 7467, 11 January 1927, Page 2

¹³⁸⁹ <https://paperspast.natlib.govt.nz/newspapers/AS19270310.2.20>

Auckland Star, Volume LVIII, Issue 58, 10 March 1927, Page 4

¹³⁹⁰ <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19270520.2.17>

Hauraki Plains Gazette, Volume XXXVIII, Issue 5128, 20 May 1927, Page 3

¹³⁹¹ <https://paperspast.natlib.govt.nz/newspapers/WHDT19270607.2.12>

Waihi Daily Telegraph, Volume XXIV, Issue 7527, 7 June 1927, Page 2

AN INTERESTING REVIEW. ADDRESS BY MR. P. E. BRENAN.¹³⁹²

A short history of Paeroa and district.

26 July

KARANGAHAKE DISCOVERY. NEW AURIFEROUS LODGE

(BY TELEGRAPH. —OWN CORRESPONDENT.) PAEROA, Monday.

Some excitement has been created at Karangahake by the discovery of a gold-bearing reef. This was made by Mr. J. B. Morris and party on land recently taken over by Mr. Morris from the New Zealand Crown Mines, Ltd.

The find is adjacent to the Imperial Company's ground, where a considerable amount of prospecting work has been done in the last two years. It consists of a well-defined reef a little more than 2ft. wide. The ore is said to show free gold throughout.

Mr. Morris was recently working on another small leader and had erected a small plant with five head of stamps. Although good stone was being mined the battery returns were not satisfactory on account of the refractory nature of the ore and of the great difficulty in treating concentrates in New Zealand. Several bags of quartz from the new reef were taken out on Saturday. A sample of this was impregnated with yellow mineral...¹³⁹³

3 August

WARDEN'S COURT.

APPLICATION FOR PROTECTION. POSITION OF N.Z. CROWN MINES.

At the Warden's Court, Paeroa...

H. W. Hopkins, attorney for the company, stated that the company was first formed in 1906 with a capital of £200,000. The expenditure had been between £800,000 and £909,000 to date, and there were considerable assets yet to dispose of. In 1910, and again in 1914, the company had been reconstructed and additional capital added each time.

Detailing the operations, witness said that a section of the property had been sold to a Mr Morris for a small sum, and on the recommendation of the Minister of Mines nearly two-thirds of the 250 acres held by the company had been thrown off or sold. Since operations ceased the ground had been opened to tributors, and several parties worked areas. Last year tenders were invited for a portion of the property, but Morris had been the only tenderer, and the company had let it go for £70. The 50 acres remaining to the company represented certain assets, and there was a certain amount of prejudice in throwing off the whole area unless a reasonable offer was forthcoming. A copy of the valuation produced did not represent the true value, and anyone caring to take the property at valuation would be getting a cheap property. The period was required to enable the company to realise its assets. It had been hoped to dispose of much of the machinery as a going concern, but such had not been possible. The Crown Mines Co. had contributed a large sum in gold

¹³⁹² <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19270627.2.15>

Hauraki Plains Gazette, Volume XXXVIII, Issue 5144, 27 June 1927, Page 2

¹³⁹³ <https://paperspast.natlib.govt.nz/newspapers/NZH19270726.2.25>

New Zealand Herald, Volume LXIV, Issue 19698, 26 July 1927, Page 7

duty towards the benefit of the district. However, it was a case where a mine had come to an end, and there was nothings left to do but to try and effect salvage on the plant.

To Mr Beeche witness said the directors had been considering realising on the assets for the past two or three years. Negotiations had been carried on with a machinery broker, but only a little over £500 had been offered. The valuation of the plant at £23,000 was not too high for anyone requiring a plant. The company was loath to destroy the battery just for the scrap value of the material. There was some revival in mining, but an effort had been made locally quite recently in which the Government was asked to purchase the company's plant. A new cross-cut had been done within the past 15 months on the Crown claim. There had never been any difficulty in obtaining protection for machinery. If an offer of £100 was received, witness would recommend it to the directors. The company had about £4000 invested, but they were getting nothing. In the earlier days of the company's activities, the shareholders had received about £70,000.

The battery could not be worked without a fair sum being expended upon it. The water-races were in fairly good order. There had been no work done on the claim recently, and as soon as the machinery and other plant was disposed of, the company's operations would probably cease at Karangahake.

George Norman McGruer, mine manager at Karangahake, for the company stated that some hundreds of feet of trenching, sinking, and surface prospecting had been carried out on the Crown claim quite recently. Certain cross-cuts had also been driven. Men were regularly employed on the water-races, in his opinion the battery could be put into operation within 48 hours, and be capable of crushing small quantities. The prospecting license was done after the driving...¹³⁹⁴

It seems the Crown battery has not yet been demolished. Water races still intact.

22 August

KARANGAHAKE RIDING. REPRESENTATIVE ON COUNCIL.

MR. J. B. MORRIS ELECTED

A poll was taken on Friday for the purpose of electing a councillor for the Karangahake Riding of the Ohinemuri County, the vacancy having been caused by the death of Mr A D. McGuire. Nominations received were those of Mt T. A. Barrett, Waihi Road Paeroa, and Mr J. B. Morris, Karangahake.

...Mr Morris was returned by a majority of ten votes...

The complete roll for the riding contained the names of 80 ratepayers who were eligible to vote, and of that number 74 ratepayers exercised their privilege. This is the first poll that has been taken at Karangahake for the election of a councillor since November, 1913, the late Mr McGuire having represented the riding continuously since that date.¹³⁹⁵

¹³⁹⁴ <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19270803.2.16>

Hauraki Plains Gazette, Volume XXXVIII, Issue 5160, 3 August 1927, Page 3

¹³⁹⁵ <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19270822.2.15>

Hauraki Plains Gazette, Volume XXXVIII, Issue 5168, 22 August 1927, Page 3

JB Morris continued till 1938.¹³⁹⁶

24 August

THE EARL OF GLASGOW MINE. AUCKLAND SYNDICATE FORMED.

Authoritative information has been received that a strong Auckland syndicate has been formed to thoroughly equip a small battery on the site of the Earl of Glasgow mine at Karangahake, at present being worked by Mr J. B. Morris. A substantial sum is being set aside to open up the mine in a systematic manner. Owing to the refractory nature of the ore a small return only has been taken from the copper plates. The indications at the present time have assured the subscribers that the expense is well warranted. The carrying out of operations will be continued until the directors decide upon a definite course of operations.

This is the mine which was referred to in these columns, a few weeks back. The assay of the ore already obtained has proved very satisfactory, and later results are very encouraging.¹³⁹⁷

JB Morris battery using amalgamated plates, not cyanide.

25 August

REPORTED FIND AT KARANGAHAKE

FUTURE OF THE FIELD. STATE AID TO PROSPECTING

(By "Old Digger")

The discovery at Karangahake of what appears from reports to be a highly payable reef on a privately owned claim serves once more to draw attention to the possibilities of the Ohinemuri district and the need for more thorough exploration of the field. All mining men conversant with the history of gold mining at Karangahake will recall the experience of the Talisman Company and its return to prosperity at a stage when it was believed that the mine was exhausted. Had not the then well-known firm of Bewick, Moreing and Company come to the rescue with a substantial sum of money when the end was generally believed to be in sight, the property would have been abandoned and gold to the value of millions of pounds sterling would have been left behind. It was at somewhere about the eighth level that it was supposed that the precious metals did not live to greater depth, but shortly after the introduction of fresh capital highly payable ore was again met with going down and for several years operations were continued on some of the richest ore won by the company, the best of it coming from the famous Bonanza chute on the Maria reef. The values lived down for a further 500 or 600 ft and from the millions of pounds worth of gold and silver won very substantial dividends were paid to the shareholders before the end finally came.

ENCOURAGING FIND...

¹³⁹⁶ <https://www.ohinemuri.org.nz/historic-texts/ohinemuri-county-diamond-jubilee/administration-of-ohinemuri-county>

Administration of Ohinemuri County. Diamond Jubilee of the Ohinemuri County 1885 - 1945

¹³⁹⁷ <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19270824.2.8>

Hauraki Plains Gazette, Volume XXXVIII, Issue 5169, 24 August 1927, Page 2

The recent find made by Mr J. Morris suggests that such is not the case, and there is ground for the hope that further investigations may lead to renewed mining activities at Karangahake. It, however, would be quite impossible for prospectors to carry on exploratory work without some assistance and that assistance should come from the Government through the Mines Department...

The department cannot be expected to carry the whole burden, but it should certainly be prepared to give substantial aid to genuine prospecting operations if it can be shown that there is a reasonable chance of the work being attended with success. This, up to a certain point, is admittedly now being done, but only in a half-hearted manner, and there is certainly room for increased encouragement to mining if there is a genuine desire on the part of the Government to endeavour to restore a languishing and important industry...

In Waihi, for instance, only the Waihi Gold Mining Company has rewarded its shareholders adequately—much more than adequately it may be said—for the capital invested; the Grand Junction, despite a very considerable output of gold and silver, having failed to realise the hopes of investors. At Karangahake the Talisman paid many of those interested handsomely; while the New Zealand Crown Mines, Ltd., fared much as did the Grand Junction, and at Komata, the Komata Reefs mine was the only producer of note...¹³⁹⁸

29 August

KARANGAHAKE MINING

SYNDICATE TO WORK FIELD. PAYABLE GOLD AVAILABLE

(From Our Own Correspondent.) PAEROA, Saturday.

Reliable information has reached Paeroa that a substantial Auckland syndicate has been formed to erect a small battery plant on the site of the Earl of Glasgow mine at Karangahake, at the present time being worked by J. B. Morris. A crushing plant on this once-famous field has long been advocated, and it is good news to hear that money is forthcoming to work the mine and furnish the plant to treat its output.

The promoters of the company feel quite sure that the proposed expenditure will prove profitable to the company. A short time ago some picked stone was secured from this mine, and the assays proved highly satisfactory.

Ever since the Talisman and Crown mines ceased working, prospecting has been steadily going on at Karangahake, but nothing rich has been discovered. Thirty years ago, when Karangahake was in its prime, and the Talisman and Crown mines were unearthing many thousands of pounds worth of gold every month, Karangahake was quite a lively place, with a population of 3,000, as against 150 to-day.

Karangahake is not a poor man's gold-field. The large reefs are not rich, and require capital to work and develop them, but the old miners declare that there are several reefs on the field that the comparatively poor man can turn into profit if they could get their quartz treated at a reasonable cost. The Government has from time to time been approached to subsidise the erection

¹³⁹⁸ <https://paperspast.natlib.govt.nz/newspapers/WHDT19270825.2.15>

Waihi Daily Telegraph, Volume XXIV, Issue 7561, 25 August 1927, Page 2

of a battery, but the matter was turned down, the Minister of Mines remarking: "Let me see you get the golden stone first."

That there are some rich leaders existing in the locality has been made certain by previous discoveries. Some stone that has yielded as much as four to five ounces to the pound has been taken from what has been known as specimen leads. Even rich gold has been blasted from the boulders in the river, which proves that they have come from some of the undiscovered rich loads that the eye cannot see. With the renewed interest which is being conspicuously manifested in Karangahake of late, there is no reason to doubt that sooner or later some of the hidden rich deposits will be discovered, and bring well deserved reward to those men who are working their claims manfully, and have entire faith in the future.¹³⁹⁹

24 September

COLLAPSE AT A DENTIST'S

MINING ENGINEER SUCCUMBS. WAIHI, Friday

During administration of an anaesthetic in dental rooms this morning before having teeth extracted, Alexander Robert Aitken, Karangahake, suddenly collapsed. All efforts to restore life failed. Mr Aitken was 34 years of age, and a son of Mr Robert M. Aitken, mining engineer, of Auckland. He was engaged in breaking up and disposing of the plant of the Talisman battery, Karangahake. He was well known in the district, and highly respected. He leaves a widow and three young children.¹⁴⁰⁰

4 November

WORKS IN THE COUNTY. ENGINEER'S REPORT FOR MONTH.

...as the Crown Quarry Company at Karangahake is resuming its crushing operations at an early date an order has been placed with this company for metal.¹⁴⁰¹

14 November

FAMOUS RUSH RECALLED.

The pegging out of a prospecting claim of 200 acres by Messrs. Daldy MacWilliams and W. M. Wallnutt, of Waihi, on the north-eastern slope of the Talisman range at the head of Scotchman's gully, Karangahake, recalls the sensational scene which followed the official opening of the Ohinemuri field by Warden Fraser on the morning of March 3, 1875, and the rush of 600 excited men from Mackaytown at a given signal for the prospectors' claim, which is situated further down the slope from the site of the claim just pegged out, the location of which latter area is associated with the finding of a rich section of lode by Mr. Mac Williams and his brothers on the Prospectors' claim some 45 years ago. This section of lode, which was exceedingly rich,

¹³⁹⁹ <https://paperspast.natlib.govt.nz/newspapers/SUNAK19270829.2.24.4>

Sun (Auckland), Volume I, Issue 135, 29 August 1927, Page 2

¹⁴⁰⁰ <https://paperspast.natlib.govt.nz/newspapers/WAIP019270924.2.12>

Waipa Post, Volume 35, Issue 2062, 24 September 1927, Page 4

¹⁴⁰¹ <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19271104.2.24>

Hauraki Plains Gazette, Volume XXXVIII, Issue 5199, 4 November 1927, Page 4

giving values running into three figures, had evidently, at some remote period, come down from its parent ore-body further up the slope during the course of volcanic disturbances. The disappointment of the finders can be easily imagined when they discovered that what had all the appearances of a very rich lode, was simply a derelict tossed to the foothills of the famous Talisman range by the whim of capricious nature.

After all these years Mr. Mac Williams, who was also one of the discoverers of the great Talisman reef, is once again paying attention to this historic locality, where, in company with Mr. Wallnutt, prospecting operations have been carried out on geophysical lines. A low-level crosscut will shortly be commenced, an agreement having been made between the prospectors and a group of Auckland mining men. Application for the claim comes before the warden this week at Paeroa, and residents of the district are much interested in the fact that Karangahake is once more coming prominently before the public as a centre for mining operations.¹⁴⁰²

19 November

PEGGING OUT CLAIMS.

KARANGAHAKE AND WAITEKAURI

Quite a small pegging out boom is in progress in the Karangahake section of the goldfields, according to the statement made by an old prospector to a representative of the Auckland "Star."

"Practically all Karangahake has been pegged out," he said. "A Nelson syndicate has pegged out 100 acres at Mackytown for the cinnabar lode, and another 100 acres has been taken up alongside. The old Talisman property has been pretty well pegged out..."¹⁴⁰³

7 December

WARDEN'S COURT. BEFORE MR. F. W. PLATTS, WARDEN.

(From Our Own Correspondent.) PAEROA, Tuesday.

At the December sitting of the Warden's Court, Paeroa, Mr. F. W. Platts presiding, Samuel A. Shaw was granted three months' protection on the Hauraki special river claim No. 8483, in terms of the Minister's consent.

Mrs. Harriet Ritchie was granted a residence site on section 11, block 2, Mackaytown, area 19 perches, and Mrs. Annie Mills was granted sections 35 and 36, block 6, Maratoto, area 2 roods.

A prospecting license over 77 acres 3 roods at Mackaytown was granted to John Rowe Leggo, and a similar license over 100 acres at Mackaytown was granted to Bennett J. Morris.

A water race license for 1050 feet in a northerly direction from the No. 7 level in the New Talisman special quartz claim at Karangahake was granted to Rudolf Schulzki. An application from Henry Allan Meagher for a special

¹⁴⁰² <https://paperspast.natlib.govt.nz/newspapers/AS19271114.2.11.8>

Auckland Star, Volume LVIII, Issue 269, 14 November 1927, Page 4

¹⁴⁰³ <https://paperspast.natlib.govt.nz/newspapers/AS19271119.2.181>

Auckland Star, Volume LVIII, Issue 274, 19 November 1927, Page 21

quartz claim over the Crown mine at Karangahake (51 acres) was granted in terms of the Minister's consent.

A license to prospect over 100 acres, part in Rotokohu and part in Karangahake, was granted to Charles Adams.

A tunnel license was granted to W. F. McWilliams at Karangahake, commencing at a point $3\frac{1}{8}$ chains south of the Ohinemuri River, and terminating at a point on the original boundary of the late Talisman Consolidated mine.¹⁴⁰⁴

12 December

THE COMSTOCK TUNNEL.

The tunnel license granted to W. F. Mac Williams at the last sitting of the Warden's Court Paeroa, covers an area of ground at Karangahake which is well known to the older mining men as the Comstock property, named after the famous lode of Virginia, Nevada. The Comstock tunnel was driven by a well-known mining celebrity of the early days of Karangahake, Mr. Bill Tregowarth, a Cousin Jack, right in as a low level proposition towards the main range, and the Talisman property. Old charts show that the tunnel wound its way like a wandering brook round and about for some 1400 feet, and eventually came to a stop when old Bill Tregowarth also came to a stop in his earthly career. It is reported that a lode has been met with in the face just about this time, but nothing further was done. This tunnel, however, should now, after all the years, prove of great value to the holders in future development work of the claims held by them.¹⁴⁰⁵

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For the year 1927

MINES STATEMENT BY THE HON. G. J. ANDERSON, MINISTER OF MINES.¹⁴⁰⁶

ANNEXURE A. SUMMARY OF REPORTS BY INSPECTORS OF MINES.
NORTHERN INSPECTION DISTRICT (Mr. M. Paul, Inspector of Mines).
Quartz-mining.

Mr. M. Paul, Inspector of Mines

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New Zealand Crown Mines, Karangahake. —The area held by this company was forfeited by the Warden early in July.

Imperial Gold-mining Co., Ltd., Karangahake. —During the year further exploration work was done in Howard's level, adjacent to the Crown boundary, but as nothing encouraging was found the directors decided to prospect in the portion of the claim known as the Ballroom area. Considerable

¹⁴⁰⁴ <https://paperspast.natlib.govt.nz/newspapers/AS19271207.2.13.6>

Auckland Star, Volume LVIII, Issue 289, 7 December 1927, Page 4

¹⁴⁰⁵ <https://paperspast.natlib.govt.nz/newspapers/AS19271212.2.16.10>

Auckland Star, Volume LVIII, Issue 293, 12 December 1927, Page 4

¹⁴⁰⁶ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1928-I.2.2.2.3>

MINES STATEMENT BY THE HON. G. J. ANDERSON, MINISTER OF MINES., Appendix to the Journals of the House of Representatives, 1928 Session I, C-02

work has been carried out in this locality without disclosing anything of a payable character.

Earl of Glasgow Claim, Karangahake (J. B. Morris, manager). —A five-head stamp mill, one berdan and wilfry [Wilfley] table were erected during the year, and 81 tons of ore treated yielded 97 oz. 4 dwt., valued at £144 14s. 7d. The ore treated is of a refractory nature and the return by amalgamation process has not been satisfactory. The values in the lode from which this ore was obtained occur in pockets, and a picked sample of 1 ton treated at the Thames School of Mines yielded bullion valued at £19 4s. 1d., included in the total.

Macwall Claim, Karangahake (J. Smith, Manager).—This syndicate has been formed with the object of endeavouring to locate the continuation of a lode carrying high values discovered in a slip in the early days of the Karangahake Goldfields. It is estimated that 250 ft. of driving should intercept this lode. Work is now in progress.

1928

13 January

LOCAL AND GENERAL.

The heavy pall of smoke which has hung over the town during the past few days increased in intensity yesterday afternoon and evening, indicating that the peat swamp fires in various parts of the Hauraki Plains are showing no signs of decreasing. On the Karangahake Mountain a large fire was visible last night, while there was another large fire on Puketawa Hill, on the Coromandel Range, behind the Paeroa water supply catchment area. During the last few days there has also been rather an extensive fire in the Karangahake Gorge, and last night it was burning fiercely alongside the road. A large area, of beautiful bush has been destroyed by fire in the district this summer, including an area, at the head of the Waitawheta Valley.

Steady progress is being made with the erection of the Criterion traffic bridge at Paeroa. On the Te Aroha side one 30ft span off reinforced concrete has been completed, together with the necessary drainage and wheel-guards. The steelwork and reinforcing for the second 30ft span is now in position, and the concreting of the span will probably be completed today. The riveting of one of the 60ft main spans is finished, and good progress has been made on the second one. All the material required to finish the bridge is now on the site, and it is anticipated that there will be no delay from now onward. Two gangs of men, both of which have been increased lately, are now engaged on the job...

It is understood (states the Waihi Telegraph) that a well-known Auckland citizen interested in gold mining will leave shortly for the United States of America to endeavour to raise capital there for mining propositions, including certain of the claims recently pegged out in the Karangahake district.¹⁴⁰⁷

19 April

THE REVIVAL AT KARANGAHAKE

EARLY DAYS OF THE FIELD. OPERATIONS IN PROGRESS

During the past few months there has been quite a revival of mining activities in the Karangahake district and the locality is now being explored in a more thorough manner than since the first rush following the declaration of the field open for mining purposes on March 3rd, 1875, with the completion of negotiations for the purchase of the auriferous area from the Maoris by the late Mr James Mackay. Karangahake was then the centre of attraction as it was believed to be a perfect El Dorado of wealth and it is interesting to recall that at an early hour on the day of the opening there was great excitement at Mackaytown, which sprang up, mushroom-like, and in a few days became a veritable canvas town, quickly developing into a population of 1600 people...
...a helter-skelter down the hill, across the Ohinemuri River and up the opposite bank, no less than 600 excited men starting out together at a given

¹⁴⁰⁷ <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19280113.2.6>

Hauraki Plains Gazette, Volume XXXIX, Issue 5226, 13 January 1928, Page 2

signal. The track led down the steep hillside, across a mountain torrent and thence up another steep incline, the goal being the prospectors' claim, the tip head of which can still be seen at Karangahake.

One of the original prospectors of this famous claim was Mr W. F. ("Daldy") Macwilliams, but it was not until March, 1882, that he, with his brothers, the late Messrs J. McCombie and J. Liddle and Mr John Kelly, the present licensee of the Junction Hotel, Thames, started prospecting operations higher up the mountain range. Within a few months the party succeeded in intersecting ore bodies which led to the opening of the erstwhile famous Talisman, New Zealand Crown and Woodstock mines, now defunct. The history of these mines are well known.

FIVE CLAIMS BEING WORKED

Coming down to the present day revival of the industry in the district it is interesting to note the keenness of the parties engaged in prospecting. One of the more important works in hand at the moment is the putting in of a tunnel by an Auckland-Waihi syndicate in a portion of what is known as Scotchman's Gully, and not far from the location of the original prospectors' claim, already referred to. This tunnel is penetrating virgin country not touched by previous operations. It is in about 250 feet, and the country rock being driven through is said to be of a good description for the existence of gold-bearing reefs. The syndicate has also pegged out other areas in the vicinity, including the Taukane hill, which is on the left of the Karangahake gorge and the face of which comes down alongside the old Talisman battery, now being dismantled. In the early days, right on top of the mountain, rich stone was secured by prospectors, and the claim worked was called the Sir Walter Scott. Further up the range considerable tunnelling has recently been done on the old Imperial ground by a Paeroa syndicate with a view to intersecting certain ore bodies. Prospecting is also being carried out on the Crown mines area, which was forfeited and recently taken up by a Karangahake resident. Another prospector is working on what is known as Shepherd's lode, while further up the range is Morris' claim. This latter property holds what have been proved to be valuable ore bodies, and a small crushing and treatment plant is in operation. In addition to these works the well known prospector, Mr Sam Shaw, is operating a small river claim, dealing with the old tailings in the rough. Some months ago a cinnabar deposit off the Rahu valley, which had been worked in the earlier days, was pegged out on behalf of Nobel and Company, the well-known explosives firm. Altogether five claims are now in operation, three of which are working on ore bodies.¹⁴⁰⁸

8 November

PRESIDENT OF U.S.A

...The newly-elected president has had a remarkably successful career, not necessarily in the accumulation of wealth but in his calling as a mining engineer, and in public life. As quite a young man Mr Hoover became associated with the well-known mining engineers, Bewick, Moreing and

¹⁴⁰⁸ <https://paperspast.natlib.govt.nz/newspapers/WHDT19280419.2.13>

Waihi Daily Telegraph, Volume XXV, Issue 7655, 19 April 1928, Page 2

Company, which firm held extensive interests in Australia, and was also concerned in the revival of the Talisman mine, at Karangahake, which afterwards produced very considerable quantities of high grade ore. Periodically in the course of his professional visits to the firm's holdings Mr Hoover came over to New Zealand to inspect the workings of the Karangahake property. Later he took up his residence in London, where, after some time, he left Bewick, Moreing and set up as a consulting engineer on his own account...¹⁴⁰⁹

30 November

WAIHI NEWS.

The Borough Council last evening carried a resolution supporting the proposal for the purchase by the Mines Department of an aerial line and hoppers and a ground train, the property of the Crown Company at Karangahake...¹⁴¹⁰

AJHR 1929

For the year 1928

MINES STATEMENT BY THE HON. W. A. VEITCH, MINISTER OF MINES.¹⁴¹¹

ANNEXURE A. SUMMARY OF REPORTS BY INSPECTORS OF MINES.
NORTHERN INSPECTION DISTRICT (J. F. Downey, Inspector of Mines).
Quartz-mining.

J. F. Downey, Inspector of Mines

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Imperial Gold-mining Company, Karangahake.—On this company's holdings a new tunnel was put in for 630 ft. to test what is known as the "Ballroom" area. Several small veins were intersected, one of them, met at 412 ft., being about 30 in. wide. This was considered to be the downward continuation of the Ballroom leader, and several samples taken from it showed on assay values up to £7 17s. 9d. per ton. At the end of the adit a 7 ft. reef was cut, from which samples were assayed and gave results ranging from a few pence to £10 per ton. A trial crushing of 2¼ tons from this reef, put through the plant at the Thames School of Mines, only returned, however, bullion valued at £4 18s. 4d., which represented 72.6 per cent, of the full assay value. The company also had a parcel of 2¼ tons from another reef on the property, the Soutra reef, put through at the same plant. This crushing yielded bullion valued at £3 16s. 10d., said to represent a 65 per cent, extraction.

Earl of Glasgow Claim, Karangahake (J. B. Morris, Owner). —No mining-work was done on this claim during the year, but the treatment of some sand

¹⁴⁰⁹ <https://paperspast.natlib.govt.nz/newspapers/WHDT19281108.2.21>

Waihi Daily Telegraph, Volume XXV, Issue 7772, 8 November 1928, Page 3

¹⁴¹⁰ <https://paperspast.natlib.govt.nz/newspapers/AS19281130.2.48>

Auckland Star, Volume LIX, Issue 284, 30 November 1928, Page 5

¹⁴¹¹ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1929-I.2.2.2.3>

MINES STATEMENT BY THE HON. W. A. VEITCH, MINISTER OF MINES., Appendix to the Journals of the House of Representatives, 1929 Session I, C-02

from previous operations resulted in the recovery of 48 oz. bullion, valued at £46 5s. 6d.

McWall Claim, Karangahake.—The adit level was extended to 336 ft. without anything of value being met with. A winze was then started from the adit a few feet back from the face, and up to the end of the year this had been sunk about 30 ft. with no better results.

New Talisman Claim, Karangahake (R. Schulzki, Manager).—This claim, which formed part of the old Talisman Co.'s property, was operated by a Marton syndicate. The main objective was to locate a portion of Shepherd's lode, on the horizon of Talisman No. 8 level, which it was thought had been missed by previous operators. After picking up an old adit and driving about 227 ft. the portion of Shepherd's lode looked for was picked up, but at this place was not found to contain any values. Cornes reef was also intersected, but was not found rich enough to pay for working.

Crown Claim, Karangahake (A. H. Meagher, Owner). —This claim formerly formed part of the Crown Mining Co.'s area. The present owner has done a good deal of superficial driving and trenching on it, and located a small rich leader. He is now driving an adit to prove it about 100 ft. lower down. To the end of the year this adit had been driven 170 ft.

1929

12 June

Tramway and Aerial at Karangahake.

The N.Z. Crown Mines have again communicated with the Ohinemuri County Council in regard to the proposed sale of the tramway and aerial at Karangahake to the Government, inquiring if the sale can be effected if the County Council is prepared to take over and maintain them. The company has also written to the chairman of the District Mining Committee, Mr W. Marshall, on this matter. After the last meeting of the Ohinemuri County Council the county chairman, Cr. C. Mason, and the member for Karangahake riding, Cr. J. B. Morris, conferred with Mr Marshall, and it was agreed that the railway siding which exists as part of the tramway was not required by tributers or prospectors. It was also tentatively agreed that if the railway siding was excluded, and the tramway and aerial could be invested in the County Council without cost to it, the project was of sufficient public importance, to the Karangahake and Waikino ridings in particular, to justify serious consideration by the County Council. The proposal will be energetically pursued, and the chairman of the County Council, who is taking an active interest, is prepared to call his members together urgently if such a course becomes necessary.¹⁴¹²

11 July

It is 18 years since 12 black opossums were released at Dickey's Flat, near Karangahake. Since then they have multiplied greatly and may now be found as far afield as Te Aroha. A few have been seen at Komata, and some near the racecourse. Taking advantage of the present open season of six weeks, 12 trappers have secured licenses and are busy in the bush. One trapper has already bagged 50 skins, which have a market value of 12s 6d each.¹⁴¹³

19 July

WARDEN'S COURT. SITTING AT PAEROA.

The following applications came before the Warden of the Court, Mr F. W. Platts, S.M., at Paeroa on Wednesday :—...

The N.Z. Crown Mines, Ltd. (Mr E. A. Porritt) asked for protection to enable the company to complete the realisation of assets. Mr Porritt said that the company's battery at Karangahake had been dismantled and mostly disposed of. There were left 20 head of stamps and two Babcock and Wilcock boilers, negotiations for the sale of which were proceeding. Protection over the properties of J. B. Morris and J. Williams (Mr E. A. Porritt) at Karangahake was requested, pending the floating of a company. Mr Porritt said that Mr M.

¹⁴¹² <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19290612.2.6>

Hauraki Plains Gazette, Volume XXXX, Issue 5434, 12 June 1929, Page 2

¹⁴¹³ <https://paperspast.natlib.govt.nz/newspapers/NZH19290711.2.47>

New Zealand Herald, Volume LXVI, Issue 20304, 11 July 1929, Page 10

Wynyard, of Auckland, had an option over the properties and proposed to erect a battery at Karangahake for the treatment of ore...¹⁴¹⁴

23 October

An aeroplane passed over Paeroa at seventeen minutes to four on Monday, flying in a south-easterly direction. It disappeared flying in a straight line directly over the Karangahake gorge, a route officials of the Auckland Aero Club said would be used by 'planes on their way from Auckland to the East Coast and Bay of Plenty towns.

There are many rumours abroad that the cyanide from the Maratoto mines will not affect the swimming pool at Hikutaia this year. It would be well for persons to take no undue risks, and to be strictly guided by the warning issued in this paper last week. It is possible, however, that a sample of water taken from the creek may be forwarded to the Government analyst, for his report, and until this has been done, using the words of the previous warning, the river should be treated as though it were a plague.¹⁴¹⁵

6 December

OHINEMURI COUNTY. MEETING OF COUNCIL.

Cr. Morris considered that a fatal accident was due in the Karangahake gorge. Up till lately, he said, drivers through there had been careful, but now they rushed along at top speed.

Cr. Hoyer said it had been turned into a speedway since the road had been put in good order.

Cr. Morris: That's what's the matter, the road is too good.

Cr. Hoyer pointed out that signs bearing the speed limit of six miles per hour had been taken down since the Public Works Department took over the road.

The chairman thought there were already too many traffic signs. People disregarded them. He considered that a traffic inspector would be the best deterrent.¹⁴¹⁶

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MINES STATEMENT. BY THE HON. A. J. MURDOCH, MINISTER OF MINES.¹⁴¹⁷

ANNEXURE A. SUMMARY OF REPORTS BY INSPECTORS OF MINES.
NORTHERN INSPECTION DISTRICT (J. F. Downy, Inspector of Mines).
QUARTZ-MINING.

¹⁴¹⁴ <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19290719.2.21>

Hauraki Plains Gazette, Volume XXXX, Issue 5450, 19 July 1929, Page 4

¹⁴¹⁵ <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19291023.2.5>

Hauraki Plains Gazette, Volume XXXX, Issue 5491, 23 October 1929, Page 2

¹⁴¹⁶ <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19291206.2.21>

Hauraki Plains Gazette, Volume XXXX, Issue 5510, 6 December 1929, Page 4

¹⁴¹⁷ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1930-I.2.2.2.3>

MINES STATEMENT. BY THE HON. A. J. MURDOCH, MINISTER OF MINES., Appendix to the Journals of the House of Representatives, 1930 Session I, C-02

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Crown Claim, Karangahake (A. H. Meagher, Owner). —The adit mentioned in last year's report, which was started with a view to cutting what was known as the Retreat reef, was continued to 200 ft. without any reef being located. A further adit was put in for 40 ft. at a higher elevation without any more satisfactory result. From a small leader near the top of the spur the claimholder took, however, some 5 tons of quartz, which on treatment at the Thames School of Mines yielded 22 oz. gold, valued at £43 16s. 4d.

New Talisman Claim, Karangahake (R. Schulzki, Owner). —The claimholder carried out a good deal of further work in the way of trenches and shallow drives without locating anything of value.

The Imperial, Earl of Glasgow, and Macwall Claims in the Karangahake area were all idle for the year.

New Zealand Crown Mine, Karangahake. —No mining was done, but a clean-up around the old battery yielded 6½ tons of material, which on treatment returned 160 oz. 14 dwt. 10 gr. gold, valued at £313 12s. 4d., and 62 oz. 4 dwt. silver, valued at £5 0s. 9d.

1930

10 February

WORK STARTED.

TALISMAN-DUBBO MINE. IMPORTANT OPERATIONS.

Work was started last week on the Talisman-Dubbo property at Karangahake, which was part of the Crown mines area, and lies across the strip of the Maria Reef. Immediate operations cover the clearing of the road from the battery to the mine, while the mouth of the intermediate level, which leads to the reef, has already been reached. Timbering will be needed to reach the face.

In addition to the Maria reef, to which operations will be first directed, Sheehan's reef and Morris' reef are outcropping on the western face. A five-stamper battery is owned by the company and is situated at the mouth of the Rose crosscut on the road up the mountain.¹⁴¹⁸

Is this JB Morris' battery at the Earl of Glasgow? Where is the Rose Crosscut? Not far from the top of the Earl of Glasgow incline.

Five stamp battery

6 June

GOLD IN THE HILLS.

...There is gold in the hills. The winter sun is already far on his westering run. The business man is leaving his drab office to step into the evening chill of Paeroa's shower-damped main street. The monotony of his work is not relieved by the sombre dullness of the immediate environment, nor is it ameliorated by any inspiration from the plains beyond the town, and upon which the mental eye is focussed eternally. But he turns once more to the hills—in a direct line along the business thoroughfare stands the imposing sentinel of Karangahake Trig. It is bathed in a blaze of golden glory, caught from the last flaming rays of the sinking sun. Its scarred and monstrous ribs assume a supernatural lustre as they throw the intervening gullies and hollows into purple twilight. The ridge that cuts the skyline as it precipitates itself into the gorge below is just beyond the touch of the fading ray, and appears a black support holding the crazy pinnacle against the heavens, to catch the last glimmer of the sunken sun. As the fiery monarch sweeps to the bounds of night, the warm flush of his departing haste creeps upwards on the peak until, with a final lingering caress, it fades into the infinity of space above the ranges, and leaves the great crag cold and deathlike in the deepening purples of the lowering twilight. If the scene has stirred the imagination, if it has broken the monotony of his daily toil, then there is still gold in the hills.¹⁴¹⁹

25 July

TALISMAN-DUBBO.

¹⁴¹⁸ <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19300210.2.32>

Hauraki Plains Gazette, Volume XXXI, Issue 5535, 10 February 1930, Page 4

¹⁴¹⁹ <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19300606.2.20>

Hauraki Plains Gazette, Volume XXXI, Issue 5583, 6 June 1930, Page 3

REPORT ON OPERATIONS. SPLENDID PROSPECTS.

Operations at the Talisman-Dubbo were commenced by the company, at the end of January from a short drive, which had been put in by tributers many years ago on a reef called the Dubbo, on the southern slopes of the Karangahake Mountain. This drive was cleaned out to the face, 60ft., and operations since have consisted of advancing the tunnel on the reef. After driving 80ft. on the reef, it made into a compact body of quartz, showing gold and sulphides freely through the ore broken out. This, with a rich rib from 10 to 12 inches wide on the footwall side, was carried for 50ft. The reef then became somewhat disturbed and pinched in places, but still showing gold and sulphides in the ore. This continued for about 60ft., when it made into a solid reef carrying gold and shiny sulphides, and it has been carried at times wider than the drive for 62ft...

In order to determine the value of the ore saved from the rich rib referred to above, a trial lot of two tons from the ore broken out in the course of the driving was sent to the Thames School of Mines for treatment, and gave a value of £9 5s 7d per ton. The supervisor is of the impression that this reef is to the eastward of and entirely separated from both the Talisman and Crown reefs. A survey has been authorised to define the true position in relation to the known reefs in the Talisman and Crown mines.¹⁴²⁰

29 JulyKARANGAHAKE MINING. IMPORTANT DEVELOPMENT,
TALISMAN-DUBBO COMPANY

What may prove to be an important development as far as mining at Karangahake is concerned occurred in the property of a company called the Talisman Dubbo, which was formed to work a portion of the ground previously held by the New Zealand Crown Mines. What really was a prospecting company was formed, with a nominal capital of 80,000 shares of 5/ each, but only 25,000 were issued pending carrying out prospecting work, the intention being to issue the balance should developments warrant calling up the extra capital. The first area secured was 37 acres, and to this another 100 acres have since been added. Work was started under the supervision of Mr. John Smith, who was formerly an underground boss in the Talisman mine, and more recently manager of the Lucky Shot at Thames.

Operations were started in an old prospecting drive about 400 ft from the top of the hill. This was cleaned out for about 60ft, and driving started...

Two tons of ore from this vein were sent to Thames School of Mines, and without cyanidation gave a return of £9 5/5 per ton...¹⁴²¹

4 SeptemberENCOURAGING RESULTS AT KARANGAHAKE. TALISMAN-DUBBO
PROPERTY.

¹⁴²⁰ <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19300725.2.33>

Hauraki Plains Gazette, Volume XXXI, Issue 5604, 25 July 1930, Page 5

¹⁴²¹ <https://paperspast.natlib.govt.nz/newspapers/AS19300729.2.138>

Auckland Star, Volume LXI, Issue 177, 29 July 1930, Page 9

During last week-end Mr M. H. Wynyard and Captain A. J. Pearce, of Auckland, and Mr J. Morris, of Karangahake, directors of the Talisman-Dubbo Gold Mining Company, paid a visit to the company's property on the site of the old Talisman Dubbo mine at Karangahake...¹⁴²²

27 December

AUCKLAND GOLDFIELDS.

...Another company formed this year was the Talisman-Dubbo, at Karangahake, to work an area formerly included in the holding of the old Talisman Company. The new company is really a prospecting venture, only a small amount of capital having been called up to enable work to be carried out on a reef that was located, and the ore from which gives satisfactory assays. On the property is a small battery.¹⁴²³

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For the year 1930

MINES STATEMENT, BY THE HON. A. J. MURDOCH, MINISTER OF MINES.¹⁴²⁴

ANNEXURE A. SUMMARY OF REPORTS BY INSPECTORS OF MINES.
NORTHERN INSPECTION DISTRICT (J. F. Downey, Inspector of Mines).
Quartz-mining.

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Talisman-Dubbo Gold-mines, Ltd., Karangahake.—This company, which is now working on part of the Maria reef in portions of the areas previously held by the Talisman and New Zealand Crown Mines Companies, carried in during the year an adit on the reef from the old Dubbo section above the elevation of the Dubbo No. 1 level to a distance of approximately 556 ft. For practically the whole length the adit was on reef varying from about 18 in. in width up to 7 ft. 6 in. Throughout the driving the quartz is said to have shown colours on panning, but there were three runs or shoots, aggregating about 250 ft. in length, believed to have contained high values. Two tons of ore taken from one of them were sent to the School of Mines at Thames for treatment, and yielded 4 oz. 12 dwt. gold and silver, valued at £10 1s. 11d. The recovery represented, however, only about 54 per cent. of the assay value, the School of Mines plant only dealing with that portion of the gold amenable to amalgamation. Quartz is still showing in the face of the adit, and the driving is being continued. Three men on an average were employed.

Apart from the foregoing, and a little done by J. B. Morris on what is believed to be the Roderick Dhu reef, and some small amount by R. Schulzki in the

¹⁴²² <https://paperspast.natlib.govt.nz/newspapers/WHDT19300904.2.11>

Waihi Daily Telegraph, Volume XXVII, Issue 8049, 4 September 1930, Page 2

¹⁴²³ <https://paperspast.natlib.govt.nz/newspapers/AS19301227.2.21>

Auckland Star, Volume LXI, Issue 306, 27 December 1930, Page 4

¹⁴²⁴ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1931-I-II.2.1.4.3>

MINES STATEMENT, BY THE HON. A. J. MURDOCH, MINISTER OF MINES., Appendix to the Journals of the House of Representatives, 1931 Session I-II, C-02

New Talisman claim, no other work of consequence was carried out in the Karangahake area.

1931**20 January****OBITUARY. WELL-KNOWN WAIHI RESIDENTS****MR W. F. MACWILLIAMS. ASSOCIATION WITH MINING**

A well-known and highly respected resident of the Waihi, Ohinemuri and Thames districts passed away in the Waihi hospital on Sunday morning in the person of Mr William Francis ("Daldy") Mac Williams, in his sixty-ninth year, and after a lengthy illness. Mr Mac Williams, who was born at Papakura, was particularly well-known in mining circles, and always had great faith in the gold mining potentialities of the Ohinemuri field.

When deceased retired from the Justice Department in August, 1927, after a service of 25 years in the Waihi court, where he was employed as bailiff and draughtsman, he took an active part in prospecting throughout the Waihi, Karangahake and Waitekauri districts and was one of the provisional directors of the Waihi Prospecting and Mining Association. Mr Mac Williams had also acted for many years as New Zealand correspondent for the London "Mining Journal." In the early days of Thames he worked in the mines as a young man and during 1882 was associated with Messrs J. McCombie, J. Liddell and others in prospecting the Karangahake mountain. He was a member of the party which discovered the famous Talisman lode. Mr Mac Williams was prominent in athletic circles in the early days of the Thames goldfield...

Mr Mac Williams had a sensational experience when seventeen years of age. He was then a member of the Government survey party operating in the Rotokuhu Valley, near Karangahake, and was shot by hostile natives. The natives opened fire on the party, and young Mac Williams received very severe gun-shot wounds in the body. The natives left him for dead, and only his wonderful presence of mind in feigning death when they examined his apparently lifeless body, saved his life. In his badly wounded condition he crawled some considerable distance, and was eventually rescued by members of his party and sent to the Thames hospital, where he was a patient for some two years.

The late Mr Mac Williams was of a genial and optimistic disposition, and was highly esteemed by all with whom he came in contact. He leaves a widow, two daughters and one son Mr Noel Mac Williams, of the Southland Electric Power Board. A private interment took place at the Waihi cemetery this morning at 11 o'clock.¹⁴²⁵

2 November**PIONEERING DAYS OF OHINEMURI. OPENING OF THE FIELD.
DISCOVERY OF MARTHA REEF.**

In speaking to the toast of "The Pioneers of the Mining Industry" at the Waihi Old Boys' reunion, the chairman (Mr W. M. Wallnutt) said that in his opinion the lure of gold was the strongest power in the world to-day, as it had been in

¹⁴²⁵ <https://paperspast.natlib.govt.nz/newspapers/WHDT19310120.2.11>

Waihi Daily Telegraph, Volume XXVIII, Issue 8106, 20 January 1931, Page 2

past ages, and seemed likely to continue to be. All the famous rushes had proved great levellers of humanity in common, breaking down social and other barriers, the pan and the pick bringing them together as one family without distinction of any sort...

Karangahake was the El Dorado at that time, and men claiming to be the original prospectors were Messrs J. Smith, J. Corbett, M. Coleman, T. Arnold, A. Mackay, J. Thorp and J. Verrall.

Some Old-timers

Continuing, the speaker said that in 1882 the Talisman and Crown reefs were discovered by the MacWilliams Bros., J. Liddell and J. McCombie. Men taking an active part in the development of various claims were W. Davies, A. Hogg, R. Noble, P. C. Hansen, H. M. Shepherd, L. Melhose, W. Tregoweth, E. Ryan, J. W. Shaw and M. Marriner. The prospects of the field, however, had not come up to expectations and a general exodus took place. Those remaining having more confidence in the future were Messrs Liddell, Shepherd, C. Davidson, M. Kelly, G. Mason, W. Fraser and J. McCombie. These men marked off the well-known Maria reef for over a mile and took out five separate leases...¹⁴²⁶

5 December

LOCAL AND GENERAL

Mention of the noxious weeds menace was made by Cr. J. B. Morris (Karangahake) at the monthly meeting of the Ohinemuri County Council at Paeroa on Thursday afternoon. Cr. Morris especially referred to unoccupied sections in his riding which had been allowed to become breeding places for ragwort, to the detriment of neighbouring occupied land. All members agreed that action should be taken, and, on the motion of Cr. W. F. Johnstone, seconded by Cr. A. R. Robinson, it was decided that the chairman (Mr Colin Mason) should confer with the inspector of noxious weeds or the Department of Agriculture with a view to obtaining a quantity of spray...

A public demonstration of cooking by electricity will be given by a representative of the Thames Valley Power Board in the Foresters' Hall [Waihi] on Wednesday and Friday next, commencing each day at 1.30 p.m. Afternoon tea will be provided.¹⁴²⁷

10 December

LOCAL AND GENERAL

...the daylight saving scheme had not made any appreciable difference to the consumption of electricity...¹⁴²⁸

¹⁴²⁶ <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19311102.2.33>

Hauraki Plains Gazette, Volume XXXXII, Issue 2795, 2 November 1931, Page 8

¹⁴²⁷ <https://paperspast.natlib.govt.nz/newspapers/WHDT19311205.2.7>

Waihi Daily Telegraph, Volume XXVIII, Issue 8243, 5 December 1931, Page 2

¹⁴²⁸ <https://paperspast.natlib.govt.nz/newspapers/WHDT19271210.2.8>

Waihi Daily Telegraph, Volume XXIV, Issue 7604, 10 December 1927, Page 2

Daylight Saving**AJHR 1932**

For the year 1931

MINES STATEMENT, BY THE HON. C. E. MACMILLAN, MINISTER OF MINES.¹⁴²⁹

ANNEXURE A. SUMMARY OF REPORTS BY INSPECTORS OF MINES.
NORTHERN INSPECTION DISTRICT (J. F. Downey, Inspector of Mines).
Quartz-mining.

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Karangahake (J. Caisley, Manager).—The drive in the Dubbo section of this company's property was continued on the reef from 556 ft. to a total of 647 ft., the reef averaging about 3 ft. in width. With a view to enabling this ore to be mined and transported economically, a start was then made to reopen the old Talisman No. 1 adit on the other side of Karangahake Peak. This adit is about 100 ft. below the adit on the Dubbo side, and it is the intention of the management to rise from it to the upper adit, and install an aerial tramway to take the ore from the mouth of the Talisman No. 1 to the County road, from which point it can be carted at reasonable cost to a treatment plant. Owing to the portal of the old Talisman No. 1 being down, it was thought advisable to start a new adit in unbroken ground to meet the old adit some distance in. This new adit had been driven 20 ft. at the end of the year. Total yield of bullion since commencing work, 4oz. 12 dwt.; value, £11 17s. 11d.

Waiawa Claim (L. Turnbull, Owner). —Some driving was done in a low level in this claim on Taukani Hill, Karangahake, to cut a run of stone on what is believed to be the Roderick D'hu reef on which some work had been done in a shallower level the previous year. This low level was carried in farther than should have been necessary to cut the reef, but nothing was seen of it, and at the end of the year a rise was being put up to the upper adit. Some 14 tons of quartz from the mine, treated at the Moanataiari Battery at Thames, is reported to have yielded 23 oz. 19 dwt. bullion, valued at £47 9s. 11d. This is the total yield and value since commencing work.

New Talisman Claim, Karangahake (R. Schulzke, [Schulzki] Owner). —A little prospecting was done on this claim, mainly on the Sheppard and Woodstock reefs, the latter being driven on for 40 ft. Some fair values were said to have been got, but no quartz was crushed.

New Crown Claim, (H. A. Meagher, Owner). —This was the only other claim at Karangahake on which any mining was done during the year. An adit, 180 ft. in length, was driven with a view to striking the downward continuation of some leaders located at the surface, but nothing of a favourable nature was cut in it.

¹⁴²⁹ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1932-I-II.2.2.2.3>

MINES STATEMENT, BY THE HON. C. E. MACMILLAN, MINISTER OF MINES., Appendix to the Journals of the House of Representatives, 1932 Session I-II, C-02

New Zealand Crown Mines, Karangahake.—No mining was done, but 9 tons of old tailings, disposed of to L. Thorburn, Thames, and treated by him at the Thames School of Mines plant, yielded 22 oz. 10 dwt. bullion, valued at £57 6s. 1d. Total yield since commencing work, 17,813 oz. 10 dwt.; value, £17,161 6s. 1d.

1932

5 February

Mr R. Schulzki, holder of the New Talisman and the New Talisman Extended claims, Karangahake, was recommended to receive a reduction in mining rent to 2s 6d acre by the Ohinemuri County Council yesterday, but in the case of the Ohinemuri Gold and Silver Mines Limited (in liquidation), whose solicitor wrote seeking a reduction in rental to 1s an acre in respect of the 299 acres held, it was decided to agree to a reduction to 2s 6d an acre.¹⁴³⁰

Cherry's Battery

11 March

RELIEF CAMPS WORK

Relief camps were reported on as follows by Mr Shaw: —...

During the month, on account of a grant having been received from the Lands Department for the clearing of ragwort, a number of men from this camp were transported to the Karangahake area and put on to this clearing. During the two weeks in which the above was being carried out, a large area was covered.

Waihi-Waitawheta camps (Nos. 1 and 2); The men from both these camps are continuing with the formation work and metalling of the Waihi-Waitawheta and old Tauranga roads. As previously mentioned, these works have been hampered by wet weather...¹⁴³¹

2 June

The revival in gold mining which appears to be coming is indicated by the number of old prospectors who are returning to the scenes of their former labours (says the Hauraki Plains Gazette). One such visitor to Paeroa last week-end was Mr William Grace, who later went out to Karangahake to resume prospecting. The improved price of gold and the provision of crushing facilities by Mr Cherry has made it possible for prospectors to make a fairly good living, and there is the chance that they may strike it rich.¹⁴³²

16 June

COUNTY AFFAIRS

NEW OHINEMURI COUNCIL MEETS

WAIHI DISTRICT WORKS. MINING CLAIM RENTS

An application was received on behalf of Mr J. N. Cherry for a reduction in rent to 2s 6d per acre on the late Crown special quartz claim No. 9556. He said he had recently acquired the claim for the purpose of working it with certain members of his family on a co-operative basis, he had sunk a certain amount

¹⁴³⁰ <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19320205.2.8>

Hauraki Plains Gazette, Volume XXXIII, Issue 2831, 5 February 1932, Page 4

¹⁴³¹ <https://paperspast.natlib.govt.nz/newspapers/WHDT19330311.2.9>

Waihi Daily Telegraph, Volume XXX, Issue 8438, 11 March 1933, Page 2

¹⁴³² <https://paperspast.natlib.govt.nz/newspapers/WHDT19320602.2.6>

Waihi Daily Telegraph, Volume XXIX, Issue 8318, 2 June 1932, Page 2

of capital in works and machinery for the purpose of extracting and crushing his own ore. He had also acquired a small battery and power plant, and had been granted a special battery site by the Warden, and six months' protection, as there was a certain amount of unprofitable work to be undertaken before actual mining operations could be entered upon. The proposition was not a speculation, but was hoped to be a permanent means of earning a livelihood for Mr Cherry and members of his family.

On the motion of Cr. Morris, seconded by Cr. Robinson, the application was granted.

An application was also received for consent to a reduction in rent to 2s 6d per acre in respect of the Desert Gold river claim of 65 acres 35 perches licensed in the name of H. D. Bedford, and worked by W. F. McCallum. Attempts had been made and were being made to save the gold values which exist in the river, but up to the present time, although considerable money had been expended in the various experiments, no final solution had been found.

The council decided to offer no objection to a reduction, so long as a genuine effort was made to work the claim.

PRESERVING BEAUTY SPOT

The New Zealand Forestry League, Inc., wrote pointing out that Mr J. B. Morris, with the assistance of Mr E. C. Cutten, S.M., had succeeded in having placed under the control of the council a small area at Karangahake on which there were growing some kauri and other native trees. As the object of the league was to preserve where possible such native forests, it desired to know what steps in that direction the council had taken. Cr. Morris said the job of fencing the area was a small one and he moved that the work be done by relief labour.

The Chairman: I think it is up to us to preserve these little beauty spots.

Cr. Mason seconded, and the motion was carried unanimously.¹⁴³³

5 August

OHINEMURI COUNTY. MEETING OF COUNCIL.

Talisman Dubbo Mine. The Talisman Dubbo Gold Mines Ltd. wrote asking that repairs be effected to Trig Road on the Karangahake mountain in order that it could be used for the getting out of ore. Cr. J. B. Morris reported that the road had been inspected by the chairman and himself and the repairs had been put in hand. This action was approved.¹⁴³⁴

Application was made by the Talisman Dubbo Gold Mines Ltd. for some repairs to the Trig road to enable ore to be carted to the public battery at Owahoro; and after an inspection was made by Cr. Morris and the chairman the work was put in hand, using relief labour as much as possible.¹⁴³⁵

¹⁴³³ <https://paperspast.natlib.govt.nz/newspapers/WHDT19320616.2.9>

Waihi Daily Telegraph, Volume XXIX, Issue 8324, 16 June 1932, Page 2

¹⁴³⁴ <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19320805.2.26>

Hauraki Plains Gazette, Volume XXXIII, Issue 2907, 5 August 1932, Page 5

¹⁴³⁵ <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19320805.2.38>

Hauraki Plains Gazette, Volume XXXIII, Issue 2907, 5 August 1932, Page 8

The County Road now being called Trig Road.

10 August

APPLICATIONS TO WARDEN.

The following applications to the Mining Warden, Mr F. W. Platts, were dealt with at Monday's sitting of the Ohinemuri Wardens' Court: —

Talisman-Dubbo Gold Mining Co. Ltd.—An application for certificate of protection over five water race licenses, fifteen special site licenses and one special quartz claim.— Granted.

Ohinemuri Gold and Silver Mines Ltd.—Application for a certificate of protection over a number of licenses. Recommended to the Minister.

J. N. Cherry.—Application for a certificate of reduction.—Recommended for the consent of the Minister.

Talisman Dubbo Gold Mining Co. Ltd.—Application for certificates of protection over S.Q.C.'s 9501 and 9486, battery site, No. 9508 and water race No. 9509.—Granted for six months from 6/6/32.

Talisman Dubbo Gold Mining Co. Ltd.—Application for a reduction of rent to 2/6 per acre over S.Q.C.'s 9486, 9501, 598 and 9730.—Granted as from January 1, 1932.¹⁴³⁶

17 September

OHINEMURI GOLDFIELDS. INCREASE IN PROSPECTING (by telegraph—OWN correspondent) PAEROA, Friday

For several years a strong agitation was made by those interested in mining in the Ohinemuri: goldfields to have a public battery and crushing plant established in a central position in the goldfields. The Mines Department eventually met the request by assisting the Golden Dawn Goldmining Company in the erection of its battery at Owharoa, between Karangahake and Waikino. The battery is used mainly by the Golden Dawn Company to treat its own ore, and it is putting through about 40 tons of stone a day.

One of the conditions laid down by the Mines Department was that the company had to put through and treat parcels of ore for small companies and private prospectors, and was entitled to charge up to £1 a ton on all ore treated. During the past few months several prospectors and small claim holders have had parcels of stone treated at the Golden Dawn battery with very satisfactory results. Quartz from Maratoto, Waitekauri and Karangahake has been treated with satisfaction to the prospectors concerned, and at present the Talisman Dubbo Company is having 80 tons of ore carted from its claim at Karangahake to the battery for treatment. The advent of public crushing plant has given a great impetus to prospecting in the Ohinemuri goldfields.¹⁴³⁷

26 September

TALISMAN DUBBO CRUSHING

¹⁴³⁶ <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19320810.2.46>

Hauraki Plains Gazette, Volume XXXIII, Issue 2909, 10 August 1932, Page 8

¹⁴³⁷ <https://paperspast.natlib.govt.nz/newspapers/NZH19320917.2.18>

New Zealand Herald, Volume LXIX, Issue 21290, 17 September 1932, Page 7

AVERAGE OF £5 3s 7d. A TON

The treatment of 65.4 tons (dry weight) of ore from the Talisman Dubbo Gold Mines Ltd., Karangahake, has just been completed at the Golden Dawn battery, Owaharoa, for an extraction of £338 16s 7d (standard values), equal to £5 3s 7d a ton. On present prices realised for gold and silver this is equal to £546 cash.

The ore was won in the course of driving the No. 1 Talisman level on the Maria reef. A large tonnage remains overhead of that level and at present the company is driving from the north side of Karangahake Mountain to cut the reef 100 ft. below the Talisman Dubbo level. It is expected that the reef will be to hand at any time, when the drive will be continued on same and risen through to the Talisman Dubbo level. From the mouth of the lower level it is intended to construct an aerial tram to deliver the ore by gravity at a minimum of cost to hoppers to be erected on the county road.¹⁴³⁸

28 October

THE TALISMAN DUBBO.

The "New Zealand Financial Times" of October thus refers to the Talisman Dubbo mine:—

Talisman Dubbo Gold Mines Ltd. comprise the Talisman Dubbo, Earl of Glasgow, Why Not, Macadyn, a special quartz claim of 131 acres at Karangahake Mountain close to the Karangahake township and rail in the Ohinemuri County. The capital is £20,000 in 80,000 shares of 5s each, of which only 28,527 have been issued. It has a 5-stamp battery and valuable water rights. The capital was privately subscribed and no prospectus was issued. The directors are Messrs Chas. Adams (chairman), Captain A. J. Pearce, W. F. McCallum, R. H. Montgomery and B. M. Myers, and the secretary is Mr M. H. Wynyard, all of Auckland. The shares are not listed as the company has not yet sought Stock Exchange quotation.

The company is concentrating on the Maria Reef (the Bonanza lode of the old Talisman Company) from which nearly £3,000,000 of bullion was extracted. This lode is still intact through the Earl of Glasgow claim.

On an outcrop of the reef on the southern face of the mountain a drive of 650 feet has been completed 300 feet below the summit. A trial lot of 2 tons assayed £9 11s a ton, while 64.4 tons got out in the course of the drive was sent to the Golden Dawn battery and returned £5 3s 7d a ton actual extraction on gold at £4 an ounce.

This mine is as yet only in the realm of possibilities, but what wonderful possibilities they are. The men directing the project are wealthy men who know the business, and it is to be hoped that the promise of good fortune materialises.¹⁴³⁹

¹⁴³⁸ <https://paperspast.natlib.govt.nz/newspapers/NZH19320926.2.21>

New Zealand Herald, Volume LXIX, Issue 21297, 26 September 1932, Page 5

¹⁴³⁹ <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19321028.2.31>

Hauraki Plains Gazette, Volume XXXXIII, Issue 2942, 28 October 1932, Page 6

AJHR 1933

For the year 1932

MINES STATEMENT, BY THE HON. C. E. MACMILLAN, MINISTER OF MINES.¹⁴⁴⁰

ANNEXURE A. SUMMARY OF REPORTS BY INSPECTORS OF MINES.
NORTHERN INSPECTION DISTRICT (J. F. Downey, Inspector of Mines).
Quartz-mining.

J. F. Downey, Inspector of Mines

Page 27

Talisman-Dubbo Gold-mines, Ltd., Karangahake. — For the year this company was mainly engaged in opening up a new level on the northern side of Karangahake Mountain, on the horizon of the old Talisman No. 1 adit, to come in under its Talisman-Dubbo adit at a depth of about 100 ft. It was at first intended to reopen the old Talisman adit, but it was found so completely collapsed that the driving of an entirely new parallel adit was found necessary. To the end of the year this had been carried in for 461 ft., at which point it should nearly have reached the random of the Dubbo adit. Some 65 tons 4 cwt. of quartz previously won from the Dubbo adit was treated at the Golden Dawn plant for a return of 79 oz. 12 dwt. gold and 338 oz. 2 dwt. 19 gr. silver, valued at £461 15s. 11d. The output since beginning of operations has thus been 422 oz. 6 dwt. 19 gr. bullion, valued at £473 13s. 10d.

New Talisman Claim, Karangahake (R. Schulzki, Owner). —A little prospecting was done in surface levels on Woodstock reef, and 10½ tons of quartz was treated at the Golden Dawn plant. This yielded 13 oz. 13 dwt. 14 gr. gold and 24 oz. 18 dwt. 4 gr. silver, of a total value of £78. This is also the total yield and value since commencing work.

Imperial Prospecting Syndicate, Karangahake. —This syndicate during the year worked, under arrangement, the claims held by the Imperial Gold-mining Co. Some good float stone was found on one of the claims, and a strong effort was made to locate the reef from which it came. About 100 shallow bores were put down, and two prospecting shafts were sunk from surface, one to 32 ft. and the other to 53 ft., and from the latter a crosscut being put out for 12 ft. An adit was also driven for 28 ft. So far the work has not succeeded in its purpose.

Crown Claim, Karangahake (J. N. Cherry, Owner). —This claim has been prospected by the owner in a number of places without any satisfactory result. The owner also inadvisedly went to considerable outlay in erecting a battery of five head of stamps on the claim before sufficient ore had been proved to justify the expenditure. No quartz was treated at this plant, but 11 tons 1 cwt. 1 qr. 15 lb. won by a tributing party was treated at the Golden Dawn plant for a return of 17 oz. 3 dwt. 22 gr. gold and 76 oz. 11 dwt. 20 gr. silver, of total value of £103 17s. 1d. This is the total yield and value since commencing work.

¹⁴⁴⁰ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1933-I.2.2.2.3>

MINES STATEMENT, BY THE HON. C. E. MACMILLAN, MINISTER OF MINES., Appendix to the Journals of the House of Representatives, 1933 Session I, C-02

1933**12 May**

AID FOR MINERS.

DEPUTATION TO MINISTER. CRUSHING FACILITIES DISCUSSED.

Members of the newly formed Karangahake Tributers' and Prospectors' Association waited upon the Minister of Employment, the Hon. A. Hamilton, and the deputy-chairman of the Unemployment Board, Mr J. S. Jessep, at the Ohinemuri county chambers on Wednesday evening relative to the question of better crushing facilities for the ore won at Karangahake. The deputation was introduced by the county chairman, Mr W. Marshall, who explained that he had discussed the present position briefly with the Minister while travelling through the district.

The Golden Dawn Battery.

The chairman of the Association, Mr D. Leach, stated that at present there were twenty tributers and prospectors at Karangahake. Their difficulty was to get their dirt crushed...

Another problem, however, was the cost of cartage [to Owharoa], which was 12s 6d a ton.

The Low Grade Ores.

Mr J. B. Morris said that he had been on the field for very many years. The whole of the mountain contained low grade ore, but on account of the cost of cartage it was not a payable proposition with the present crushing facilities. He could show over 5000 tons of low grade ore. Mr Jessep said that why he had asked his question that low grade ore was attracting attention everywhere, and its working would provide much employment for many years. Mr Morris said that if some assistance was given in order to make a start with the working of low grade ore employment would be provided for very many years.

An Incomplete Plant.

Mr J. N. Cherry said that he had spent £400 on building a battery but had found that he would require a further £200 to complete it. He had approached the Government for a loan but without success, and as the battery was useless in its uncompleted state he had been forced to accept relief assistance.

Mr D. Leach pointed out that when Mr Cherry had approached the Government it had stated that as there were public crushing facilities available at the Golden Dawn battery there was no need for Mr Cherry to be assisted.

Mr Jessep asked the other members of the deputation whether they thought £600 was sufficient for Mr Cherry to provide a complete battery. Mr Leach said that while it was a question for experts, the deputation thought so.

In reply to a question Mr Leach said that the cost of transport to Mr Cherry's plant would be reduced to 2/6 per ton.

Mr F. E. Flatt explained that in the early days Karangahake had been worked by big companies which had taken out the rich ore and had left the blocks of poorer ore. These blocks were now quite payable, owing to the rise in the price of gold, and it was possible for men to make a good living working them if

only they could get the stone crushed. The Golden Dawn people were only prepared to crush when it suited them so if the Government could provide the funds for Mr Cherry's plant a hundred men would be taken off the relief funds. Any amount of the ore was worth up to £5 a ton, so would return good wages to workmen...

In reply to Mr Jessep, Mr Cherry said that his battery, when complete, could treat four tons of ore every eight hours. His idea was to provide a battery to crush for tributers and prospectors in order to earn money for the development of his own mine...¹⁴⁴¹

13 May

MINING ASSOCIATION.

An organisation to be known as the Karangahake Tributers and Prospectors' Association has been formed at Karangahake, some twenty odd members being enrolled. Mr D. Leach was appointed chairman and Mr. C. Waines secretary and treasurer, Messrs J. B. Morris, W. Symes, T. J. Maher and N J. Cherry the committee. Rules for the conduct of business were drawn up and active work was commenced a few hours later, when a deputation waited upon the Minister of Employment.¹⁴⁴²

6 July

CROWN MINES DIVIDEND

The payment of a dividend of 1½d a share is to be recommended by the directors of the New Zealand Crown Mines Company, Limited, at the annual meeting of the company to be held in London on July 14, according to cabled advice received yesterday by the local attorney. Mr. R. G. Milligan. The dividend is to be free of tax and payable on July 15 on all shares on the register as at July 6.¹⁴⁴³

14 August

THE CROWN MINES COMPANY

(From "The Post's" Representative.) LONDON, July 14.

The annual meeting of the New Zealand Crown Mines Company was held today, Mr. A. L. Foster presiding...

"The past history of the company, as a mining company," concluded the chairman, "has been disappointing; it was formed to work certain leases in New Zealand which were believed to be goldbearing and which from time to time appeared to offer good promise of proving payable and justifying further expenditure upon development, but in every case these good prospects unfortunately failed sooner or later to materialise, the distribution of the gold in the reef proving exceedingly erratic. This type of property is, of all, that

¹⁴⁴¹ <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19330512.2.35>

Hauraki Plains Gazette, Volume XXXIV, Issue 3020, 12 May 1933, Page 7

¹⁴⁴² <https://paperspast.natlib.govt.nz/newspapers/AS19330513.2.26>

Auckland Star, Volume LXIV, Issue 111, 13 May 1933, Page 4

¹⁴⁴³ <https://paperspast.natlib.govt.nz/newspapers/NZH19330706.2.23>

New Zealand Herald, Volume LXX, Issue 21536, 6 July 1933, Page 7

most feared by mining men, and financially the most dangerous, owing to the extreme difficulty of deciding if, or when, to cut your loss and abandon work on it."¹⁴⁴⁴

Indeed.

31 August

TALISMAN DEVELOPMENT

The Talisman Dubbo Gold Mines, Limited, Karangahake...

The construction of the aerial ropeway from No. 1 Talisman level to the County Road is now in hand, and it is anticipated that a daily output from the Maria reef will be maintained after the aerial is completed...¹⁴⁴⁵

20 September

SEARCH FOR GOLD.

THE KARANGAHAKE FIELD. (Contributed.)

In a quiet way the old Karangahake goldfield is coming into its own again. Little is heard of it, for no sensational finds have been made and there are not big gangs of men at work under the Unemployment Board's schemes as at Thames and Coromandel, but it is asserted that in the past few months more bullion has been won by the twenty-odd prospectors and tributers at Karangahake than at both Thames and Coromandel combined. Most of these men are working on their own or tributing for others, some few being employed on wages, and it is asserted that in the past few months there has been produced well over £1200 worth of bullion.

The work is spread over a wide area from the trig to the Ohinemuri river at the north end of the Taukani, and there is every prospect of it continuing, for the returns are quite satisfactory and at least three parties have made arrangements for a continuous supply of dirt to the battery [Owharoa].

No assistance whatever has been given by the Mines Department, and at the most the assistance towards wages by the Unemployment Board has been to three men at the rate of 15s per week to single men and 30s a week to married men. At present but two men are in receipt of assistance from the Unemployment Board's funds. Considering the great amount of assistance granted by the State in adjoining fields it is strange that so little has been granted Karangahake.

What is holding Karangahake back is the absence of adequate crushing facilities. What is wanted to ensure a good return are facilities for treating the dirt as though it were low grade. Experience has shown that the return from dirt which assays £6 a ton is but £2 12s, the balance going in expenses and battery losses.

The present system of treatment does not hold out much prospect for the individual man or the prospector, for the quantity of ore required, the long wait for payment after treatment, and the transport costs are all factors

¹⁴⁴⁴ <https://paperspast.natlib.govt.nz/newspapers/EP19330814.2.161>

Evening Post, Volume CXVI, Issue 38, 14 August 1933, Page 10

¹⁴⁴⁵ <https://paperspast.natlib.govt.nz/newspapers/NZH19330831.2.19>

New Zealand Herald, Volume LXX, Issue 21584, 31 August 1933, Page 5

working against him. Yet, in the opinion of men with a long experience of the Karangahake field, it is in such men that the future of the field lies.

Years ago Karangahake produced over four millions of bullion in a brief period. The rich deposits were worked and the country which did not show rich prospects was not touched. Then, when the rich country gave out, the works closed down. Very different was the policy of the Waihi Gold Mining Company in similar ground, for it took the poor with the rich and has continued producing big dividends ever since.

Karangahake was “boom and bust,” so that now, while it is very evident that the hill contains great quantities of gold—more perhaps than ever came out of it—there is required either a wealthy company to work the field as a big low-grade proposition or some little assistance to the prospectors and tributers who are now at work in order that they might prove the value of the hill. Were one of these parties to make a strike the future of Karangahake would be assured. In the meantime, there are men with faith in the old hill. For a long period there was but one man at work, and then for another long period there were two. Now, there are over twenty, and despite the handicap of expensive crushing facilities and expensive transport they are making a fair living besides keeping a number of carriers and battery-men off relief work.¹⁴⁴⁶

7 October

John Nathaniel Cherry was granted a prospecting license over 27 acres near the confluence of the Ohinemuri and the Waitawheta Streams, in Block 2, Aroha S.D.¹⁴⁴⁷

In 1933 the first one-day School Reunion was held on the Mackaytown Recreation Ground, but in 1959, through the initiative of Mr Eric Nash (the Headmaster) and his wife, Gwen, a grand, long weekend celebrated 70 years of the school's history. It was no small matter to accommodate the hundreds who came to the now sparsely populated area, but it was a wonderful success, aided by the fact that a new Hall had been built by the community.¹⁴⁴⁸

10 October

Talisman Dubbo (Karangahake)

The aerial ropeway from Talisman No. 1 level to the county road (2100 ft. in length, with a fall of 800 ft.), and loading and discharging hoppers are now working. A tender has been let for the cartage of ore to the Golden Dawn battery and arrangements have been made to commence treatment of the ore on Thursday next. Fifty tons are already paddocked or in the hoppers and the staff engaged to put out 10 tons of ore a day from the No. 1 Talisman level, which simultaneously will be advanced southward along the lode.

Arrangements are also in hand for rising on the lode from Talisman No. 1

¹⁴⁴⁶ <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19330920.2.25>

Hauraki Plains Gazette, Volume XXXIV, Issue 3076, 20 September 1933, Page 5

¹⁴⁴⁷ <https://paperspast.natlib.govt.nz/newspapers/AS19331007.2.15>

Auckland Star, Volume LXIV, Issue 237, 7 October 1933, Page 4

¹⁴⁴⁸ <http://www.ohinemuri.org.nz/historic-texts/karangahake-the-years-of-the-gold-1875-1935/245-more-changes-at-karangahake>

More Changes at Karangahake. KARANGAHAKE the years of the gold 1875 -1935

level to the Talisman Dubbo level, and when this is completed the daily tonnage available for treatment can be doubled.¹⁴⁴⁹

Talisman Dubbo aerial cableway

17 October

TRIBUTERS' GOOD RETURN.

That payable gold can be won at Karangahake, and that the district is producing more wealth than many other fields of which so much is heard, is demonstrated by the return obtained recently by Mr. J. Brown and party, who called at the office of the Paeroa Gazette this week with a statement from the Golden Dawn battery.

For a fortnight's work Mr. Brown and two mates, who are working on tribute, obtained 18.68 tons of dry ore. The actual gold recovered totalled 13.972 ounces, which, with gold valued at £6 10s 7d an ounce, was worth £91 10s 6d. In addition, the ore contained 16.195oz. of silver, worth £1 4s 5d, so the return was. £92 8s 11d. The cost of treatment at the battery, at 25s a ton, was £23 7s, and 2½ per cent. of the proceeds was deducted to cover the cost of gold duty, etc., so that the actual cheque received from the company was £66 15s 8d.

Out of this return of a little over £11 per week per man there was cartage, explosives, and royalty to be paid, but as one of the party observed, it was better than relief work.¹⁴⁵⁰

5 December

TALISMAN DUBBO

DIVIDEND OF 5 PER CENT

The directors of Talisman Dubbo Gold Mines, Limited, Karangahake. have declared an interim dividend of 5 per cent, equal to 3d a 5s paid share, payable on December 16. This is the first distribution by the company.

In a report, the directors state that since the completion of the aerial and hoppers on October 1, 202.27 dry tons had been treated at the Golden Dawn battery for an actual return of £1408...¹⁴⁵¹

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¹⁴⁴⁹ <https://paperspast.natlib.govt.nz/newspapers/NZH19331010.2.27>

New Zealand Herald, Volume LXX, Issue 21618, 10 October 1933, Page 5

¹⁴⁵⁰ <https://paperspast.natlib.govt.nz/newspapers/WHDT19331017.2.13>

Waihi Daily Telegraph, Volume XXX, Issue 8529, 17 October 1933, Page 2

¹⁴⁵¹ <https://paperspast.natlib.govt.nz/newspapers/NZH19331205.2.24>

New Zealand Herald, Volume LXX, Issue 21666, 5 December 1933, Page 5

MINES STATEMENT, BY THE HON. C. E. MACMILLAN, MINISTER OF MINES.¹⁴⁵²

ANNEXURE A. SUMMARY OF REPORTS BY INSPECTORS OF MINES.
NORTHERN INSPECTION DISTRICT (J. F. Downey, Inspector of Mines).
Quartz-mining.

J. F. Downey, Inspector of Mines

Page 27

Talisman—Dubbo Gold-mines, Ltd., Karangahake (C. F. Calvert, Manager).— Work was confined to the Talisman No. 1 level, which was extended a further 240 ft., the last 180 ft. of which was on reef. An aerial tramway was installed for the transport of ore from the mouth of the level to a point on the county road near No. 8 Talisman level. Stoping was started over the back of No. 1 adit, and during the year the company mined 331 tons of ore, which was sent to the Golden Dawn plant at Owaharoa for treatment. This ore yielded 307 oz. 8 dwt. gold, valued at £1,976 7s. 9d., and 1,693 oz. 4 dwt. silver, valued at £129 11s. 2d. From other parts of the company's property parties of tributers mined a further 74 tons 9 cwt. quartz, which was also treated at the Golden Dawn plant, for a yield of 32 oz. 15 dwt. gold, valued at £207 6s. 10d., and 177 oz. 1 dwt. silver, valued at £13 5s. 1d., making the total value of gold and silver produced from the mine for the year and since commencement of operations £2,800 4s. 8d. An average of four men was employed by the company, and there was about a similar number of tributers.

New Talisman Claim, Karangahake (R. Schulzki, Owner).—A good deal of work was done by the owner in the way of reopening and repairing old workings with a view to starting operations on Sheppard's reef. He crushed no stone for himself, but a party of tributers took several crushings from reef outcrops at surface which were put through the Golden Dawn battery. They totalled 35 tons 13 cwt. of quartz, and yielded 11 oz. 3 dwt. 14 gr. gold, valued at £74 7s. 5d., and 16 oz. 7 dwt. 18 gr. silver, valued at £1 4s. 10d. Total yield since commencement of operations 66 oz. 3 dwt. 16 gr. bullion; value, £153 12s. 3d.

Imperial Prospecting Syndicate, Karangahake.—This syndicate, working the area formerly held by the Imperial Gold-mining Co., did a considerable amount of surface work in the way of trenching and pitting with a view to locating the source of a quantity of "float" stone found on the claim. An old drive known as Stackpoole's was also reopened and repaired, and extended for several hundred feet with the same object in view, but in none of the workings was any reef found in situ. Some 7 tons 4 cwt. of the float was collected, which on treatment at the Golden Dawn battery yielded 3 oz. gold, valued at £18 12s. and 7 oz. 16 dwt. 7 gr. silver, valued at 12s. 6d. A tribute party also crushed 3 tons 7 cwt. of quartz from another part of the claim, which yielded 1 oz. 16 dwt. 22 gr. gold, valued at £11 6s., and 2 oz. 2 dwt. silver, valued at 3s. 2d. These results represented the total output of the claim since start of operations by the syndicate.

¹⁴⁵² <https://paperspast.natlib.govt.nz/parliamentary/AJHR1934-I.2.2.2.3>

MINES STATEMENT, BY THE HON. C. E. MACMILLAN, MINISTER OF MINES., Appendix to the Journals of the House of Representatives, 1934 Session I, C-02

Crown Claim, Karangahake (J. N. Cherry, Owner). —The old 5a level of the mine was cleaned up and repaired for about 1,000 ft., and a light aerial was erected to transport quartz from it to the tramline in Waitawheta Gorge.

Although a recollection by Jack Milroy¹⁴⁵³ has this cableway starting from the County Road, in which case it may have followed the route of the earlier (1912) Crown No. 7 level cable, the Crown 5a level is considerably lower on the mountain.

The owner mined 62 tons of quartz from a small block over the level, which yielded 52 oz. gold, valued at £278 4s. 9d., and 188 oz. 12 dwt. 14 gr. silver, valued at £13 18s., making the total value £292 2s. 9d. Several parties of tributers also mined from other parts of the property 37 tons 16 cwt. of quartz, which yielded 40 oz. 8 dwt. 3 gr. gold, valued at £251 13s. 2d., and 274 oz. 14 dwt. 15 gr. silver, valued at £21 1s. 2d., making the total output of the claim from the commencement of operations 649 oz. 11 dwt. 2 gr. bullion, valued at £668 14s. 2d.

Waiawa Claim, Karangahake (L. Turnbull, Owner). —Comparatively little active mining was done by the owner on the property during the year, but a party of tributers crushed 18 tons 13 cwt. of quartz for a yield of 13 oz. 19 dwt. 8 gr. gold, valued at £91 4s. 6d., and 16 oz. 3 dwt. silver, valued at £1 4s. sd. Total production since commencement of operations, 54 oz. 1 dwt. 8 gr. bullion; value, £139 18s. 10d.

¹⁴⁵³ <https://www.ohinemuri.org.nz/journals/journal-27-september-1983/dolph-schultz>

Dolph Schultz. Ohinemuri Regional History Journal 27, September 1983

1934

3 February

Unemployed men's camps:—...

Waikino: These men have been engaged on various works, including the reconstruction of the Paeroa-Waihi road. Karangahake: Reconstruction of the Paeroa-Waihi road is proceeding from this camp...

"Public Works camps in the county are accounting for very good work," continued the engineer...¹⁴⁵⁴

7 February

DISTRICT MINING.

THE OHINEMURI FIELD. APPLICATIONS TO WARDEN.

The following mining applications were dealt with by the mining warden, Mr. F. W. Platts, S.M., at the monthly sitting of the Court at Paeroa on Monday afternoon:—

Karangahake Prospecting Association (for a tramway license over an area 1000 yards long by 10 feet wide). —The inspector's report was favourable and the application was recommended for the consent of the Minister.

J. N. Cherry (for protection on the S.P.C. No, 9556 and battery site license No. 9830). —The inspector's report was favourable and the application was recommended for the consent of the Minister.

David. Leach (for a prospecting license over 100 acres at Karangahake).—The report was favourable and the application was granted.

J. N. Cherry (for a license to construct a dam in the Waitawheta Stream). — Referred to the Minister.¹⁴⁵⁵

10 February

SEARCH FOR GOLD

SUCCESS OF KARANGAHAKE SYNDICATE. OLD N.Z. CROWN MINE

Working quietly on the old Crown mine property at Karangahake is a private syndicate comprising Mr J. N. Cherry and his sons. In marked contrast to public companies they say little of what they are doing, but those in a position to know realise that they are meeting with greater success than many a gold mining proposition listed on the stock exchange. Messrs Cherry and Sons commenced operations some time ago with but little capital. For about £500 they equipped a battery and have since worked to such purpose that they have now been able to spend a further £500 on machinery. This comprises a low head turbine of 45 horsepower, pipes to convey water from a dam to be made in the Waitawheta stream to the turbine site at the present battery, and an air compressor. Up to the present the plant has been able to show a profit from ore

¹⁴⁵⁴ <https://paperspast.natlib.govt.nz/newspapers/WHDT19340203.2.7>

Waihi Daily Telegraph, Volume XXXIII, Issue 8574, 3 February 1934, Page 2

¹⁴⁵⁵ <https://paperspast.natlib.govt.nz/newspapers/AS19340207.2.145>

Auckland Star, Volume LXV, Issue 32, 7 February 1934, Page 10

returning £2 10s a ton, valuing the gold won at £4 an ounce, but with improvements to be effected later it will be found possible to profitably treat dirt of considerably lower grade. Hitherto the Cherrys have been working a five-stamp battery capable of crushing four tons of ore every eight hours, and with a return of £2 10s a ton there are wages at £1 a man a shift. Much of the ore on the claim is of higher value and tributers have obtained up to £6 a ton. The syndicate is having its claim thoroughly prospected by tributers who work under a strict agreement in respect to leaving the ground in a workable condition.¹⁴⁵⁶

19 April

MINING NEWS.

THE OHINEMURI FIELD. APPLICATIONS TO WARDEN.

Sitting as the mining warden at the Paeroa Courthouse on Monday, Mr. F. W. Platts, S.M., dealt with the following applications :—

The Karangahake Prospecting Association, the granting of a license for a tramway of 1000 yards alongside the Waitawheta stream at Karangahake, such application having been consented to by the Minister; granted.

John Nathaniel Cherry, the granting of a license to construct a dam in the Waitawheta stream 200 feet to the west of the Old Crown bridge to store water to drive a turbine, such application having been consented to by the Minister; granted.

Timothy B. Hurley, for protection for six months for a special dredging claim No. 9829, such application have been consented to by the Minister for a period ending May 7, 1934; granted.

H. D. Bedford, for protection for twelve months for the Desert Gold S.D.C. No. 8967; adjourned.

Eliza Adams, executrix in the estate of H. H. Adams, deceased, for protection for twelve months for sundry tunnel, water race and battery site licenses; granted.¹⁴⁵⁷

4 May

John Nathaniel Cherry.—For a water race license of 60 heads alongside the Waitawheta stream, 200 ft. below the old Crown bridge.—The inspector's report was favourable and the application was recommended to the Minister.¹⁴⁵⁸

From the above, it is not clear whether the battery was ever worked by water power, or if the dam was constructed. "200 feet to the west of the old Crown bridge", the dam would have been about half way between the Crown bridge and his battery. No conclusive evidence has been found at this area. A few metres down stream from the battery, on the river bank, lies a series of parallel, joined flat steel bars, which may

¹⁴⁵⁶ <https://paperspast.natlib.govt.nz/newspapers/WHDT19340210.2.26>

Waihi Daily Telegraph, Volume XXXIII, Issue 8577, 10 February 1934, Page 3

¹⁴⁵⁷ <https://paperspast.natlib.govt.nz/newspapers/AS19340419.2.21>

Auckland Star, Volume LXV, Issue 92, 19 April 1934, Page 4

¹⁴⁵⁸ <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19340504.2.33>

Hauraki Plains Gazette, Volume VL, Issue 3167, 4 May 1934, Page 7

have been used as a grizzly at the battery, or perhaps a grill for the water intake of a turbine.

Assuming the battery was worked, but not with water power, then some other power source was required (not mentioned). Internal combustion?

3 July

Talisman Dubbo (Karangahake).— TALISMAN DISTRIBUTION A dividend of 6d a share, equal to 10 per cent, has been declared by the directors of Talisman Dubbo Mines, Limited, payable on July 16. This is the fourth dividend declared by the company. The first, of 3d a share, was paid in December, 1933, followed this year by two dividends of 6d a share each in March and May.

The company is also offering 2300 shares at par to shareholders pro rata to their holdings.¹⁴⁵⁹

14 July

GOLDMINING CASE

TENURE OF A CLAIM

ACTIONS FOR FORFEITURE WARDEN IMPOSES FINE

(BY TELEGRAPH —OWN CORRESPONDENT) PAEROA Friday

A mining case with unusual features which was partly heard last Court day was concluded in the Warden's Court at Paeroa yesterday. Talisman Dubbo Gold Mines, Limited (Mr. C. N. O'Neill), and Athol Dally (Mr. Edwin Clendon) both claimed by separate action a decree of forfeiture in respect of the Crown Mine special quartz claim at Karangahake held by John Nathaniel Cherry (Mr. R. S. Carden). The ground on which each plaintiff relied was that Cherry had made default in the observance of the labour conditions prescribed by the Mining Act.

A preliminary legal question was raised to determine whether the Talisman Dubbo Company, which had filed its summons first, was entitled to any preferential consideration on that account, as it was only by accident that Dally's summons had not been filed first. This was for the purpose of determining who would have the prior right to take up a claim if forfeiture were decreed.

Claims by the Plaintiffs

The Talisman Dubbo Company claimed to have agreed to purchase portion of Cherry's ground, and on finding the title liable to forfeiture, had filed the summons to protect its rights. It was prepared to abide by the agreement for sale and purchase, whether forfeiture was decreed or not, provided it obtained a clear title to the portion mentioned.

Dally alleged that while working as a tributer on Cherry's ground he had discovered a rich leader from which he had obtained three crushing during April and May, the returns being £74, £153 and £95 respectively. As a result of this discovery, the Talisman Dubbo Company desired to purchase the area, and Cherry had given him notice terminating his tribute. Dally claimed that

¹⁴⁵⁹ <https://paperspast.natlib.govt.nz/newspapers/NZH19340703.2.18>

New Zealand Herald, Volume LXXI, Issue 21842, 3 July 1934, Page 5

this gave him an equitable right to have the forfeiture decreed in his favour. Cherry admitted that he had not had the full number of workmen employed, but submitted it was only as the result of a misunderstanding that he had not applied sooner for a certificate of protection which would have protected the claim front forfeiture during the time the default had occurred. It was stated he had spent over £2000 in developing this property during the past two years, and in view of all the circumstances, it was submitted, this was a case in which a fine should be inflicted in lieu of forfeiture.

Several witnesses were called by the parties.

The Warden's Decision

The warden, Mr. F. W. Platts. S.M., in delivering his judgment, said the Talisman Dubbo Company had instituted its proceedings for the purpose of protecting the interests it had acquired by purchase. This was a natural proceeding, and he could see nothing wrong in it. He did not consider it had been proved that they were taking any advantage of anything Dally may have discovered. Dally had no enforceable right, and no equitable right to a forfeiture.

The evidence showed that the Crown claim was worked 30 years ago, and abandoned as worked out, continued the warden. In 1931 when Cherry took it up, mining in the district was at a very low ebb. It was admitted that Cherry had not employed the number of men required, but the circumstances were exceptional. The mine had been worked out by the former owners, and the place was riddled with drives.

Cherry took it up in the hope that something profitable could be found and worked, the warden said. Cherry had sunk a lot of capital. He and his son had worked continuously and they had erected a lot of machinery. In a worked-out claim the full number of men could not conveniently be employed. In this case, there were special circumstances that justified the Court in inflicting a fine in lieu of decreeing forfeiture.

On the two summonses Cherry was fined £15 and costs £11 16s.¹⁴⁶⁰

26 July

TALISMAN ISSUE TAKEN UP

An issue of 3458 5s ordinary shares to shareholders in Talisman Dubbo Gold Mines, Limited, which closed yesterday, was over-subscribed. On allotment the shares will be paid to 2s, the balance being payable in calls of 6d each. The new capital is required for the purchase of portion of the Crown mining claim adjoining the Talisman Dubbo workings at Karangahake. The addition of this area will ensure the compactness of the Talisman property and will also make available a lode in close proximity to the present workings and easily available to the company's aerial transport.¹⁴⁶¹

¹⁴⁶⁰ <https://paperspast.natlib.govt.nz/newspapers/NZH19340714.2.29>

New Zealand Herald, Volume LXXI, Issue 21852, 14 July 1934, Page 9

¹⁴⁶¹ <https://paperspast.natlib.govt.nz/newspapers/NZH19340726.2.23>

New Zealand Herald, Volume LXXI, Issue 21862, 26 July 1934, Page 7

18 August**KARANGAHAKE PROSPECTS**

The well-known prospector, Mr. J. Morris, who has a claim on the Taukani Hill, has nearly completed his battery, which is being erected in the township. It is stated that he has a large tonnage of ore in sight.¹⁴⁶²

JB Morris has a battery in Karangahake township. This at what is now car park?

1 September**MINING REVIVAL. DEVELOPMENT PROSPECTS****EFFECT OF GOLD PRICES****TALISMAN DUBBO OPERATIONS**

The substantial increase in the price of gold in the past three years has opened wider possibilities for the development of mining in New Zealand, and it is known that properties which even a decade ago held little prospect of profitable development would to-day return dividends were an earnest effort made to win gold. An illustration of what can be done in mine development with comparatively limited capital and competent management is given by the success so far achieved by the Talisman Dubbo Gold Mines Limited, which has acquired ground formerly held by substantial companies.

While this company has a certain number of old workings in its area, it has a depth of approximately 600 ft. of virgin country below its present main level. Originally it secured the Earl of Glasgow and Dubbo portions of the old Crown property at Karangahake. It was on this land that the company carried out its investigations and within the past few weeks it has obtained several adjoining areas with the object of extending its operations...

...the No. 1 Talisman level on the northern face of the hill, nearly 1400 ft. above sea level.

Long Aerial Tram

A light aerial tram was then constructed from this point to convey the ore to the hoppers on the county road 800 ft. below, from where it was taken to the Golden Dawn battery for treatment. This aerial tram is one of the longest single span ropeways in New Zealand, having a length of 2160 feet [658m]. The first ore was sent down on October 1, 1933, and to date 1373 tons have been delivered and treated, realising, on an 85 per cent extraction, £11,428. Expenditure during that period on development has been £2563 and in the 10½ months the company has paid £3050 in dividends.

The company is at present employing 33 men in two shifts and it is estimated by the mine manager, Mr. W. M. McConachie, that he has opened up 15,500 tons of ore ready for treatment. The ground below this area is thought to contain probably 50,000 tons of ore which can be mined. One of the areas now acquired is the unworked portion of the Crown property to the eastward which contains the Crown reef intact. This is all above the No. 5 Talisman level which had previously been driven 1900 feet. Tributaries have been working there and have secured good values. It is considered that there will be 100,000

¹⁴⁶² <https://paperspast.natlib.govt.nz/newspapers/AS19340818.2.18>

Auckland Star, Volume LXV, Issue 195, 18 August 1934, Page 4

tons of ore above this drive, from which the Welcome lode can also be worked, while it is thought that there should be payable ore below where work has been done before.

Other Good Prospects

Tributes let on portions of the property remote from the company's operations have disclosed good values, particularly on the Morris leader on the eastern shoulder of the hill and the Adeline workings lower down. The McIntyre leader, which extends right through the property, also has shown good results, a parcel of five tons recently taken out realising £200 on an 85 per cent extraction.

It was explained yesterday by the chairman of directors of the company, Mr. W. F. McCallum, that the company had not yet decided to erect its own battery and would continue its arrangement with the Golden Dawn battery, which was crushing up to 50 tons a week for them. With the recent purchases they had secured the sites of the former Talisman and Woodstock batteries and they had also obtained water rights over the Ohinemuri and Waitawheta Rivers.¹⁴⁶³

7 September

...pink candles are still being supplied by the Talisman Dubbo company to its men at Karangahake, the issue being six candles to each two men for an eight-hour shift.¹⁴⁶⁴

1 December

KARANGAHAKE DISTRICT.

(From Our Own Correspondent.) WAIHI, Thursday.

The once famous mining district of Karangahake is again the centre of much activity in prospecting, in addition to the operations of the Talisninan-Dubbo Company, and most of the surrounding country has been pegged out. Mr. J. Morris has completed the erection of his battery in the township. The old stamper system has been discarded and the plant consists of a stonecrusher and ball mill. Mr. Morris is working a claim on top of the Taukani Mountain, which skirts the main road in the Karangahake Gorge, and where in the early days payable ore was mined...¹⁴⁶⁵

J. B. Morris has erected his battery in the township

AJHR 1935

For the year 1934

¹⁴⁶³ <https://paperspast.natlib.govt.nz/newspapers/NZH19340901.2.115>

New Zealand Herald, Volume LXXI, Issue 21894, 1 September 1934, Page 12

¹⁴⁶⁴ <https://paperspast.natlib.govt.nz/newspapers/NZH19340907.2.50>

New Zealand Herald, Volume LXXI, Issue 21899, 7 September 1934, Page 10

¹⁴⁶⁵ <https://paperspast.natlib.govt.nz/newspapers/AS19341201.2.109>

Auckland Star, Volume LXV, Issue 285, 1 December 1934, Page 12

MINES STATEMENT. BY THE HON. C. E. MACMILLAN, MINISTER OF MINES.¹⁴⁶⁶

ANNEXURE A. SUMMARY OF REPORTS BY INSPECTORS OF MINES. NORTHERN INSPECTION DISTRICT (J. F. Downey, Inspector of Mines). Quartz-mining. I have to report as follows on the mining industry in the Northern Inspection District for the year ending 31st December, 1934.

J. F. Downey, Inspector of Mines

Page 29

Talisman-Dubbo Gold-mines, Ltd., Karangahake (W. M. McConachie, Manager).—Work was carried on steadily for the period, an average of thirty men being employed. The drive south on No. 1 Talisman level was advanced 349 ft., making total of 1,018 ft. from portal and 473 ft. south of main rise. From the main rise to 160 ft. south the lode was 15 in. wide and of good value. From 160 ft. to 208 ft. south the reef was mixed with clay, and values were low. From 208 ft. to 473 ft. south the reef was of good value, and varied from 4 in. to 4 ft. in width. At 473 ft. south the drive connected with one of the old Dubbo workings previously driven from the southern side of Karangahake mountain. A rise was put through to connect with the level 100 ft. above. This was on a footwall section of the reef. Practically the only other development work was dome-driving done on McIntyre's leader. The leader was driven on 106 ft., and varied from ½in. to 6 in. in width, but the quartz was of high value. A rise was also put up on the leader for 24ft., following two veins of quartz of high value, but which were only from ½in. to 2 in. wide. During the year the company mined 2,034 tons of ore, all of which was treated at the Golden Dawn battery, and yielded 2,428 oz. 7 dwt. gold, valued at £14,228 11s. 3d., and 13,179 oz. 14 dwt. silver, valued at £1,057 2s. 9d. Besides this, 60 tons were mined by tributers for a return of 49 oz. 18 dwt. gold, valued at £296 6s. 11d., and 162 oz. 6 dwt. silver, valued at £14 0s. 11d., making the total output of the claim for the year 2,094 tons of quartz, which yielded 2,478 oz. 5 dwt. gold, valued at £14,524 18s. 2d., and 13,342 oz. silver, valued at £1,071 3s. 8d. Total output since commencement of operations 18,453 oz. 0 dwt. 5 gr. bullion, valued at £18,396 6s. 6d. Dividends to the amount of £2,614 5s. 6d. were paid.

New Talisman Claim, Karangahake (R. Schulzki, Owner). —A good deal of work was done by way of reopening old workings below the Talisman No. 8 level, on Shephard's reef. The owner mined 10 tons of quartz from a hanging-wall section of Shephard's reef for a return of 14 oz. 17 dwt. gold, valued at £105 8s. 5d., and 45 oz. 15 dwt. silver, valued at £4 18s. 11d., while tributers mined 20 tons for 16 oz. 5 dwt. gold, valued at £81 2s. 10d., and 73 oz. silver, valued at £5 7s. 11d., making the total output of the claim for the year 31 oz. 2 dwt. gold, valued at £186 11s. 3d., and 118 oz. 15 dwt. silver, valued at £10 6s. 10d. Total output since start of operations 164 oz. 11 dwt. 7 gr. bullion; value, £361 9s. 8d.

¹⁴⁶⁶ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1935-I.2.2.2.3>

MINES STATEMENT. BY THE HON. C. E. MACMILLAN, MINISTER OF MINES., Appendix to the Journals of the House of Representatives, 1935 Session I, C-02

Waiawa Claim, Karangahake (L. Turnbull, Owner). —Eight tons of ore from this mine was crushed at the Golden Dawn battery for a yield of 10 oz. 14 dwt. gold, valued at £63 7s. 11d., and 9 oz. 10 dwt. silver, valued at 13s. 2d. The quartz treated came mainly from the Crown reef at the Monastery level. Practically no development work was done on the claim during the year, but during the period the owner erected a small treatment plant for himself at Karangahake Township, in which it is proposed to treat any further ore won from the claim. Total output since beginning of operations 74 oz. 5 dwt. 8 gr. bullion; value, £203 19s. 11d.

New Talisman Extended Claim, Karangahake (C. C. O'Brien, Owner). —This claim is portion of the New Talisman, purchased from R. Schulzki. During the year the owner mined from surface portions of it 131 tons of quartz, which yielded 132 oz. 18 dwt. gold, valued at £849 4s. 6d., and 263 oz. 7 dwt. silver, valued at £28 9s. 6d., making the total output for the year 396 oz. 5 dwt. bullion, valued at £877 14s. 6d., which also represents the total output since start of operations.

Tawa Claim, Karangahake (O'Brien Bros., Owners). —From this claim 195 tons of quartz was mined during the year, which yielded 120 oz. gold, valued at £817 4s. 4d., and 146 oz. 19 dwt. silver, valued at £12 11s. 2d., making a total output for the year of 266 oz. 19 dwt. bullion, valued at £829 15s. 6d., which also represents the total output since start of operations. The quartz came from a surface portion of the Crown reef.

The Brothers Claim, Karangahake (O'Brien Bros., Owners). — From this claim 190 tons of ore was mined, which yielded 129 oz. 5 dwt. gold, valued at £893 14s. 6d., and 141 oz. 4 dwt. silver, valued at £12 15s., making the total output for the year 270 oz. 9 dwt. bullion, valued at £906 9s. 6d., which also represents the total output since start of operations.

Imperial Prospecting Syndicate, Karangahake.—The Imperial Prospecting Syndicate, which has now taken over portion of the Imperial claim from the previous owners, continued work fairly continuously through the year in the hope of locating the source of a quantity of rich "floater" found on the surface of the claim. Stackpoole's drive was extended a further distance to a total of 600 ft. from the portal, but no reef was located in it. The syndicate abandoned work there and started the driving of another shallow adit a few hundred feet farther to the north. To the end of the year this had been carried in 175 ft. Loose auriferous quartz was found practically the whole way embedded in slip material. A good deal of this was saved, but no crushing was done.

Star Claim, Karangahake (H. A. Meagher, Owner). —A small crushing of 2 cwt. of quartz from this claim, treated at Golconda battery, Thames, returned 11 oz. 7 dwt. gold, valued at £34 10s. 7d., while a further 5½ tons, treated at the Golden Dawn battery, yielded 4 oz. 19 dwt. gold, valued at £34 12s. 1d., and 56 oz. 9 dwt. silver, valued at £6 2s. 11d., making the total production for the year 72 oz. 15 dwt. bullion, valued at £75 5s. 7d., which also represents the total output since start of operations.

Talisman Battery-site (R. M. Aitken, Owner). —A tribute party cleaning up around this old battery-site recovered 254 tons of quartz, which on treatment at the Golden Dawn battery yielded 125 oz. 1 dwt. gold, valued at £849 9s. 5d., and 619 oz. 5 dwt. silver, valued at £60 3s. 5d.

Early Memories of Karangahake By C J Gwilliam

Speaking of walkways. How thrilling to have that tramp along the old rail-line, and am I looking forward to the proposed walk down through the Gorge and to follow the old pipeline from opposite the bluff and down past the old "Woodstock" battery. What memories! The old swing bridge across to that battery from the single mens quarters, just past the old Post Office. Well, who knows but that at sometime in the future we might even be able to walk the old tramline up the Waitawheta past the site of Cherry's small battery opposite the entrance to the old "Woodstock" mine with its shaft inside. I worked for a time for the Cherry's in 5A, which is up above the river-level entrance of the Crown mine and shaft....¹⁴⁶⁷

Dolph Schultz. By JACK MILROY.

Another man who worked around the east and south of the mountain was Cherry. He built a treatment plant of salvaged gear: Stamps, Crusher, Tanks, Bedan [Berdan – E] and Vanner Table, etc. around the Waitawheta Gorge, just in front of the old Talisman hopper on the left-hand side about 150 yards before the Monastery [aka "Crown Stope" – E]. This hopper was fed by an aerial tramway from up on the Trig Road [County Road – E]. The remains of the plant could still be seen before the 1981 flood. He was a very energetic man and always seemed to be rushing somewhere. It was a familiar sight to see his ancient ton truck, with no cab, travelling at a reckless speed, away up on the Trig Road, with its narrow, twisting rock-hewn track.¹⁴⁶⁸

If the aerial tramway was indeed from the County Road, then this may have been the old wire from No. 7 Level, the hopper being conveniently adjacent to the Cherry battery.

¹⁴⁶⁷ <https://www.ohinemuri.org.nz/journals/journal-31-september-1987/early-memories-of-karangahake>

Early Memories of Karangahake. Ohinemuri Regional History Journal 31, September 1987

¹⁴⁶⁸ <https://www.ohinemuri.org.nz/journals/journal-27-september-1983/dolph-schultz>

Dolph Schultz. Ohinemuri Regional History Journal 27, September 1983

1935

4 February

CAPSIZE OF A LORRY

EDGE OF ROAD SUBSIDES. THREE PEOPLE INJURED. FALL CHECKED BY BUSHES (by telegraph OWN correspondent) PAEROA, Sunday.

Five occupants of a lorry were involved in a serious accident near Karangahake yesterday afternoon when the vehicle capsized over a bank and fell nearly 30ft. before being held by trees and thick undergrowth. The driver, J. W. Forrest, contractor, of Paeroa, suffered a fractured jaw and bruises, his daughter, Miss Heath Forrest, was cut on the head, and Mr. J. McConachie, manager of the Talisman Dubbo gold mine, suffered the fracture of several ribs. Two youths, Mr. Jack Forrest, son of the driver, and Mr. W. White, who were riding on the back of the lorry, escaped uninjured.

Mr. Forrest was driving along a narrow road leading up to the Talisman Dubbo mine when he met a herd of cattle. He drove to the side of the road in order to pass, but suddenly the edge gave way, and the truck was precipitated down a steep bank. It turned over twice before coming to rest against some trees and in the centre of a thick clump of blackberries.

The two youths were thrown clear when the lorry capsized, but the occupants of the closed cab were unable to get clear. Miss Forrest was able to scramble out through the shattered door when the vehicle came to rest, but the two men were pinned underneath. Several men were quickly on the scene, and after about 10 minutes were able to lift the truck and free Mr. Forrest and Mr. McConachie, who were taken to Paeroa by Mr. C. O'Brien for medical treatment.

Miss Forrest's injury required several stitches. Mr. Forrest was also able to receive attention at his home, but Mr. McConachie was ordered to the Thames Hospital.¹⁴⁶⁹

6 February

KARANGAHAKE FIELD. MANY RUMOURS.

The fact that a few of the miners were put off the Talisman Dubbo mine this week has given rise to many rumours in Paeroa. It is not possible to get at the actual state of affairs, and many theories are advanced, but it is generally agreed that the shortening of hands is due to the fact that the Golden Dawn-battery is not able to continue crushing Dubbo ore at the same rate as formerly. In fact, prospectors have had their parcels severely limited. It is stated that the reason for this is the fact that greater quantities than formerly are being mined in the Golden Dawn. This is probably the explanation.

Nevertheless, the incident has given rise to the statement that the Golden Dawn plant has been sold to the concern which took up a six months' option

¹⁴⁶⁹ <https://paperspast.natlib.govt.nz/newspapers/NZH19350204.2.129>

New Zealand Herald, Volume LXXII, Issue 22025, 4 February 1935, Page 11

late last year and that the new owners are concentrating on developing their own mine. Arising out of this it is asserted that the Talisman-Dubbo company is to proceed immediately with the erection of a crushing plant of its own. It is known that the company has acquired a battery site on the location of the old Talisman battery, and a decision to build would not surprise those who claim to know something of the working of the company.¹⁴⁷⁰

30 March

TALISMAN DUBBO YEAR

PURCHASE OF MILLING PLANT

The accounts of Talisman Dubbo Gold Mines, Limited, for the year ended December 31, show a net profit of £5733, against £915 earned in the half-year ended December, 1933, and a loss of £118 in the previous half-year. Interim dividends of 6d a share paid in March, May and July, 1934, absorbed £2614...

The treatment of ore by the Golden Dawn Company did not, by reason of the cartage cost and treatment conditions, enable ore under, say, £3 a ton value (on £4 an oz. gold value) to be profitably treated. There was a large tonnage of ore of a value of around about £2 a ton, which, assuming the company had its own treatment plant, could be profitably milled at the higher gold prices available today. The directors believe that, unless better conditions could be made for treatment in an outside plant than existed at present, the time had arrived for consideration of a milling plant for the company.

Samples of ore had been sent to England, America and Australia, for testing, with a view to selection of the most suitable and up-to-date plant. For this reason available funds were being conserved and not paid in further dividends. The mine manager had been instructed to survey and sample all ore available in the various workings in the property, to ascertain the amount of ore reserves available and whether the present erection of a treatment plant was fully warranted.

The directors during the year completed the purchase of the whole of the Crown mines S.Q. claim of 51 acres, and also applied for an adjoining area of 19 acres, making the total present holding 209 acres. The acquisition of the areas secured the extensions of a number of reefs traversing the mine, and also access by old workings to the reefs.¹⁴⁷¹

7 June

KARANGAHAKE FIELD.

(Contributed).

As has been stated in your paper in the past, writes Mr J. B. Morris of Karangahake, the prospects of the old Karangahake are looking up. It is, of course, not possible without access to documents, to give the actual returns from the field but one is safe in stating that the return for 1934 was well up to £20,000.

¹⁴⁷⁰ <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19350206.2.28>

Hauraki Plains Gazette, Volume VLI, Issue 3291, 6 February 1935, Page 5

¹⁴⁷¹ <https://paperspast.natlib.govt.nz/newspapers/NZH19350330.2.20>

New Zealand Herald, Volume LXXII, Issue 22072, 30 March 1935, Page 9

As this was produced without assistance from the Unemployment Board or the Mines Department it goes to show that the field still holds some bullion and that if it were kept going it would lead New Zealand in general, and Paeroa in particular, along the right road to prosperity, for most of the sum mentioned is spent in wages, mining requisites, cartage, crushing, etc., keeping men off the unemployed list and enabling them to contribute a substantial sum to the Unemployment Fund.

It also proves that all that Karangahake needs is crushing facilities—a want that has been expressed for years but not filled yet—for though one or two parties are putting in pilot plants they will not fill the need. The Paeroa Chamber of Commerce has stated that it was taking up the question of getting the field moving again. Paeroa people have been rather unfortunate in their speculations here and I know of much hard-earned money that has been spent here without result. But this was not the fault of the field. What is wanted is that the right men get together, secure an unbiassed opinion of the country and with capable supervision, sympathetic, honest, practical work, the proposition will be a success. This will cost money, as it appears to me that if any Government Departments are to be approached for assistance it must be shown that the applicants have faith in the field.

It may be contended that it is necessary to look for new ground that has not been prospected before. Speaking with a fair knowledge of the question I may say that the old prospectors did not leave many spots on the whole peninsula into which they did not stick their picks or from which they did not pan a dish. There are many uncovered portions of known reefs at greater depth, portions of reef that were left owing to low values, hardness, of difficult of access, which, with the present price of gold could be worked at a considerable profit. When it is remembered that for a good length of time there was only one man working on the field and that at present there are at least a hundred exclusive of battery hands, carters, etc., it is conclusive proof that Karangahake is not finished. There are many good chances in the place for the actual ground which has been worked and which produced over five millions of money comprises but a few acres. It may be asked what are the local men doing that they don't take advantage of the opportunities which are offering. As stated before it takes money to start and in Karangahake there are men who have had sufficient faith in the field to spend all their own money and as much as they could borrow. At times they have had a win but at all times they must live and much money is necessary to live when returns are not coming in. Then it must be remembered that in all mining districts there are only a few that prospect and many that just look for others to find work for them.

The present price of gold has turned attention back to the old field and good returns have been secured. There is no reason why such returns should not be secured for many years to come.¹⁴⁷²

8 July

There was a big attendance at the Mackaytown domain yesterday when a Rugby match was played between the Karangahake miners' team and a Paeroa

¹⁴⁷² <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19350607.2.22>

Hauraki Plains Gazette, Volume VLI, Issue 3339, 7 June 1935, Page 5

team and selections were played by the Paeroa King's Jubilee Band. The sum of £5 10s was collected for the band funds. The Rugby match was a very interesting one and was won by Karangahake by six points to three.¹⁴⁷³

30 October

Mr. L. Oldham has been transferred from Colville-Port Jackson road formation job to take charge of the widening of the Karangahake gorge. He arrived in Paeroa last week. The 40 relief workers are due to arrive shortly, and it is expected that the work will take six months, for the keeping of the road open for traffic as much as possible will hamper the progress. In quite a number of places the road is to be built out on what is now river bed. When the gorge road is closed, traffic will be deviated to the Rahu Road. Mr. Oldham will also supervise the deviation of the highway on the Waikino side of the Waitete bridge.¹⁴⁷⁴

AJHR 1936

For the year 1935

MINES STATEMENT. BY THE HON. P. C. WEBB, MINISTER OF MINES.¹⁴⁷⁵

ANNEXURE A. SUMMARY OF REPORTS BY INSPECTORS OF MINES. NORTHERN INSPECTION DISTRICT (E. J. Scoble, Inspector of Mines.) Quartz-mining. I have to report as follows on the mining industry in the Northern Inspection District for the year ending 31st December, 1935

E. J. Scoble, Inspector of Mines.)

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Talisman-Dubbo Gold-mines, Ltd., Karangahake (W. M. McConachie, Manager).—Work was carried on steadily for the period, an average of thirty-one men being employed. Talisman No. 2 level: The drive south was advanced 454 ft., total 484 ft. from the main crosscut. The reef was narrow throughout, but values were satisfactory. At 140 ft. south the filled in stopes worked by previous owners were intersected, and the drive was then diverted to the east and carried through country rock to 484 ft. on the footwall side of the old stopes. Another 160 ft. of driving should reach the point where highly payable ore was mined in No. 1 level. Talisman No. 1 level: The drive south of the main rise was advanced to 493 ft. through an old collapsed stope. The drive from 493 ft. to 602 ft. south was cleaned out and the track relaid. The lode from 493 ft. to 560 ft. is small, irregular, and somewhat disturbed. The stopes from the main rise to 500 ft. south produced 955 tons of good grade ore. High-grade ore was obtained on the footwall vein from 420 ft. to 470 ft. south, the average width being 8 in. Dubbo level: The drive north was advanced to 720 ft. From 640 ft. to 669 ft. the reef averaged 14 in. in width, and was worth

¹⁴⁷³ <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19350708.2.13>

Hauraki Plains Gazette, Volume VLI, Issue 3352, 8 July 1935, Page 4

¹⁴⁷⁴ <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19351030.2.13>

Hauraki Plains Gazette, Volume VLI, Issue 3401, 30 October 1935, Page 4

¹⁴⁷⁵ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1936-I.2.2.2.3>

MINES STATEMENT. BY THE HON. P. C. WEBB, MINISTER OF MINES., Appendix to the Journals of the House of Representatives, 1936 Session I, C-02

about £5 15s. 10d. per ton. At 686 ft. the lode is cut off by a break or fault. At 720 ft. a crosscut was driven 20 ft. to the east. A fissure 15 in. wide, filled with clay and a small amount of quartz, was cut at 18 ft. east, but further work will be necessary to determine whether or not this is the faulted portion of the main lode. A rise at 110 ft. north was put up 20 ft. From this rise an intermediate drive was carried in for 75 ft. and good ore, averaging 20 in. in width, was exposed over that distance. The stopes above the Dubbo level produced 1,911 tons of very good grade stone. During the year the company mined 2,811 tons of ore, which was treated at the Golden Dawn battery for a yield of 2,495 oz. 11 dwt. of gold, valued at £21,170 9s. 8d. and 11,301 oz. 12 dwt. of silver, worth £1,760 15s. 10d. Besides this, 7 tons of quartz was mined by tributaries for a return of 8 oz. 18 dwt. of gold, valued at £64 4s. 2d. and 55 oz. 15 dwt. of silver, worth £6 4s. 8d., making the total output from the claim for the year amount to 2,818 tons of quartz, which yielded 2,504 oz. 9 dwt. of gold, valued at £21,234 13s. 10d., and 11,357 oz. 7 dwt. of silver, worth £1,767 0s. 6d. Dividends to the amount of £3,835 6s. were paid. The total yield of bullion since the commencement of operations is 32,314 oz. 16 dwt., valued at £51,398 0s. 10d.

New Talisman Claim, Karangahake (R. Schulzki, owner). —During the year a good deal of driving and crosscutting was carried out. A crosscut, advanced a total of 123 ft., intersected Shephard's reef at 97 ft. in. The reef here was found to be about 6 ft. wide, but was of low value. A total of 8 tons was mined from the claim for a return of 5 oz. 7 dwt. of gold, valued at £38 3s. 3d., and 141 oz. 11 dwt. of silver, valued at £18 13s. 9d. The total yield of bullion from the claim since the start of operations is 311 oz. 11 dwt., valued at £418 6s. 8d.

Waiawa Claim, Karangahake (L. Turnbull, owner). —About 325 tons of quartz was mined from this claim during the year, practically all of which was treated in the Waiawa battery. A return of 188 oz. 17 dwt. of bullion, valued at £702 10s. 4d. was obtained. Five men were employed. The total yield of bullion from the claim since the commencement of operations is 263 oz. 2 dwt., valued at £906 10s. 3d.

The Brothers Claim, Karangahake (O'Brien Bros., owners). —Two hundred and eleven tons of quartz, which was mostly won from old mine passes, was treated at the Golden Dawn battery for a return of 139 oz. 17 dwt. of gold, valued at £899 9s., and 93 oz. 2 dwt. of silver, worth £12 5s. The total yield of bullion since the beginning of operations is 503 oz. 8 dwt., valued at £1,818 3s. 6d.

Jubilee Prospecting Syndicate, Karangahake. —This syndicate carried out a fair amount of work by way of crosscutting and driving on the old Imperial claim. Operations were mainly on the Jubilee and Sutra reefs, the former being driven on for 122 ft., and the latter for 34 ft. Values were low. Four crosscuts were put in on the southern section of the area for distances of 15 ft., 25 ft., 20 ft., and 38 ft., respectively. Small leaders carrying low values only were met with. No ore was crushed during the year.

New Talisman Extended Claim, Karangahake (C. C. O'Brien, owner). —From this claim 29 tons of ore was treated at the Golden Dawn battery for a return of 10 oz. 9 dwt. of gold, valued at £75 16s. 9d., and 24 oz. 9 dwt. silver, worth £2 14s. 4d. The total yield since the beginning of operations is 431 oz. 3 dwt. of bullion, valued at £956 5s. 1d.

Talisman Battery Site, Karangahake (R. M. Aitken, owner). —A tribute party continued the work of cleaning up around this area, recovering 146 tons of ore, which, on treatment, yielded 125 oz. 2 dwt. of gold, valued at £795 19s. 2d., and 458 oz. of silver, worth £58 8s. 1d. The total amount of bullion obtained since the beginning of operations is 1,327 oz. 8 dwt., valued at £1,764 0s. 1d.

PUBLIC WORKS STATEMENT (BY THE HON. R. SEMPLE, MINISTER OF PUBLIC WORKS).¹⁴⁷⁶

Page 136

Ohinemuri County: A small bridge was destroyed by flood at Waikino, and replaced with a 6 ft. by 6 ft. concrete culvert. The widening on this section has been continued, and the improvement of the Karangahake Gorge put in hand. The work is principally in rock cutting with high batters, and massive stone walling adjoining the river.

Level crossing elimination near Waihi: A contract was let for the elimination by a 70 ch deviation, of a highway level-crossing, an unsatisfactory subway, and a level-crossing on a by-road. The formation of the first 34 ch., including the placing of all culverts, has been completed.

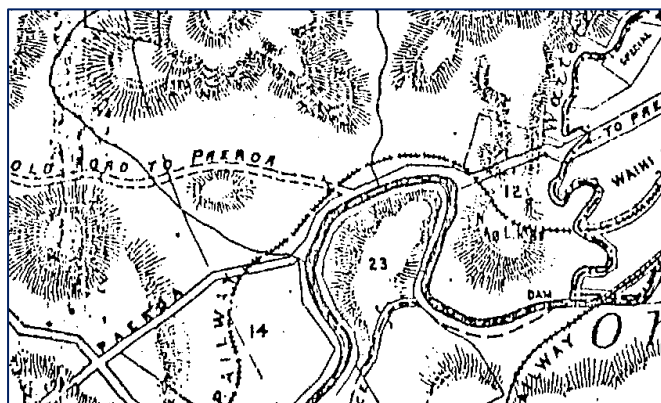
Waihi Borough: A contract has been let for a new concrete bridge over the Ohinemuri River, and work is in hand.

The 6 ft. by 6 ft. concrete culvert is opposite the Victoria Battery (destroyed by flood 2 February 1936).

The concrete bridge is the Tauranga or Coronation Bridge.

The highway, SH 2, when travelling from Waikino to Waihi, used to cross the railway about where there is a level crossing now to a farming property. It skirted the Ohinemuri River before ducking under the railway as the track climbed towards the Waihi station. This subway was roughly opposite the present day Rifle Range Road. The section skirting the river can still be seen today, most clearly from the cycleway on the opposite bank.

The highway now keeps to the north of the rail line. The map is a crop from Topographical Plan, Waihi and Surrounding Country, 1900.



¹⁴⁷⁶ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1936-I.2.2.3.1>

PUBLIC WORKS STATEMENT (BY THE HON. R. SEMPLE, MINISTER OF PUBLIC WORKS)., Appendix to the Journals of the House of Representatives, 1936 Session I, D-01

1936**10 January****WAIHI-PAEROA ROAD****GORGE CLOSED.**

The Karangahake-Gorge section of the Auckland-Tauranga highway between Waihi and Paeroa, will be closed next week for reconstruction purposes, stated Mr T. G. Julian, a member of the Council of the Automobile Association (Auckland), who returned from a tour of inspection yesterday. For holiday touring purposes the association will regard the highway as closed for traffic and is already diverting motorists, travelling to and from the Bay of Plenty, via the Kaimai Hills route. Provision for local traffic is being made by an old road climbing over the hill at the back of Karangahake.

The work in the gorge involves the cutting back of a solid rock face 80ft. high, a distance of 40 ft. into the hillside and extensive blasting operations are necessary. Some of the spoil will be utilised to make a filling 30ft. high in the bed of the stream. The reconstruction will extend for half a mile and in several places concrete walling will be placed out in the stream to provide a wide highway as free as possible from bends. The curvature will be on modern highway alignment, with a width of formed road of 24ft. The existing narrow bridge over the railway will be replaced by a two-way structure in keeping with the remainder of the work.

Limitations of Detour.

Although a good deal of money had been spent effecting improvements in the deviation for local traffic, stated the touring manager of the association, it would be little more than a rough one-way track. On the Waihi side of the detour there was a steep winding hill half a mile in length on which passing was impossible, and special points would be developed before the gorge was closed.

As this was the only possible detour and in consideration of its narrowness, permission had been granted by the licensing authorities for the large buses between Paeroa and Waihi to be replaced by a motor-car service during the constructional period. The officials had found the detour in a very rough state, but had been assured that the gorge would not be closed until further improvements had been carried out. Appropriate signposting had already been erected on the route, soliciting careful driving and a due regard for instructions as to passing other vehicles at the correct points.

Further improvements contemplated are the elimination of a narrow subway and a railway level crossing on the Waihi side of the Karangahake Gorge and the erection of a two-car bridge on the Tauranga highway on the southern boundary of the Waihi Borough.¹⁴⁷⁷

¹⁴⁷⁷ <https://paperspast.natlib.govt.nz/newspapers/BOPT19360110.2.35>

Bay of Plenty Times, Volume LXIV, Issue 11919, 10 January 1936, Page 3

13 January

Notice is given by the No. 2 Main Highways Board that the Karangahake gorge section of the Waihi-Paeroa road will be closed to all traffic from January 15th during the carrying out of reconstruction work and it will be necessary for all vehicles to use the Rahu road deviation.¹⁴⁷⁸

17 January

MAIN HIGHWAY.PAEROA-WAIHI DETOUR

ARRANGEMENTS NEAR COMPLETION

INSPECTION BY OFFICIAL PARTY. ROAD NOW SUITABLE FOR TRAFFIC.

In connection with a statement made by Mr T. G. Julian, a member of the Council of the Automobile Association (Auckland), following his recent tour of inspection of the Paeroa-Waihi main highway, in which it was stated that the association would regard the highway as closed during the alterations to the Karangahake gorge section of the road, consternation has been caused among business men here.

Inquiries were instituted by a representative of the "Gazette," and yesterday, in company with the chairman of the Ohinemuri County Council, Mr W. Marshall, and the county engineer, Mr L. E. Shaw, a tour of the Rahu road detour was made.

A considerable amount of work has been done on this route extending over the past few months, involving heavy expenditure by the council, and as a result of strengthening culverts, extending and grading corners and the construction of passing places at generous intervals, the road can now be described as being suitable for almost all classes of traffic.

Mr Marshall stated that his council had done everything possible to assist the motorist in negotiating the Rahu road, by the erecting of instructional signs, and the flagging of the passing places would be done almost immediately. He was of the opinion that with reasonably careful driving and strict regulation of speed, there was not the slightest danger to be feared from the detour.

Kaimai Hills Route.

In the writer's opinion, while the Kaimai hills may be classed in portions as a much better road, there is no justification for diverting motorists through that route in preference to the detour arranged for practically as great a measure of care in driving is necessary to negotiate the hills at any time.

Mr H. H. Bray, when approached for his opinion of the detour, said that he considered it equal to some sections of main highway in various parts of the North Island, and, providing speed inclinations were not in excess of reasonable safety, motorists need have no trepidation in taking that route to Waihi. Personally, he was of the opinion that the work undertaken by the council was indeed creditable and he could see no reason for the action of the Automobile Association in diverting motorists to another route, which, possessed little if any advantage.

¹⁴⁷⁸ <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19360113.2.17>

Hauraki Plains Gazette, Volume 46, Issue 3430, 13 January 1936, Page 4

To describe the road as little more than a “rough one-way track” is definite exaggeration, and motorists and drivers of commercial vehicles have every assurance that the Rahu road detour it [is], with careful driving, a good negotiable and safe thoroughfare with ample room for cars to pass, even at many places that have not been marked as such by the County Council.¹⁴⁷⁹

Flood

4 February

STORM AND FLOOD. HAVOC IN OHINEMURI

SHOPS AT WAIKINO UNDER WATER. OWNERS LOSE HEAVILY.
LOW-LYING AREAS INUNDATED

SLIPS HOLD UP ROAD TRAFFIC. LITTLE DAMAGE IN WAIHI

Thousands of pounds worth of damage was done in the Waihi district by the storm which broke on Saturday evening and reached its height in the early hours of Sunday morning. Although the borough area suffered little, business premises at Waikino, five miles away, were flooded to a height of three or four feet when the Ohinemuri River rose to its greatest level since the big flood of 1910...

RECORD RAINFALL. The total rainfall registered for the 24 hours ended at 8 a.m. on Sunday was 12.1 inches, but this was actually exceeded as the rain gauge had overflowed, and it was likely that a considerable amount of water was lost. It is estimated that 10 inches fell in the 10 hours between 7 p.m. on Saturday and 5 a.m. on Sunday...

Bridges and swing-bridges were washed away on the Waihi-Paeroa road, parts of which were many feet under water when the flood was at its worst. At 8 o'clock on Sunday morning, when the waters had begun to recede, the road at the first railway overhead crossing at Say's farm was four feet under water. Yesterday morning the road was clear and almost dry, and was passable until the first slip from the Waihi end was encountered, about half a mile above the mouth of the Karangahake tunnel.

Both the swingbridge near Say's farm and the one a little farther on, where the railway line winds round the high rocks, had been washed away, and signs of the height to which the water had risen were to be seen in the bowed growth on either side of the riverbank and the flotsam that had been left there...

Road traffic to Waikino yesterday had to make a detour over the hills at the railway station turn-off, arriving in the township below the Victoria Hall. This was because the small bridge near the battery bridge, and alongside which is a waterfall, was swept away...

The Waikino footbridge was washed away and the Owharoa traffic bridge, giving access to Waitawheta, was damaged, although its foundations stood the strain. Handrails and side stays were carried away in places and much storm wrack was caught between the decking and rails. Despite the fact that the bridge stood the strain, vehicular traffic could not reach Waitawheta because

¹⁴⁷⁹ <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19360117.2.14>

Hauraki Plains Gazette, Volume 46, Issue 3432, 17 January 1936, Page 4

washouts on either side of the concrete bridge a little way up the Waitawheta road had occurred.

Many houses in the low-lying areas beyond Waihi and as far as Owcharoa were flooded and yesterday morning's bright sunshine saw bedding and other household effects getting an airing. Damage in these houses must have been considerable.

SLIPS ON MAIN ROAD

Several slips on the Waihi-Paeroa road, the first of them not far past Owcharoa, stopped traffic until after noon yesterday, by which time gangs of men had made passage possible. The slip between Owcharoa and the Karangahake tunnel was the last to be cleared, but cars coming from Paeroa were able to get that far not long after 10 o'clock. The Rahu road is impassable...¹⁴⁸⁰

14 February

COUNTY WORKS

THE OHINEMURI AREA ENGINEER'S REPORT.

The engineer to the Ohinemuri County Council reported as follows to the monthly meeting of the council on Thursday:— Main Highways...

Pokeno-Waihi. —Soon after the holidays the Karangahake Gorge was closed and the Rahu Road detour opened for traffic. To make this route fit to take heavy traffic a lot of reconditioning was necessary, and a gang of men and several trucks were constantly employed and at the time of opening was in very fair order, the heavier traffic not experiencing much difficulty other than having to wait at passing places. On the day of opening a traffic tally was taken and between the hours of 8.30 a.m. and 4.30 p.m. a total of 139 vehicles passed over without mishap.

So as to take advantage of the reduced traffic a start was made with the alteration of the alignment and the lowering of the grade at the Railway Bridge at Karangahake, this work was proceeding when the storm and flood of Sunday, February 2 was experienced, the damage to this particular highway is considerable and all other works were suspended so as to make all available labour free to clear slips; a concentrated effort was made and the road was open for traffic by mid-day on Monday, and owing to slips on the Rahu detour the Public Works Department cleared the gorge sufficiently to take the traffic.

The detour is now clear and is again taking traffic. The wooden Bridge at the waterfall, opposite the Waikino Battery was taken clean away and a deep gap 40 feet across left in the road. It has been necessary to close this section and a detour at the back of Waikino is being used. Plans of a 6 x 6 concrete culvert were prepared and special authority obtained to proceed with the work; material is on the site and the work is under way. Scour on the river-side of the road has been extensive and many chains of protective groins that have stood the floods of 25 years were swept clean away, and many places that in the past did not require protection from scour will require to be done. It has been estimated that 2000 cubic yards of metal would be required to replace that

¹⁴⁸⁰ <https://paperspast.natlib.govt.nz/newspapers/WHDT19360204.2.10>

Waihi Daily Telegraph, Volume XXXV, Issue 8874, 4 February 1936, Page 2

which has been lost. Two suspension bridges over the river have been totally destroyed and two others badly damaged.

Ridings...

Karangahake Riding.—Although no especially heavy damage has taken place a good deal of scour to metalled road surface has happened, and the two suspension bridges mentioned previously as being damaged are in this riding.

Waikino Riding.—In this riding all roads have suffered to a larger extent than in most other ridings, metal surfaces have been badly scoured, tracks and paths in the township area were practically stripped of the fine surfacing; this is difficult to replace owing to the steep grades and narrowness. On the Owharoa-Waitawheta Road the concrete bridge over the Owharoa Falls had the approaches washed clean out. The road immediately below the bridge is badly scoured and a portion of the formation has been washed out leaving it too narrow for traffic, this appears to have been caused by the overflow from the Waihi Gold Mining Company's water race. The settlers on the other side of the Waitawheta River are without access except for a small suspension bridge only usable for foot traffic. The ford has completely disappeared and the tramway bridge which it was intended to re-condition and use when the road was metalled on the new alignment was swept clear of the foundations...¹⁴⁸¹

29 February

TALISMAN DUBBO BATTERY

(from our own correspondent) PAEROA, Friday

The Talisman Dubbo Gold Mining Company, Limited (Karangahake), is preparing a site for a 12-stamp battery at the junction of the Waitawheta and Ohinemuri Rivers. In the past, ore has been taken to the Golden Dawn battery at Owharoa by motor-lorry. There will be an aerial tramline from the mine to the battery.¹⁴⁸²

Stampers will not be used.

11 March

PLANT FOR CRUSHING. USE BY SMALL PARTIES

FORMER PROPOSALS STATED

GOLDEN DAWN'S POSITION.

...After many vicissitudes and lengthy negotiations an arrangement was made by the Minister of Mines in 1931 with the Golden Dawn Gold Mines Ltd., the company being sold the machinery in the Muir's Reefs battery for a nominal sum, that it should crush up to a specified quantity of outside ore at a charge of 20s per dry ton plus 2½ per cent, of realised value to cover gold duty, refining, etc. '

Charge Increased.

¹⁴⁸¹ <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19360214.2.43>

Hauraki Plains Gazette, Volume 46, Issue 3443, 14 February 1936, Page 8

¹⁴⁸² <https://paperspast.natlib.govt.nz/newspapers/NZH19360229.2.21>

New Zealand Herald, Volume LXXIII, Issue 22356, 29 February 1936, Page 9

Somewhere about September, 1933, however, continued the Mayor, the company obtained from the minister permission to increase the charge to 25s; then when the exchange rate was raised to 25 per cent, it claimed under the agreement that in addition to the fixed charges, the exchange was to go to the credit of its account also...¹⁴⁸³

5 June

The Rahu Deviation.

The Rahu road deviation between Karangahake and Waikino is still a source of complaint from motorists through the rough surface. Work on widening the road and providing more passing places has improved it to some degree, but motorists are looking forward to when the gorge road will be open—probably in August or September.¹⁴⁸⁴

27 June

NEW GORGE ROAD. KARANGAHAKE LINK

RECONSTRUCTION PROGRESS. REOPENING IN SPRING

The opinion that the reconstruction of the Karangahake Gorge road between Paeroa and Waihi would be sufficiently advanced for this link of the Auckland-Bay of Plenty highway to be reopened for traffic in the spring was expressed by the touring manager of the Automobile Association (Auckland), Mr. R. E. Champtaloup, on his return yesterday from a tour of inspection.

The section of road which is receiving attention extends over a length of three-quarters of a mile and the work entails the cutting of over 10,000 yards of spoil, most of which is hard rock that necessitates constant blasting. The worst corner on the old alignment, a narrow bluff where the bend was more acute than a right-angle, will be eased to a curvature of three and two-thirds chains. At this point the side of the gorge rises above the road on a sheer rock face, and a cutting 80ft. high and 40ft. in width is in hand.

Road Out Over River Bed

To obtain the width and alignment stipulated for modern highways, the building of the new road out on to the river bed in places has been found preferable to cutting into the precipitous rock walls of the gorge. Protection against erosion in flood periods will be a necessary safeguard, and the construction of rock faces is in hand. At the Paeroa end a long length of stone pitching above a concrete toe, with fillings completed to road level, gives a good indication of the finished appearance of the new highway. At one point the road alignment will run right out on to the river bed for approximately two chains.

The extremely low level of the river during the last few months has enabled the work to be expedited and has obviated delay in completing the foundations of the protective works, which are now well in hand and up to schedule. The exceptional flood last February, when the river rose 3ft. 6in. above the level of

¹⁴⁸³ <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19360311.2.24>

Hauraki Plains Gazette, Volume 46, Issue 3454, 11 March 1936, Page 5

¹⁴⁸⁴ <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19360605.2.10>

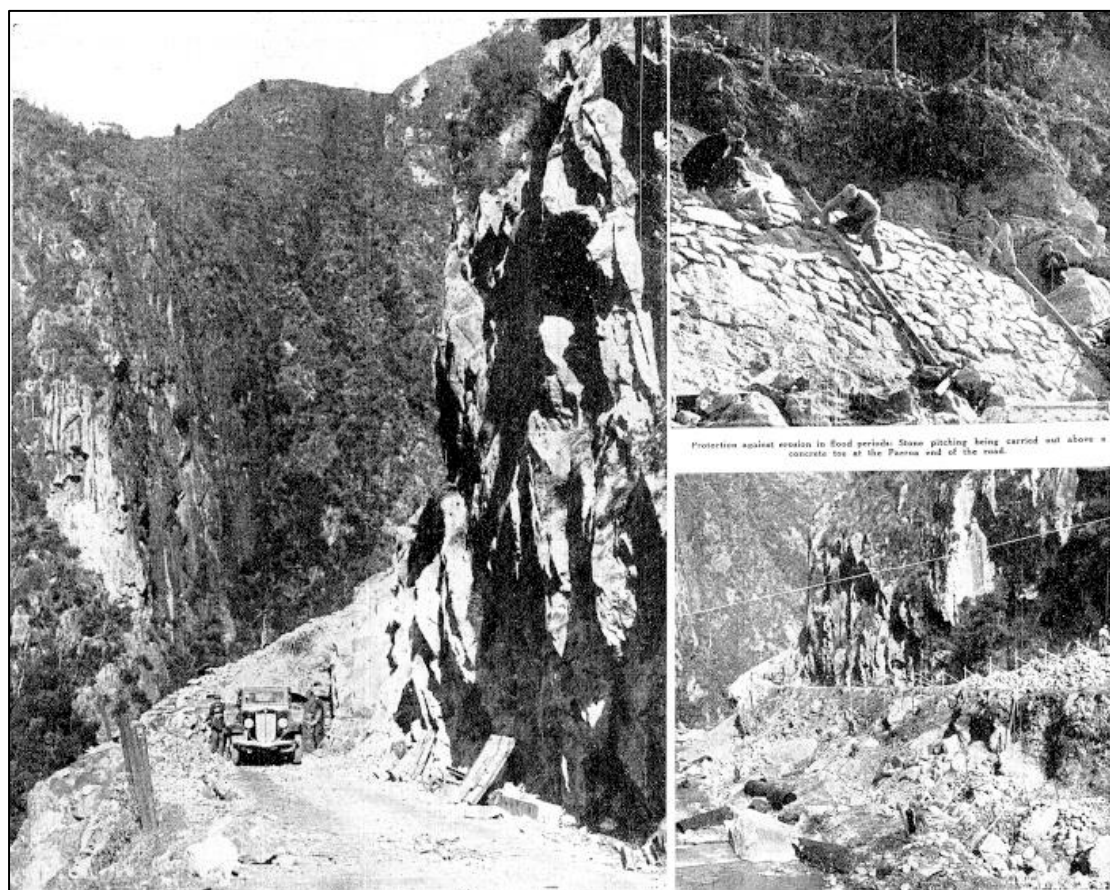
Hauraki Plains Gazette, Volume 46, Issue 3489, 5 June 1936, Page 4

the previous record of 1910, proved a valuable experience for the engineers in providing against any possible eventualities.

First-Class Highway

First-class highway specifications have been laid down for the construction of this section, which will include a running surface with a minimum width of 24ft., with an extra allowance on corners. As a safety measure a kerbing approximately 18in. high will be constructed along the outside edge of the gorge, it being the intention to finish the kerb in white to ensure good visibility for night driving. The gorge at present is completely blocked on account of the heaps of rock brought down by frequent blasting, and traffic during operations would be quite impossible.

The work will continue throughout the winter, although the heaviest portion of the cutting has already been completed. During the next three months progress should be much more rapid and the fillings inside the protective walls and other features of construction should be in an advanced stage. Later, and as soon as is consistent with safety, it is hoped that the gorge will be reopened for traffic pending the completion of the finishing touches.¹⁴⁸⁵



27 June 1936, New Zealand Herald.

The caption under left image: Where a bad bend in the gorge road is being eased and widened. The road alignment will encroach into the river-bed at this point and will be protected by a grouted rock wall built on a solid concrete base. This method is preferred to cutting into the precipitous rock walls of the gorge.

¹⁴⁸⁵ <https://paperspast.natlib.govt.nz/newspapers/NZH19360627.2.20>

New Zealand Herald, Volume LXXIII, Issue 22456, 27 June 1936, Page 10

Top right: Protection against erosion in flood periods. Stone pitching being carried out above a concrete toe at the Paeroa end of the road.

Bottom right: This view shows the proximity of the road to the river and the need for protective rock facings below the widened highway.¹⁴⁸⁶

10 July

Bridge Dismantled. The Ohinemuri County Council yesterday decided to dismantle the Karangahake swing bridge [River Road to Irishtown?] as it was considered to be a danger to children.¹⁴⁸⁷

COUNTY WORKS

ROAD MAINTENANCE OHINEMURI COUNCIL REPORT REVIEW BY THE ENGINEER.

The report of the engineer to the Ohinemuri County Council, Mr L. E. Shaw, yesterday stated...

The restoration of flood damage in the Waikino riding was complete, with the exception of the Suspension Bridge, which was well under way...

The alterations to the grade and alignment on the main road near the tunnel at Karangahake made it necessary to shift-the water supply pipe that gives the supply to the Karangahake Railway Station and several residences on the other side of the river. At present the 2 inch main crosses the river on the old Suspension bridge, and as this structure was in a state of collapse, some other means of crossing the river would have to be found, and it was suggested that it be taken across on the combined rail and traffic bridge...¹⁴⁸⁸

31 July

THE WAIHI ROAD. WORK IN THE GORGE. HUGE UNDERTAKING 9000 YARDS OF ROCK REMOVED. SOLID MASONRY WALL BUILT.

A scene of strenuous activity is presented in the Karangahake Gorge, where a gang of public works men is engaged in removing a projecting rock face, building a retaining wall and raising and widening the roadway to a level and even width of 24 feet, instead of the undulating, narrow road hitherto used by traffic. Although operations have been in progress for over half a year a casual glance would reveal that little work had been done. Closer observation, however, would show definitely that considerable progress had been made and that a wonderful improvement to the road will be effected when the undertaking is complete.

A representative of the Gazette was conducted over the job on Wednesday by the engineer in charge of the work, Mr L. Oldham. An impression of the magnitude of the operations follows, although a true grasp of the situation cannot be adequately obtained unless the work is closely inspected.

Height of 132 Feet.

¹⁴⁸⁶ Images at: <https://paperspast.natlib.govt.nz/newspapers/NZH19360627.2.24.1>

New Zealand Herald, Volume LXXIII, Issue 22456, 27 June 1936, Page 10

¹⁴⁸⁷ <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19360710.2.10>

Hauraki Plains Gazette, Volume 46, Issue 3504, 10 July 1936, Page 4

¹⁴⁸⁸ <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19360710.2.34>

Hauraki Plains Gazette, Volume 46, Issue 3504, 10 July 1936, Page 7

The point which is to be removed has a maximum height of 132 feet from the present road level. Already approximately 9000 cubic yards of rock have been removed, and a large quantity still remains. In order to facilitate operations the point has been removed in shelves. The work is necessarily performed at a comparatively slow rate because the rock is used in building the wall which will abut on the river and will form the foundation and outer edge of the new highway.

The wall itself is a large undertaking. It will reach a height of 30 feet above the river, and the foundations have been sunk to an average depth of six feet. When solid bottom was obtained the water which seeped in was pumped away and solid concrete foundations laid. The wall itself is built of solid masonry, rock set in concrete, built to withstand the erosion of the river at highest flood and the strain of heavy traffic on the road surface.

In this connection Mr Oldham mentioned that the flood in February had provided him with most useful data regarding quantity and rate of flow of the water which passed the point, with the result that the structure would be built so as to withstand the heaviest volume that might pass and still be safe for traffic.

Wall Construction.

This portion of wall will be 110 feet in length when completed and will have a batter of $\frac{1}{4}$ in 1. As it is being built up of the material taken off the point and set in concrete, the progress of the whole job is governed by the speed in which the wall can be built.

A short distance further on another wall is being constructed for a length of about six chains. This is known as a dry stone wall, being made of heavy pieces of rock with a slope of 1 to 1.

A similar structure about six chains long has been constructed about a hundred yards on the Paeroa side of the point.

Several small cuttings have been necessitated, but the amount taken from these has been comparatively small, ranging from 100 to 2000 cubic yards. The last shelf in the main point has now been reached, and the wall is also beginning to rear itself up an appreciable distance from the river level.

When the cutting back of the point has been completed, and the wall fully constructed, the road will be levelled and filled up so as to provide an even running surface no less than 24 feet wide, compared with the previous width which ranged from eight feet upwards.

Quantity of Explosives.

Some idea of the magnitude of the task which confronted the engineers can be conveyed by the fact that a gang averaging 70 men has been employed for over eight months. Explosives alone were used at the rate of about a hundredweight a week when blasting operations were performed. The holes were drilled by compressed air plants.

About 4 p.m. on Wednesday the men drew back from where one worker was perched precariously above the road. He stooped, rose, took a step, stooped again. Then he seized a rope suspended from an outcrop of rock far above, slid down and sped to safety. The loud voice of the current of the Ohinemuri river filled the gorge until suddenly debris and pieces of rock burst out from the face and fell to the ground, while smaller pieces hurtled across the stream or

fell to be engulfed in its depths. A dull roar reverberated in the hills, and more rock shot out of the face, and another report momentarily drowned the noise of the river.

When the dust cleared away there was another pile of rock ready to be hauled away and set in the retaining wall or dumped behind it to fill in the space. So the work goes on, until man has carved his way round nature's obstacle and provided a safe path for his vehicles.

Finish Before Christmas?

No accurate estimate embracing the length of time required to finish the job could be given by Mr Oldham, who stated, however, that it was hoped to complete the undertaking before Christmas. The Ohinemuri County Council had made overtures regarding the possibility of allowing oneway traffic to use the gorge, but at present that was out of the question. Apart from the danger due to blasting, and consequent blockages of the road through falls of rock, operations would be seriously hampered if vehicles were allowed to use the route.

Mr Oldham ventured the opinion, however, that as soon as the main point had been cut back he expected that one-way traffic could be permitted.

Motorists who use the Paeroa-Waihi road, and have perforce to traverse the Rahu deviation, are becoming restive as to when the gorge road will be opened, according to recent inquiries made by a Gazette representative. However, the Rahu road, although it is exceedingly rough and uncomfortable to journey over compared with the other main roads in the district, is in quite good order as a temporary route.

Heavy cars, buses and motor lorries find the greatest inconvenience on the trip, but this will no doubt be amply compensated for when the gorge road is opened and the great improvements are noted. In the meantime though, regular and intermittent travellers are required to possess their souls in patience and look forward to the opening of the Karangahake gorge road—wide, level and as safe as man can make it.¹⁴⁸⁹

20 August

Waihi Telegraph

Two men were injured when a shot miss-fired in the course of road works in the Karangahake gorge yesterday afternoon. They were Messrs Leslie O'Brien, who had his leg broken near the ankle, and Jack Gilmour, who was bruised and suffered injury to his back. Other men who were with them when the charge unexpectedly exploded suffered from shock...

While engaged in trucking ore from the adit level, which crosses the Waihi-Paeroa main road to reach the Golden Dawn Gold Mining Company's crushing mill at Owaharoa yesterday Mr Arthur Goldsworthy had a very narrow escape from serious injuries and as it was he sustained severe abrasions to one of his legs by being knocked down by a motor vehicle. As he emerged, pushing the loaded truck from the mouth of the tunnel, Mr Frank Roberts, of Messrs Mahoney and Roberts, Waihi, who was driving a break-

¹⁴⁸⁹ <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19360731.2.24>

Hauraki Plains Gazette, Volume 46, Issue 3513, 31 July 1936, Page 5

down truck to give aid to a motor car on the Rahu road, saw the truck about midway across the road, and immediately swerved his vehicle to the cliff side of the road to avoid a collision. He missed the truck but Goldsworthy, who had darted back to the mouth of the tunnel, was struck by the front of the car and knocked down. A second loaded truck, which had been following up Goldsworthy's truck, would have run over the fallen man but for the attendant's presence of mind in tilting it off the line.¹⁴⁹⁰

21 August

Karangahake old boys did not have a regular association like the Thames and Coromandel, said Mr Rusden, but judging by the large attendance he thought it was time they formed one and held monthly meetings. Several speakers agreed with the chairman's suggestion, and it was decided to form a Karangahake Old Boys' Association and hold a meeting in three weeks' time to elect officers and committee.¹⁴⁹¹

19 September

OLD GHOSTS THAT WILL LIVE FOR EVER

By RONALD VINE

...There is one ghost-road I know that is, I believe, unique in its way. Then come with me, and let me show you.

It was one of those strange, uncertain days that seem to be for ever torn between brilliant sunlight and lowering gloom when I entered the narrow gorge where flows the Ohinemuri river. But the weather was well suited to the mood of the country, for hereabouts the land is a picture of amazing contrasts.

On one hand there may be a towering wall of jagged rock in which you can read only cruelty and defiance; on the other you may see a natural rocky grotto of enchanting beauty with its little singing brook. Far above, on the hillsides' rugged heights, a winding line curls round the rocky bluffs and gullies. "Can it possibly be a road up there?" you think, when first you see it. It is, for sometimes you can see its rugged formation unmistakably silhouetted against the clouds.

Karangahake is one of those dead towns of ghosts and memories where old wooden gateposts stand bravely upright, like the last remaining sentries of a defeated army, marking the entrances to almost hidden garden paths that lead to plots of tangled gorse and blackberry. Like the bones of a defeated army, too, weather-white skeleton houses combat the irrepressible force of gravity, though in the Karangahake of to-day most of the buildings have disappeared altogether.

"Just Anywhere"

That rock-hewn roadway on the hillside was still in my mind, and so I went in search of one who would know. I found the Old Timer [JB Morris?] in a

¹⁴⁹⁰ <https://paperspast.natlib.govt.nz/newspapers/WHDT19360820.2.4>

Waihi Daily Telegraph, Volume XXXV, Issue 8960, 20 August 1936, Page 2

¹⁴⁹¹ <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19360821.2.38>

Hauraki Plains Gazette, Volume 46, Issue 3522, 21 August 1936, Page 7

corrugated iron building that was a small quartz battery, weighing particles of the golden alloy from which bullion bars are cast.

"Yes," he said, "I've been in Karangahake since it was founded about fifty years ago. Roads? Why, the roads were just anywhere where you could get through, in those days. I remember I paid twelve-and-six for a coach fare from Paeroa to Waihi once, and it was winter and I never rode a couple of hundred yards! Still," he added philosophically, "I did get my portmanteau carried for my twelve-and -six!

"That road right up there? That's Butler's Track," he said, in answer to my question. "It was the first road put through here, and only one coach ever went along it. A man called Butler was in charge of the gang that put it through. It's blasted from solid rock all the way, and when it rains it's as slippery as—er — as ice. One driver took a coach round, but no passenger would go, and the driver wouldn't go again, so they put through the Rahu Road, round the other side of the hills. After that came the present main road, running round the foot of the range below Butler's Track."

The Phantom Coach

So I thanked the Old Timer, and went to look for myself. Walking on Butler's Track was not difficult, though in some places piles of broken rock and boulder from the hill above almost block its way. Stunted vegetation clings tenaciously to its precarious root-hold, and sometimes fragments of rock go rattling down the slope.

Presently I came to a great bluff where the rocky wall towered far above, and the edge of the road, not six feet wide, dropped sheer and jagged—to eternity. Leaning against the wall of rock, I watched a solitary phantom coach and team pass round here. The picture did seem very real, and I found myself edging further round the bend, for I knew there would be no room for even the thinnest of dreamers between the coach wheels and the rockface.

I saw the outside wheels, without an inch to spare, and then I looked at the road surface, where I scarcely even cared to walk, for it was smooth, hard rock, all covered with damp, slimy moss, as slippery, as the Old timer had said, as ice. And yet that phantom coach was real enough once, and actually passed by here. That makes you think! How much water has flowed beneath the bridge since then!¹⁴⁹²

24 September

MAIN HIGHWAY.KARANGAHAKE GORGE SECTION

Steady progress is being made with the work of widening the Karangahake gorge section of the Paeroa-Waihi main highway and it is now possible to gain an indication of what the completed road will be like (says the Hauraki Plains Gazette). It is also possible to realise that it will be Christmas before the job is finished. The Rahu Road deviation has been very much improved in recent weeks and now has a good running surface. Regular users of the Paeroa-Waihi road were perturbed last week by rumours of a ten mile or so deviation between Waikino and Waihi while a bridge near the Waikino railway station

¹⁴⁹² <https://paperspast.natlib.govt.nz/newspapers/NZH19360919.2.226.5>

New Zealand Herald, Volume LXXIII, Issue 22528, 19 September 1936, Page 1 (Supplement)

was being renewed. However, the rumour is without foundation, for the time being, at any rate, and the bridge may not be renewed, for under the Government scheme of doing away with railway level crossings, the Public Works Department is looking into the question of deviating the highway from the Waikino side of the railway bridge level crossing up the side of the hill and along to rejoin the present road at the top of Snake Hill. This will obviate a highway level crossing, a side road level crossing and a narrow subway for the highway. The work would be very costly and is probably well down on the list of such work.¹⁴⁹³

25 November

FALL OF ROCK

WORK IN GORGE ROAD. DAMAGE TO NEW HIGHWAY. OPENING WILL BE POSTPONED.

Considerable damage was caused by a slip which occurred in the Karangahake gorge on Monday afternoon, a fall of rock roughly estimated to contain about 300 cubic yards breaking away at the scene of the Public Works Department's operations of widening the main road.

The most serious aspect of the fall, from the point of view of the motoring public, is that the gorge road will probably not be opened for the holiday traffic, although by employing extra labour the department is making every effort to clear the slip as soon as possible.

The work has been constantly inspected by departmental officials as the operations are being conducted in faulty country. Besides the amount of rock which has to be removed it is probable that some damage has been sustained by the wall built up from the bed of the river.

When the matter was referred to the assistant public works engineer, Mr A. P. Grant, by a Gazette representative yesterday he stated that although he did not wish to belittle the damage done the department always anticipated such eventualities and would take the work in its stride.¹⁴⁹⁴

22 December

PAEROA-WAIHI ROUTE

OPENING GORGE ROAD READY BEFORE CHRISTMAS

(BY .TELEGRAPH OWN CORRESPONDENT) PAEROA, Monday

Advice that the road through the Karangahake Gorge, on the Paeroa-Waihi main highway, will be opened for traffic before Christmas, has been given by Mr. A. P. Grant, district engineer of the Public Works Department. The road has been closed for traffic for the past 10 months while widening and grading work have been done.

Many thousands of yards of solid rock have been blasted from the cliff face. Three dangerous bends have been widened and the river-bank has been faced with rock, and for some distance with a concrete wall.

¹⁴⁹³ <https://paperspast.natlib.govt.nz/newspapers/BOPT19360924.2.24>

Bay of Plenty Times, Volume LXV, Issue 12135, 24 September 1936, Page 2

¹⁴⁹⁴ <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19361125.2.13>

Hauraki Plains Gazette, Volume 46, Issue 2559, 25 November 1936, Page 4

Men have been working three shifts daily for the past week to have the road open for Christmas traffic. When the road was closed traffic was diverted over the old Rahu road, over the Karangahake hills. The main road will be closed again after the holidays for a few weeks to enable the work to be finished.¹⁴⁹⁵

AJHR 1937

For the year 1936

MINES STATEMENT. BY THE HON. P. C. WEBB, MINISTER OF MINES.¹⁴⁹⁶

APPENDIX A.

REPORTS RELATING TO METALLIFEROUS MINES AND STONE-QUARRIES.

The Inspecting Engineer of Mines to the Under-Secretary of Mines. Sir, — Wellington, 14th June, 1937. I have the honour to present my report on metalliferous mines and stone-quarries, together with statistical information, for the year ended 31st December, 1936.

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From other mines in the district, but chiefly from the Talisman-Dubbo Mine, the Golden Dawn battery treated 2,347 tons of ore from which 2,439 oz. of gold, valued at £21,250, and 10,694 oz. of silver, valued at £1,210, were recovered. During the year £4,000 was paid in dividends by the Golden Dawn Gold-mines, Ltd.

At the Talisman-Dubbo Mine, Karangahake, driving and stoping was continued in the Talisman Nos. 1 and 2 levels, and the Talisman No. 4 level is being cleaned up and retimbered. Stopping was done also in the Dubbo level. From the Talisman-Dubbo Mine 2,272 tons of ore was mined and it was treated at the Golden Dawn battery and yielded 2,344 oz. of gold, valued at £20,576, and 10,296 oz. of silver, valued at £1,171.

From four other small mines in the Karangahake District 240 tons of ore was mined which yielded 95 oz. of gold, valued at £589, and, from the old Talisman battery site, 61 tons were treated from which 67 oz. of gold was recovered, valued at £552.

ANNEXURE A.

SUMMARY OF REPORTS BY INSPECTORS OF MINES. NORTHERN INSPECTION DISTRICT (E. J. Scoble, Inspector of Mines). Quartz-mining.

E. J. Scoble, Inspector of Mines

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Talisman-Dubbo Gold-mines, Ltd., Karangahake (W. M. McConachie, Manager).—

Work was carried on continuously for the year, an average of thirty-one men being employed. Talisman No. 2 level: The drive south was advanced 466 ft.,

¹⁴⁹⁵ <https://paperspast.natlib.govt.nz/newspapers/NZH19361222.2.182>

New Zealand Herald, Volume LXXIII, Issue 22608, 22 December 1936, Page 14

¹⁴⁹⁶ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1937-I.2.2.2.3>

MINES STATEMENT. BY THE HON. P. C. WEBB, MINISTER OF MINES., Appendix to the Journals of the House of Representatives, 1937 Session I, C-02

total 950 ft., from the main crosscut. From 484 ft. to 610 ft. the level was advanced in country rock at about 10 ft. west of the old collapsed workings of the Talisman Consolidated Co., Ltd. At 627 ft. it connected with the end of the old drive and stopes, and from that point has continued south on the lode, which has not previously been worked. It is of fair average value, and ranges from 1 ft. to 4½ ft. in width. A rise at 840 ft. south of the main crosscut was put up 22 ft. on reef and connected to a winze sunk from the No. 1 level. The lode averaged 24 in. in width, value £9 8s. 8d. per ton. Stopes opened up from 720 ft. to 850 ft. south yielded 472 tons of ore. Some difficulty has been experienced with soft and slidy walls and a thick horizontal layer of clay, and in places it has been necessary to erect timber sets in the stopes to prevent caving. No. 1 Talisman level: A winze, at 140 ft. south of the main rise, was sunk a total of 71 ft. on stone, and connected with the rise from No. 2 Talisman level. The average width of the reef over the 71 ft. is 20 in., value £4 11s. per ton. From the main rise to 420 ft. south ore was broken out in three stopes. From the rise to 130 ft. the width of the lode is about 8 in., and the stope is worked out to within 5 ft. below the Dubbo level. As this section of the lode is about 10 ft. west of the section in the Dubbo level, and has been proved to carry good values farther north up to 80 ft. above the level named, it is now apparent a good stoping block will continue to produce ore above same. The stopes above No. 1 level produced 290 tons of good-grade ore, the average width broken being 10 in. Dubbo level: The stopes extending from 200 ft. to 400 ft. north were worked to 205 ft. above the level, and produced 1,137 tons of ore. The lode has an average width of 21 in., and carries good values. From 600 ft. to 680 ft. north the stopes are 80 ft. above the level, and are producing ore of good grade. Talisman No. 4 level: The cleaning-up, timbering, and relaying of the tramway has been started and completed from the portal to 300 ft. For the year the company mined 2,272 tons of ore, which was treated at the Golden Dawn battery for a yield of 2,344 oz. of gold, valued at £20,576 3s. 10d., and 10,296 oz. of silver, worth £1,171 5s. 7d. The total yield of bullion since the commencement of operations is 44,954 oz. 16 dwt. 5 gr., valued at £63,145 10s. 3d.

New Talisman Claim, Karangahake (C. Wainnes, Owner). —The work done for the first half of the year on this property gave nil results. Driving south on a reef that had been discovered in 1935 was then undertaken. The reef has an average width of 15 in., and 10 ft. of additional work exposed stone of a payable nature. Four and a half tons taken from this point and treated at the Golden Dawn mill yielded 9½ oz. of gold and 180 oz. of silver, but values are low in other places and erratic on the whole. A total of 8 tons 9 cwt. of stone was crushed for a return of 16 oz. 6 dwt. of gold, valued at £101 8s. 11d., and 241 oz. 7 dwt. of silver, valued at £23 8s. 8d. The aggregate output since the beginning of operations is 569 oz. 2 dwt. 7 gr. of bullion, value £543 4s. 3d.

Waiawa Claim, Karangahake (J. B. Morris, Owner). —Five men employed. The result of the storm in February and several other adverse matters affected the output of this mine, and probably not more than six months of a production period should be recorded. A total of 299 tons of ore was treated for a return of 70 oz. 8 dwt. of gold, worth £463 12s. 5d., and 58 oz. of silver, valued at £5. The production of bullion since the beginning of operations is 391 oz. 10 dwt. 8 gr., valued at £1,375 2s. 3d.

Star Claim, Karangahake (H. A. Meagher, Owner). —The Rhoderic Dhu reef, 12 in. wide, was driven on for about 40 ft. with largely negative results. Surface prospecting was also undertaken, and this yielded 2 tons of payable stone, which is held for treatment.

Talisman Battery Site, Karangahake (C. Waines). —Cleaning-up operations resulted in some 61 tons of stone being treated for a recovery of 66 oz. 12 dwt. of gold, valued at £551 12s. 1d., and 44 oz. 8 dwt. of silver, worth £4 18s. 9d. The total yield of bullion since the beginning of operations is 1,438 oz. 8 dwt., valued at £2,320 10s. 11d.

Victoria Claim, Karangahake (D. Leach, Owner). —This area previously formed part of the Imperial and McDonald properties. The construction of a main prospecting drive was commenced during the year. It is to be advanced for a total distance of 400 ft., and is expected to pass within the random of some good stone before work is completed. One ton of ore was crushed for a return of 8 oz. 18 dwt. of gold, valued at £25 9s., which is also the total production since the commencement of operations.

PUBLIC WORKS STATEMENT (BY THE HON. R. SEMPLE, MINISTER OF PUBLIC WORKS).¹⁴⁹⁷

Progress Report

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Paeroa-Whakatane (No. 2 District) :— Waihi Borough: The Ohinemuri River Bridge, a concrete structure 110 ft. long, was erected.

Ohinemuri County: Heavy reconstruction is in progress, 20 ch. having been completed at the Paeroa end of the gorge, and a 2 m. [mile] length adjoining the borough has been sealed in two coats.

The work in the Karangahake Gorge was continued, and the major improvements over 40 ch. are nearing completion.

Waitete (Waihi) Deviation: This deviation, 70 ch. in length, replaces two level crossings and an obsolete overbridge, and has been completed, including sealing.

¹⁴⁹⁷ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1937-I.2.2.3.1>

PUBLIC WORKS STATEMENT (BY THE HON. R. SEMPLE, MINISTER OF PUBLIC WORKS)., Appendix to the Journals of the House of Representatives, 1937 Session I, D-01

1937**20 January****THE GORGE ROAD**

CLOSING IMMINENT. FURTHER WIDENING WORK. USE OF THE RAHU DEVIATION.

The Karangahake gorge, on the Waihi-Paeroa main highway, will be closed again about the end of this month and the difficult Rahu load deviation will have to be used again, probably for a considerable time. The road was closed for the greater part of last year while the Public Works Department undertook widening work for the Ohinemuri County Council.

The job is not yet completed, as a wooden bridge over the railway line at the mouth of the tunnel has to be replaced by a wide concrete structure and much regrading has to be done.

Now that the road has been taken over by the State it is proposed to continue the widening work, and it is estimated that this will take about six months to complete. The stone which will be brought down will be required for the building of further river protection walls. Work on the road is likely to continue for several years.¹⁴⁹⁸

19 February**CLOSED AGAIN****KARANGAHAKE GORGE CONSTRUCTION OF BRIDGE.**

Paeroa-Waihi road traffic will for the next three weeks again have to use the Rahu road. The Karangahake Gorge road was closed again on Wednesday, and will not re-open for at least three weeks.

The closing of the road is necessitated by the construction of a new bridge over the tunnel portal on the top side of the road. Advantage will also be taken of the closing to break down a point of rock above the road near the Waihi end of the gorge.

The amount of work entailed in the improvement and reconstruction of the road is emphasised by the fact that over 100 public works employees are at present employed within the gorge limits.¹⁴⁹⁹

26 February**MINING REVIVAL****PLANT TO BE ERECTED. KARANGAHAKE PLANS****CONFIDENCE IN ORE RESERVES.**

Karangahake mining is to come into its own again. A share list issued by Talisman Dubbo Gold Mines, Ltd., for subscription of £20,000 in 5s shares

¹⁴⁹⁸ <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19370120.2.17>

Hauraki Plains Gazette, Volume 47, Issue 2575, 20 January 1937, Page 4

¹⁴⁹⁹ <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19370219.2.21>

Hauraki Plains Gazette, Volume 47, Issue 2587, 19 February 1937, Page 4

has closed, and the erection of a treatment plant capable of handling 25 tons of ore a day is to be commenced almost immediately.

An ideal site has been selected, at the junction of the Ohinemuri and, Waitawheta streams, and levelling work has already been carried out.

Treatment costs for ore, which up till the present has been transported to Owaharoa, have totalled £3 1s 6d a ton. The costs at the proposed new plant are authoritatively estimated at a maximum of £1, including aerial transport. On the 2247 tons of selected ore treated last year this would mean a saving of £4775, or nearly two-thirds of the estimated cost of the new mill.

Elimination of transport and reduction of treatment costs will permit the profitable working of lower-grade ores, greatly increasing the payable ore reserves. Embodying the latest technique in ore reduction and bullion saving, the plant is estimated to give from 91 to 96 per cent. extraction.

Many thousands of tons of ore are said to be available from the Talisman workings alone. In addition other promising reefs can be embraced in a development scheme, and the 209 acres owned by the company, with Karangahake peak in the centre, is confidently reported to be one of the most promising prospects in New Zealand mining.¹⁵⁰⁰

10 April

CORONATION WEEK¹⁵⁰¹

ARRANGEMENTS MADE FOR WAIHI. ATTRACTIVE PROGRAMME. HEARTY CO-OPERATION BY ALL

Arrangements in connection with Coronation Week (May 10 to May 15) were almost finalised so far as Waihi was concerned at a meeting of business men, farmers and members of the Coronation Committee of the Waihi Borough Council in the Council Chambers on Thursday evening...

CORONATION BRIDGE The Mayor said the Minister of Transport, Hon. R. Semple, would be asked to officially open the new bridge on the Tauranga road, now known as Tauranga bridge...¹⁵⁰²

7 June

TALISMAN DUBBO. THE ANNUAL REPORT

CONFIDENCE OF SHAREHOLDERS. DEVELOPMENT IN THE MINE.

The annual report of the Talisman Dubbo Gold Mines Ltd., Karangahake, states that the accounts for the year ending December 31, 1936, showed a profit of £5370. After writing off £150 for depreciation and putting £2500 towards development the profit was £3602 13s 4d. This amount has been retained undivided against the cost of a new treatment mill.

During the year 20,000 5s shares were offered at a premium of 2s 6d per share and the whole issue was taken up by the shareholders, a tribute to the confidence of the members in their property.

¹⁵⁰⁰ <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19370226.2.18>

Hauraki Plains Gazette, Volume 47, Issue 2590, 26 February 1937, Page 4

¹⁵⁰¹ King George VI. May 12, 1937

¹⁵⁰² <https://paperspast.natlib.govt.nz/newspapers/WHDT19370410.2.9>

Waihi Daily Telegraph, Volume XXXVI, Issue 9057, 10 April 1937, Page 2

A commencement had been made with the erection of the treatment plant which would embody up-to-date methods for the treatment of ore. Owing to delay through the demand for metal goods it was anticipated that it would be eight months before the mill was completed.

“The directors look forward with confidence to the future of this property as a steady gold producer with a long life ahead of it. Their object has been to keep the capital within low limits and provide a property and plant which will, in their opinion, give and continue to give a very high return on its capital as soon as the company’s new plant is in operation.

“The aerial tram, hoppers, buildings and workings are maintained in good order and the staff and employees both at the mine and head office have, as herebefore, worked well for the success of the company.”...¹⁵⁰³

Coronation Bridge Waihi open

“The coronation of George VI ... 12 May 1937.”¹⁵⁰⁴

15 June

New Bridge Opened.—The new ferro concrete bridge over the Ohinemuri River at Waihi was officially opened on Saturday, the Mayoress, Mrs W. M. Wallnutt, cutting the ribbon. The structure, which cost £2400, has been christened the Coronation Bridge.¹⁵⁰⁵

NEW BRIDGE AT WAIHI

THE OPENING CEREMONY

(by telegraph—own correspondent) WAIHI. Monday

Christened "Coronation Bridge" by Mr. J. Thorn, M.P. for Thames, the ferro-concrete structure costing over £2400 officially replaced the old wooden bridge over the Ohinemuri River at Waihi known to four decades of travellers as Tauranga Bridge. The Mayoress of Waihi, Mrs. W. M. Wallnutt, cut the ribbon before a representative gathering on Saturday.

The new bridge has three spans of the beam span, the centre span being 42ft. in length, and the two end spans 34ft. The deck width is ample for two-way traffic, having a 22ft. roadway, while pedestrian traffic is provided for by a separate footway 4ft. in width. The abutments are slightly arched in profile and this treatment, together with a panelled concrete parapet, gives the bridge an attractive appearance.¹⁵⁰⁶

22 June

MINING REPORTS

Talisman Dubbo. Preparatory work in connection with clearing the site for the new crushing mill and treatment plant to be erected by the Talisman Dubbo

¹⁵⁰³ <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19370607.2.23>

Hauraki Plains Gazette, Volume 47, Issue 2630, 7 June 1937, Page 5

¹⁵⁰⁴ https://en.wikipedia.org/wiki/Coronation_of_George_VI_and_Elizabeth

¹⁵⁰⁵ <https://paperspast.natlib.govt.nz/newspapers/WT19370615.2.39>

Waikato Times, Volume 121, Issue 20221, 15 June 1937, Page 6

¹⁵⁰⁶ <https://paperspast.natlib.govt.nz/newspapers/NZH19370615.2.58>

New Zealand Herald, Volume LXXIV, Issue 22755, 15 June 1937, Page 8

Gold Mining Company is now well in hand. The location is on the old Woodstock battery site [Talisman powerhouse site] on the south bank of the Ohinemuri River, nearly opposite the old Karangahake township. It is interesting to note that the first Woodstock battery was in operation fifty years ago. Meanwhile the ore from the mine continues to be treated at the Golden Dawn's mill at Owharoa.¹⁵⁰⁷

18 October

RE-OPENING A ROAD. MINE COMPANY'S REQUEST
ESTIMATE TOTALS £350. COUNTY TO ASK FOR GRANT.

Following a request by the Talisman Dubbo Goldmining Company to have repairs and improvements made to the Crown Hill road to the Adeline claim, the Ohinemuri County Council's engineer, Mr L. E. Shaw, reported on Thursday that in company with Mr. J. B. Morris an inspection of the road had been made.

The company intended carting all its quartz by motor-truck to its battery on the old Woodstock site at Karangahake, stated Mr Shaw, and it requested that the old Scotchman's gully road be re-opened, as this would save about one mile of carting. This road was about 20 chains long and required metalling for most of the length, several slips removed, new water-tables made, three culverts renewed, and two wash-outs walled up, and where this road joined the No. 8 road a small bridge would have to be replaced.

Bridging and Metalling.

From that point to the Adeline claim, a distance of approximately two miles, the surface was very rough and the company wanted it dressed with fine metal which was obtainable on the ground. Two bridges required new decking and it was suggested that quite a number of corners should be taken off. The estimate of the work was £350.

The chairman, Mr Wm. Marshall, said that the council should assist the enterprise if it had faith in the district. The council would be able to do so if it received all the gold duty, but three-quarters of that went towards river protection work. He suggested that a grant or subsidy should be obtained from the Mines Department. The council agreed to adopt this course.¹⁵⁰⁸

17 November

Karangahake Yield.

From four other small mines in the Karangahake district 240 tons of ore was mined which yielded 95 oz. of gold, valued at £589, and, from the old Talisman battery site, 61 tons were treated from which 67 oz. of gold was recovered, valued at £552.¹⁵⁰⁹

¹⁵⁰⁷ <https://paperspast.natlib.govt.nz/newspapers/WHDT19370622.2.19>

Waihi Daily Telegraph, Volume XXXVI, Issue 9088, 22 June 1937, Page 3

¹⁵⁰⁸ <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19371018.2.34>

Hauraki Plains Gazette, Volume 47, Issue 2684, 18 October 1937, Page 5

¹⁵⁰⁹ <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19371117.2.27>

Hauraki Plains Gazette, Volume 47, Issue 2696, 17 November 1937, Page 5

20 December**TALISMAN DUBBO ISSUE****BASIS OF ONE FOR FIVE**

With a view to providing capital for the completion of the new crushing mill and for working the mill for three months, as well as meeting the costs of the large development programme, the directors of Talisman Dubbo Gold Mines, Limited (Karangahake), propose to issue 11,620 shares of 5s each at par. A circular to shareholders states that the offer is made in the first place to shareholders in the proportion of one share for every five held...

The circular states that, although orders for the imported plant were placed in April for delivery by the end of August, some of it will not arrive until January. Preparations have been made for installation on arrival to have the mill in operation at the earliest possible date. Owing to the death of the mine manager, Mr. W. M. McConachie, the temporary carrying on under shift bosses and the erratic nature of the reef in the No. 2 level, mining has not been as profitable as in previous years. The company has appointed Mr. W. J. McConachie, son of the late mine manager, to fill his position. Although the development programme is more costly and greater than the directors had made provision for, it will assure a big tonnage of ore opened out and shrinkage stopped in readiness for a continuous supply at full capacity for the new battery.¹⁵¹⁰

AJHR 1938

For the year 1937

MINES STATEMENT. BY THE HON. P. C. WEBB, MINISTER OF MINES.¹⁵¹¹**ANNEXURE A.**

SUMMARY OF REPORTS BY INSPECTORS OF MINES. NORTHERN INSPECTION DISTRICT (E. J. Scoble, Inspector of Mines). Quartz-mining.

E. J. Scoble, Inspector of Mines

Page 30

Talisman-Dubbo Gold-mines, Ltd., Karangahake (W. J. McConachie, Manager).—No. 2 level: The drive south was advanced to 1,143 ft. from the main crosscut. From 950 ft. to 1,000 ft. the drive continued in good-grade ore, but from that point onwards the lode was very irregular and poor in value. Crosscuts were put out at intervals from the drive, but with unsatisfactory results. Stopping was done from 750 ft. to 1,000 ft. south. From 935 ft. to 1,000 ft. values cut out; the lode practically disappeared 12 ft. below No. 1 level also. Dubbo level: A drive was advanced on the hanging-wall section of the lode from the main rise to 52 ft. north, at which point the reef functioned with the footwall section. Stopping was carried out in the eastern section of the lode from 638 ft. to 664 ft. north, and also on the hanging-wall section on quartz of

¹⁵¹⁰ <https://paperspast.natlib.govt.nz/newspapers/NZH19371220.2.19>

New Zealand Herald, Volume LXXIV, Issue 22916, 20 December 1937, Page 7

¹⁵¹¹ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1938-I.2.2.2.3>

MINES STATEMENT. BY THE HON. P. C. WEBB, MINISTER OF MINES., Appendix to the Journals of the House of Representatives, 1938 Session I, C-02

good value. Intermediate level: At 22 ft. above the mouth of No. 1 level a crosscut was driven to intersect the Maria lode. The level was extended north for 10 ft. and south for 90 ft. Values were low. A winze sunk to determine the nature of the lode underfoot did not yield encouraging results. Stopping on this level produced 122 tons of ore of fair value. No. 4 level: The opening-up of this level was commenced early in the year, with the object of reaching a portion of the Maria lode which was not worked by previous companies. The face is now in 767 ft. south of the main crosscut. Hauraki (No. 7) level: This level has been cleaned out and repaired for a distance of 930 ft., the intention being to continue the driving of same into virgin country. The erection of the company's battery is still in hand. Thirty-two men were employed. For the year the company mined 2,239 tons of ore, which was treated at the Golden Dawn battery, for a yield of 1,895 oz. 7 dwt. of gold, valued at £16,668 15s. 1d., and 8,752 oz. 14 dwt. of silver, worth £988 1s. 8d. No dividends were paid. The total yield of bullion since the commencement of operations is 55,602 oz. 17 dwt. 5 gr., valued at £80,802 7s.

Star Claim, Karangahake (H. A. Meagher, Owner). —No. 2 level was driven a further 20 ft. on the reef, but the country became very hard and this work was stopped. An effort is now being made to locate the Rhoderic Dhu reef in No. 1 level, where report states it was lost many years ago. From a small parcel of ore 4 oz. 16 dwt. of gold, valued at £18 19s. 2d., was obtained. This is the total production since the commencement of operations.

New Talisman Claim, Karangahake (C. Waines and R. Schulzki, Owners). —Operations consisted of driving, crosscutting, and sinking in order to test a supposed continuation of the Shepherd line of reef. Eleven tons of ore was treated for a return of 20 oz. 7 dwt. of gold, valued at £143 13s. 9d., and 469 oz. 18 dwt. of silver, valued at £42 4s. 7d. The total yield since the beginning of operations is 1,059 oz. 7 dwt. of bullion, valued at £729 2s. 7d.

Waiawa Claim, Karangahake (J. B. Morris, Owner). —Stopping operations in this mine have produced 264 tons of quartz for the year, which, on treatment in the owner's battery, yielded 159 oz. of gold, valued at £981 13s. 6d., and 208 oz. 10 dwt. of silver, valued at £11 13s. 7d. The total production since the commencement of operations is 759 oz. of bullion, worth £2,358 9s. 4d.

Victoria Claim, Karangahake (D. Leach, Owner). —The prospecting drive commenced in the previous year was extended to the western boundary of the claim, a distance of over 400 ft., but nothing of importance was met with, and all work on the area was abandoned.

1938

11 February

Paeroa Water Supply.

An important report on the Paeroa water supply was submitted to the Ohinemuri County Council yesterday by Mr Ralph P. Worley. The report embraced several methods of augmenting the supply and an alternative scheme concerning the Waitawheta stream. It will be published in full in Monday's Gazette.¹⁵¹²

14 February

THE WATER SUPPLY.

PAEROA people will read with interest, if not concern, Mr Worley's report to the Ohinemuri County Council upon the water supply published to-day. "The fact that during protracted dry spells both spillways are dry is further proof that the present supply is barely sufficient to cope with the demand," as Mr Worley says, is rather disturbing when it is realised that the present supply is not at all satisfactory from several points of view. Principal among these is the lack of pressure for fire fighting...

The major proposals outlined by Mr Worley are the erection of a storage dam at a cost of £20,000, the utilisation of a subsidiary supply at £5500 without the price of acquiring the land in the catchment area, or a complete new scheme embracing the Waitawheta stream at costs varying, according to different specifications, between £18,600 and £26,000.

More enthusiasm is expressed by Mr Worley over the Waitawheta scheme than over any of the other proposals. "This really wonderful supply," he terms it. It is far more flexible than the others, and both quantity and pressure would be much in excess of those from the other sources...¹⁵¹³

PAEROA WATER SUPPLY. ENGINEER'S REPORT

INADEQUACY OF DAMS. ALTERNATIVE SCHEMES WAITAWHETA STREAM. COST OF VARIOUS PROPOSALS.

Of great importance to residents of Paeroa was a report on the water supply submitted to the Ohinemuri County Council on Thursday by Mr Ralph P. Worley. The inadequacy of the present supply and several alternative suggestions to augment it, or the utilisation of the Waitawheta stream were exhaustively dealt with...

Waitawheta Supply.— As the various schemes detailed above are more or less in the nature of temporary expedients, and as the minimum expenditure recommended to give a 50 per cent. increase of the available supply amounts to £13,800, it seemed necessary to investigate schemes for a permanent future supply. In this connection the Waitawheta stream offers the only simple and

¹⁵¹² <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19380211.2.13>

Hauraki Plains Gazette, Volume 48, Issue 2729, 11 February 1938, Page 4

¹⁵¹³ <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19380214.2.15>

Hauraki Plains Gazette, Volume 48, Issue 2730, 14 February 1938, Page 4

economic solution. It has a catchment area of 12,000 acres and has a minimum flow of 10,000,000 gallons per day, at an intake site having the same level as the present dams and at a distance of only 6 miles from the Paeroa Post Office. A detailed inspection of the Waitawheta valley was made, and barometric levels taken. These showed that the level of the river was 210 feet above sea level at the old Talisman waterrace intake, 250 feet at Dickey's flat and 390 feet at the old swing bridge. It was no doubt due to the fact that mining companies used it that this really wonderful supply was not developed for water supply in the past. And but for the fact that mining companies excavated water-races and tram tracks out of the solid faces of the gorge, it would even to-day be a costly matter to lay a pipe line. As my inspection revealed from the old Talisman intake to the junction with the Ohinemuri river there is a well formed pipe track with the exception of about 20 chains, partly old water race and partly old tram track. Both have been abandoned, by mining companies and should be available for use to-day...¹⁵¹⁴

10 March

Waitawheta Road bridge.

For speedy work in bridge construction a striking example is evidenced by the completion this week of a concrete bridge of three spans across the Ohinemuri River, on the Waihi side of the Karangahake gorge, giving access to the Waitawheta Valley settlers. The contractors, Messrs Smith and Aitken, who were also the builders of the Coronation Bridge, which replaced the old Tauranga bridge across the Ohinemuri stream on the Tauranga road, commenced the construction of the Waitawheta bridge during the first week of January, two months ago, and on the completion of filling in the approaches at either end of the structure, which is well in hand, the bridge will be open for traffic. It is a one-way bridge and has a very fine appearance.¹⁵¹⁵

11 March

MINING ROADS GRANT. ACCESS TO DUBBO BATTERY
PUBLIC WORKS SUBSIDY OF £150.

Confirmation of his promise to make a grant of £150 (£ for £) towards the reconditioning of Scotchman's gully and Karangahake hill roads to give access to the Talisman Dubbo's battery is contained in a letter to Mr Jas. Thorn, M.P. for Thames, by Mr R. Semple, Minister of Public Works...¹⁵¹⁶

2 April

Better Paeroa Roads.

Steady improvement is being made in the surface of the roads in the Paeroa district, writes the "Star's" local correspondent. Tenders have been called by the Public Works Department for the sealing of a big section of the Paeroa-

¹⁵¹⁴ <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19380214.2.25>

Hauraki Plains Gazette, Volume 48, Issue 2730, 14 February 1938, Page 5

¹⁵¹⁵ <https://paperspast.natlib.govt.nz/newspapers/WHDT19380310.2.5>

Waihi Daily Telegraph, Volume XXXVII, Issue 9195, 10 March 1938, Page 2

¹⁵¹⁶ <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19380311.2.41>

Hauraki Plains Gazette, Volume 48, Issue 2741, 11 March 1938, Page 8

Waihi road, including the Karangahake gorge, where some thousands of pounds have been spent on widening and straightening the route...¹⁵¹⁷

28 May

TALISMAN DUBBO MILL

WORK AT KARANGAHAKE OPERATIONS COMMENCED

Operations at the new mill of the Talisman Dubbo Gold Mine, Limited, at the junction of the Ohinemuri and Waitawheta rivers, at Karangahake, were commenced on Monday last. The mill is across the river from the Paeroa-Waihi highway and will operate on low-grade ore for a few weeks to "run in" the machinery and "cure" the plant.

All the machinery is new and of the latest type. It has been designed for efficiency and low running costs. The gold will be saved by cyanidation. Previous tests made in England, America and Australia have demonstrated the superior advantages of this system and according to the secretary, Mr. M. H. Wynyard, although the various components in the process have been well tried out in America and Australia, this is the first time they have been employed in New Zealand.

Electricity provides the motive power and the mill can be operated with a shift of two men. It is designed to treat from 125 to 150 tons a week and a large tonnage of ore has been broken out ready for treatment. The new mill is readily accessible from the various workings on the Karangahake mountain.¹⁵¹⁸

Dubbo battery underway

1 July

Karangahake Gorge Road.

The second metal coat preparatory to sealing is being applied on the Karangahake gorge section of the Pokeno-Waihi State highway by the contractors. Half a mile of sealing was laid down on the Waihi-Tauranga highway inside the Ohinemuri County boundary on Monday last.¹⁵¹⁹

Another flood

28 July

TUESDAY'S STORM

SLIPS ON WAIHI-P AEROA MAIN HIGHWAY. ALL TRAFFIC SUSPENDED

The effect of the storm and torrential rain on Tuesday night was disastrous to the Waihi-Paeroa main highway, and the spectacle it presented yesterday morning at either end of the Karangahake gorge and in the gorge itself was the

¹⁵¹⁷ <https://paperspast.natlib.govt.nz/newspapers/AS19380402.2.33>

Auckland Star, Volume LXXIX, Issue 78, 2 April 1938, Page 8

¹⁵¹⁸ <https://paperspast.natlib.govt.nz/newspapers/NZH19380528.2.22>

New Zealand Herald, Volume LXXV, Issue 23049, 28 May 1938, Page 11

¹⁵¹⁹ <https://paperspast.natlib.govt.nz/newspapers/BOPT19380701.2.22>

Bay of Plenty Times, Volume LXVI, Issue 12390, 1 July 1938, Page 2

most discouraging seen for years. A series of formidable slips has occurred for almost the entire section of the gorge area. A quarter of a mile beyond Karangahake the new concrete bridge has been put out of commission. Here huge washouts are in evidence in the approaches at either end of the structure. Traffic between Waihi and Paeroa on the main road is completely cut off. The damage is of an extensive character and it would seem that some time must elapse before traffic on the road can be resumed. Road communication between Waihi and Paeroa for the greater part of yesterday was out of the question, attempts to use the Rahu, a deviation road of 2½ miles between Owaharoa and Karangahake, failed until the afternoon, when the Transport Limited's bus from Auckland got through to Waihi...¹⁵²⁰

1 August

MINE ACCESS BLOCKED. LOSSES OF BRIDGES. MARATOTO ISOLATED. OHINEMURI IN FLOOD

(by telegraph —own correspondent) PAEROA, Sunday

The heaviest damage for many years in Paeroa and surrounding districts was caused by a severe storm last night, when 7.2 in. of rain was recorded by the Public Works Department...

Ohinemuri County Damage

The Ohinemuri River was swollen to abnormal heights, and damage throughout the Ohinemuri County is expected to run into many thousands of pounds, according to the county chairman, Mr. W. Marshall, who carried out a survey of the damage today, accompanied by the engineer, Mr. E. L. Shaw.

In the Karangahake Gorge, where road improvements have been going on for over two years, large slips and washouts have occurred. For some days after the previous heavy rains the road was impassable, and a deviation over the Rahu Hill had to be used. The road was cleared on Friday, and in spite of the further slips a relief gang, with mechanical equipment, has been able to keep the highway open.

Talisman Dubbo Gold Mines

Recently opened after costing the county £500 for construction and metalling, Scotchman's Gully Road, leading to the battery of the Talisman Dubbo Gold Mines, has been completely destroyed. Further slips on the Karangahake Hill Road have isolated the mine, which has been temporarily closed, as ore cannot be carted to the battery. Arrangements have been made to employ the disengaged miners on road repair work under scheme 13. It is expected that it will be several weeks before the mine can be reopened.¹⁵²¹

8 August

THE TALISMAN DUBBO. MILL STILL RUNNING. REPAIRS TO ACCESS ROAD

¹⁵²⁰ <https://paperspast.natlib.govt.nz/newspapers/WHDT19380728.2.6>

Waihi Daily Telegraph, Volume XXXVII, Issue 9254, 28 July 1938, Page 2

¹⁵²¹ <https://paperspast.natlib.govt.nz/newspapers/NZH19380801.2.101.2>

New Zealand Herald, Volume LXXV, Issue 23104, 1 August 1938, Page 12

The offer of 8523 shares of 5s each in the Talisman Dubbo Gold Mines Limited, which closed on August 4, was largely oversubscribed.

With reference to the heavy storm of last week, it will only interrupt delivery of ore until Wednesday when supplies from No. 8 level will be delivered via the county road through Karangahake, and it is expected that the road to No. 7 level will be in order in a further week's time. In the meantime the mill will be running on ore delivered prior to the storm.

In the mine itself practically no damage was done. The action of the Ohinemuri County Council in at once arranging for a large repair gang on the Karangahake access road is greatly appreciated by the company.

The first return from the mill will be available shortly. As previously intimated the initial treatment is intentionally upon low grade ore so as to allow for the absorption that invariably takes place in the running in of a new mill. Regular returns will start as soon as the road access referred to above is available.¹⁵²²

9 November

QUARTZ DEPOSITS. NEW TALISMAN CLAIM

FIVE MEN EMPLOYED. OPERATIONS OF TRIBUTERS. CRUSHING AT DUBBO BATTERY

A Paeroa syndicate has obtained good results recently at the New Talisman claim —slightly to the north of the Dubbo and on the site of the old Talisman mine. The men are working on deposits of quartz from the old No. 8 level.

Thirty or 40 years ago only about 40% of the gold in the sulphide ore was recoverable by the methods then in use while gold was about half of its present price. Quartz which was then of no value in treatment was dumped, but the present extraction methods and the price of gold make much of that ore very profitable.

Six Months' Employment

At present there are five men working on these deposits and the quartz is being crushed at the Dubbo battery and it is anticipated that their employment will continue for well over six months at this work which is proving a payable proposition.

The syndicate hopes that when this is cleaned up that it will be able to test the underground area for further quartz in the stopes and also along some of the known reefs already opened up.

Prospector's Opinion

One of the syndicate, Mr D. Leach, who knows the ground in the vicinity very well, in conversation with the Gazette representative last week stated that he had just finished five years' prospecting the claim to the east of the syndicate's ground, the Imperial claim. He expressed confidence in the outcome of his operations in that area and is convinced that gold exists in payable quantities.

It is reported that Mr J. B. Morris is getting good results from his claim at Karangahake. Six hands are employed at his battery which cannot cope with

¹⁵²² <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19380808.2.21>

Hauraki Plains Gazette, Volume 48, Issue 2795, 8 August 1938, Page 5

all the ore that is being extracted and the surplus is being treated at the Dubbo battery.

Praise For Manager

The Dubbo plant is very well equipped and returns a high percentage of extract. Tributers state that the manager, Mr Clifton, treats them very well and they give him high praise as a practical miner. His advice is frequently sought and freely given...¹⁵²³

AJHR 1939

For the year 1938

MINES STATEMENT BY THE HON. P. C. WEBB, MINISTER OF MINES.¹⁵²⁴

APPENDIX A.

REPORTS RELATING TO METALLIFEROUS MINES AND STONE-QUARRIES.

The Inspecting Engineer of Mines to the Under-Secretary of Mines. Sir, — Wellington, 1st June, 1939. I have the honour to present my report on metalliferous mines and stone-quarries, together with statistical information, for the year ended 31st December, 1938.

Page 21

At the Talisman Dubbo Mine, near Karangahake, the development work done in 1938 was confined to the Nos. 4 and 7 levels, while some stoping was done in the Talisman No. 2 and the Dubbo levels. Most of the stoping, however, was in a shrinkage stope on the No. 7 Hauraki level. Since the completion of this company's own up-to-date battery all the quartz from their mine has been treated there. The battery includes a 5-ft.-diameter ball mill, classifiers, &c., and a Merril Crowe plant, and is capable of treating a much larger tonnage than is now being put through it. During 1938 the Talisman Dubbo Gold-mining Co. mined 1,667 tons of ore, which yielded 318 oz. of gold, valued at £2,913, and 1,370 oz. of silver, valued at £155.

From two other mines in the Karangahake district 516 tons of quartz was mined, yielding 243 oz. of gold, valued at £1,894, and 429 oz. of silver, valued at £26.

ANNEXURE A.

SUMMARY OF REPORTS BY INSPECTORS OF MINES. NORTHERN INSPECTION DISTRICT (E. J. Scoble, Inspector of Mines). Quartz-mining.

E. J. Scoble, Inspector of Mines

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Talisman-Dubbo Gold-mines, Ltd., Karangahake (R. B. Dunlop, Manager). — For the early part of the year operations were carried out by forty men, but by the end of February, owing to the anticipated early completion of the

¹⁵²³ <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19381109.2.2.2>

Hauraki Plains Gazette, Volume 48, Issue 2831, 9 November 1938, Page 1

¹⁵²⁴ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1939-I.2.2.2.3>

MINES STATEMENT BY THE HON. P. C. WEBB, MINISTER OF MINES., Appendix to the Journals of the House of Representatives, 1939 Session I, C-02

company's own mill and other factors, ore-breaking was more or less suspended. The number of men underground was reduced to fourteen, just sufficient to keep the mine in repair and to carry on developmental work at Nos. 4 and 7 levels. Stopping was undertaken on a small block of ore situate on No. 2 Talisman level. Dubbo level: Stopping was carried on here from 40 ft. north to 38 ft. south of the main Dubbo rise for a height of 52 ft. above the level. The lode is 10 ft. wide and contains high values. Underhand stopping was commenced at 44 ft. north of the Dubbo rise, west branch. Depth of stope 9 ft., average width, of reef 15 in., and values satisfactory. No. 4 Talisman level: This has been cleaned out and retimbered where required from 767 ft. to 1,409 ft. south of the rise which connects with the Dubbo No. 2 level. At 1,074 ft. south in the Crown block, which has not previously been worked, a rise was constructed to test the size and value of the lode. At 20 ft. up the lode is exposed in the hanging-wall, is 24 in. wide, and of good grade. It is intended to commence stopping operations under this block as soon as air is available. No. 7 Hauraki level: Considerable quantities of ore have been drawn from a shrinkage stope on this level, and about 1,200 tons still remain. The level was cleaned out from 930 ft. south to the face at 990 ft. south, the lode being 5 ft. wide. Some stone was drawn from under Hyde's stope at 930 ft. south, but proved to be low grade. At the Talisman Woodstock boundary stopping has been in operation for a length of 50 ft. and has been carried to a height of 12 ft. above the level. The lode here is 6 ft. wide, but only 3 ft. of the footwall is being stoped. The company's battery was completed during the year, and crushing commenced in same. It comprises the following items of plant: One Telsmith-Wheeling jaw crusher driven by a 25 h.p. motor; a 16 in. Challenge feeder; a Head-Wrightson ball mill, 5 ft. in diameter and 4 ft. long, worked by a 50 h.p. motor; a Dorr-Duplex classifier; one Doreo diaphragm pressure pump to deliver classifier overflow to Dorr thickener tank; eight agitators (B. and M. tanks), each 20 ft. deep by 6 ft. in diameter; and an Oliver filter 5 ft. 4 in. in diameter by 8 ft. in length. The air for the agitators is supplied by an Ingersoll-Rand type thirty automatic compressor. The vacuum for the Oliver filter is supplied by a 7½ h.p. Thompson vertical pump. The filtered solution is delivered by a 1½ in. centrifugal pump to a Merrill-Crowe precipitation plant, and the barren solution is returned for wash by a similar pump. The Merrill-Crowe plant consists of a clarifying unit, Crowe tank, and Merrill bag-type filter, operated by two 1½ in. and one 1 in. water-sealed centrifugal pumps. Precipitation is obtained through a zinc-dust emulsifier and a feeder driven by a ½ h.p. motor.

The average number of men employed was twenty, for the year the company mined 1,667 tons of ore, which yielded 318 oz. 8 dwt. of gold, valued at £2,913 2s. 11d., and 1,370 oz. 10 dwt. of silver, worth £155 3s. 5d. No dividends were paid. The total output since the commencement of operations is 57,291 oz. 15 dwt., valued at £83,870 13s. 4d.

New Talisman Claim, Karangahake (C. Waines and R. Schulzki, Owners). — This claim produced 32 tons of quartz, from which 12 oz. 11 dwt. of gold, valued at £95 7s. 4d., and 79 oz. 6 dwt. of silver, valued at £3 19s. 3d., were obtained. The total production since the commencement of operations is 1,151 oz. 4 dwt. of bullion, valued at £828 9s. 2d.

Waiawa Claim, Karangahake (J. B. Morris, Owner). —Owing to flood damage on three different occasions very little development work was done on this property. A rise was put up 30 ft. in the Monastery section with the object of enabling a block of ore above river-level to be opened up. Further work must, however, be carried out before this objective is attained. During the year 484 tons were mined and treated for a return of 230 oz. 16 dwt. of gold, valued at £1,798 10s., and 349 oz. 15 dwt. of silver, worth £22 5s. 4d. The total production since the commencement of operations is 1,339 oz. 11 dwt. of bullion, valued at £4,189 4s. 8d. Ten men were employed.

1939**1 May****THE DUBBO BATTERY****REDUCTION OF WORKMEN. MINERS' UNION CONFERENCE**

An application which would have been of some interest was adjourned from Friday's sitting of the Paeroa Warden's Court on the application of counsel to enable the parties to hold a conference. This was the application of the Talisman Dubbo Mines Ltd., for a reduction of workmen to two for 12 months on the McAdwyn S.Q.C...

It was stated that the conference was in connection with the closing down of the Dubbo battery at Karangahake, the miners' union endeavouring to secure further employment for the men.¹⁵²⁵

21 August**FORTY YEARS AGO****SERIOUS BUGGY ACCIDENT COLLISION IN GORGE HORSES BOLT WITH FRIGHT (From the Ohinemuri Gazette of August 21, 1899.)**

See entry for August 23, 1899.

30 August**DUBBO AND GOLDEN DAWN**

"At the Talisman Dubbo Mine, near Karangahake," states the Mines Statement tabled on Tuesday in the House of Representatives by the Minister of Mines the Hon. P. C. Webb, "the development work done in 1938 was confined to the Nos. 4 and 7 levels, while some stoping was done in the Talisman No. 2 and the Dubbo levels. Most of the stoping, however, was in a shrinkage stope on the No. 7 Hauraki level. Since the completion of this company's own up-to-date battery all the quartz from their mine has been treated there. The battery includes a 5ft. diameter ball mill, classifiers, etc., and a Merrill Crowe plant, and is capable of treating a much larger tonnage than is now being put through it. During 1938 the Talisman Dubbo Goldmining Company mined 1667 tons of ore, which yielded 318 oz. of gold, valued at £2913 and 1370 oz. of silver, valued at £155..."¹⁵²⁶

AJHR 1940

For the year 1939

¹⁵²⁵ <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19390501.2.20>

Hauraki Plains Gazette, Volume 48, Issue 2897, 1 May 1939, Page 4

¹⁵²⁶ <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19390830.2.48>

Hauraki Plains Gazette, Volume 48, Issue 2832, 30 August 1939, Page 8

MINES STATEMENT BY THE HON. P. C. WEBB, MINISTER OF MINES.¹⁵²⁷

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At the Talisman-Dubbo Mine, near Karangahake, the No. 4 level was cleaned up, driving was continued to the No. 2 Crown block, and rises were then put up. Stopping was continued in the No. 7 Hauraki level and in the Dubbo and Nos. 1 and, 2 Talisman levels. Two small sections of the mines were worked by tributes, and from all workings 2,013 tons of ore were treated at the new mill, yielding 291 oz. of gold, valued at £2,979, and 1,374 oz. of silver, valued at £136.

From two other mines in the Karangahake district 708 tons of quartz was mined, yielding 752 oz. of gold, valued at £2,608, and 267 oz. of silver, valued at £27. Most of this ore was treated at the Talisman-Dubbo battery.

ANNEXURE A.

SUMMARY OF REPORTS BY INSPECTORS OF MINES. NORTHERN INSPECTION DISTRICT (E. J. Scoble, Inspector of Mines). Quartz-mining.

E. J. Scoble, Inspector of Mines

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Talisman-Dubbo Gold-mines, Ltd.—Stopping operations were undertaken mainly on the No. 7 Hauraki level and on the Dubbo and Nos. 1 and 2 Talisman levels. Most of the ore sent to the mill was mined from stopes at 60 ft. south in the first-named level, where the reef averaged 9 ft. in width but proved to be fairly low grade. Development work was chiefly confined to opening up and cleaning out No. 4 level for the purpose of exploiting the No. 2 Crown block of ore, which is situated at a distance of 840 ft. south of the main crosscut, or approximately 1,000 ft. from its portal. The block is now exposed on the hanging-wall side of the level from the Talisman (old mine) stopping system north to Cogan's crosscut in the south, a distance of 240 ft. It varies from a few inches up to 2 ft. in width, and four short rises were put up on same. The first rise, constructed at 100 ft. north of Cogan's crosscut, was carried to a height of 40 ft. on stone with fair values and an average width of 18 in. The second, third, and fourth rises were constructed at 24 ft., 30 ft., and 40 ft. south of Cogan's crosscut and were carried to 20 ft., 40 ft., and 20 ft. respectively. The first of these is on stone 2 ft. wide with values of about £2 per ton, the second is located in what appears to be an old watercourse, and the third on stone that progressively decreases from 2 ft. (with payable values) to a few inches in width where it becomes valueless. Tributaries worked on two small sections of the company's property.

Waiawa Mine, Karangahake.—A limited amount of development work was undertaken in this mine, with indefinite results where the proving of additional blocks of stone are concerned. The ore won therefrom amounted to 457 tons, portions of which were treated in the owner's mill and portions by the Talisman-Dubbo plant.

¹⁵²⁷ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1940-I.2.2.2.3>

MINES STATEMENT BY THE HON. P. C. WEBB, MINISTER OF MINES., Appendix to the Journals of the House of Representatives, 1940 Session I, C-02

Talisman Extended, Karangahake.—Work consisted of winning ore that had run from an old stope in the mine.

1940

8 February

The monthly meeting of the Thames Valley Power Board was held today...

The Talisman Dubbo Gold-mining Company, at Karangahake, wrote asking the board to disconnect the battery, as the company was closing down.¹⁵²⁸

6 March

MINING NEWS. TALISMAN DUBBO FUTURE

An extraordinary general meeting of Talisman Dubbo Gold Mines, Limited (Karangahake), will be held on March 14, at which a resolution for voluntary winding-up will be proposed. Incorporated in 1929, the company has a nominal capital of £20,000 in 80,000 shares of 5s each.¹⁵²⁹

AJHR 1941

For the year 1940

MINES STATEMENT BY THE HON. P. C. WEBB, MINISTER OF MINES.¹⁵³⁰

APPENDIX A.

REPORTS RELATING TO METALLIFEROUS MINES AND STONE-QUARRIES.

The Inspecting Engineer of Mines to the Under-Secretary of Mines. Sir, — Wellington, 6th May, 1941. I have the honour to present my report on metalliferous mines and stone-quarries, together with statistical information, for the year ended 31st December, 1940.

Page 29

Only one small tribute party is now working at the Talisman-Dubbo Mine. In 1940 they produced 105 oz. of bullion, valued at £254. The up-to-date battery, erected in 1937, has been dismantled and sent to Fiji.

From the Waiawa Mine, near Karangahake, 208 oz. of bullion, valued at £630, was produced.

ANNEXURE A.

SUMMARY OF REPORTS BY INSPECTORS OF MINES.

NORTHERN INSPECTION DISTRICT (E. J. Scoble, Inspector of Mines).
Quartz-mining

¹⁵²⁸ <https://paperspast.natlib.govt.nz/newspapers/WT19400208.2.143>

Waikato Times, Volume 126, Issue 21033, 8 February 1940, Page 13

¹⁵²⁹ <https://paperspast.natlib.govt.nz/newspapers/NZH19400306.2.23>

New Zealand Herald, Volume LXXVII, Issue 23598, 6 March 1940, Page 7

¹⁵³⁰ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1941-I.2.1.4.3>

MINES STATEMENT BY THE HON. P. C. WEBB, MINISTER OF MINES., Appendix to the Journals of the House of Representatives, 1941 Session I, C-02

E. J. Scoble, Inspector of Mines

Talisman-Dubbo Gold-mines, Ltd. (In Liquidation).—Mine closed down and battery sold for removal to Fiji, where it is now in operation. However, three subsidized prospectors were engaged, on tribute, at exploiting some narrow veins on the north and north-western extensions of the property with fair success.

Waiawa Mine, Karangahake.—No new ore was proved and production fell to 170 tons, which yielded 208 oz. 9 dwt. of bullion, worth £630 5s. 5d.

1941**AJHR 1942**

For the year 1941

MINES STATEMENT BY THE HON. P. C. WEBB, MINISTER OF MINES.¹⁵³¹

Page 6

MERCURY.

...In addition to these operations, the Mines Department has been investigating cinnabar occurrences, and is at present prospecting the Ascot Mine at Karangahake. Results so far have been sufficiently encouraging to indicate that a small but worthwhile tonnage of high-grade ore may be developed, and prospecting work is being continued.

ANNEXURE A. SUMMARY OF REPORTS BY INSPECTORS OF MINES.
NORTHERN INSPECTION DISTRICT (E. J. Scoble, Inspector of Mines). Quartz-mining.

E. J. Scoble, Inspector of Mines

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Talisman-Dubbo Gold-mines, Ltd. (in Liquidation), Karangahake.—All privileges have been struck off the Register and the company should shortly be dissolved. During the early part of the year, tributers (one subsidized) won a little bullion from the property.

¹⁵³¹ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1942-I.2.1.4.3>

MINES STATEMENT BY THE HON. P. C. WEBB, MINISTER OF MINES., Appendix to the Journals of the House of Representatives, 1942 Session I, C-02

1942**AJHR 1943**

For the year 1942

MINES STATEMENT BY THE HON. P. C. WEBB, MINISTER OF MINES¹⁵³²

Mr. Speaker,— I have the honour to present to Parliament the annual statement on the mining industry of the Dominion for the year ended 31st December, 1942.

Page 7

Mercury. —A further 5 tons of mercury were produced by Mercury Mines, Ltd., from the Puhipuhi deposits...

Development work at the Department's Ascot Mine at Karangahake has been suspended and all the available ore is being stoped out. It is expected that a small tonnage of ore will result from these operations, which will make a slight contribution to the production of an essential metal.

ANNEXURE A. SUMMARY OF REPORTS BY INSPECTORS OF MINES.
NORTHERN INSPECTION DISTRICT (E. J. Scoble, Inspector of Mines). Quartz-mining.

E. J. Scoble, Inspector of Mines

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Golden Dawn Gold-mines, Ltd., Owaharoa—Work suspended and plant being sold for removal.

Talisman-Dubbo Gold-mines, Ltd., Karangahake.—The company has been dissolved, and all privileges struck off the register.

Ascot Cinnabar Mine, Karangahake.—Development is proceeding and a small quantity of good ore has been proved, and this will be concentrated for shipment and subsequent treatment. Two men were continuously employed for the period.

¹⁵³² <https://paperspast.natlib.govt.nz/parliamentary/AJHR1943-I.2.1.4.3>

MINES STATEMENT BY THE HON. P. C. WEBB, MINISTER OF MINES, Appendix to the Journals of the House of Representatives, 1943 Session I, C-02

1943

AJHR 1944

For the year 1943

MINES STATEMENT BY THE HON. P. C. WEBB, MINISTER OF MINES¹⁵³³

SUMMARY OF REPORTS BY INSPECTORS OF MINES

NORTHERN INSPECTION DISTRICT (E. J. Scoble, Inspector of Mines) Quartz-mining

E. J. Scoble, Inspector of Mines

Page 8

Operations have now been suspended at the Ascot Mine, where the Mines Department was carrying out some investigations. The tonnage of mercury ore available proved to be too limited to warrant the erection of a furnace, while the ore did not prove amenable to concentrating to small bulk.

Page 15

Ascot Cinnabar Mine, Karangahake.—Operations were continuous, but nothing of importance was proved. Two men were employed.

¹⁵³³ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1944-I.2.1.4.3>

MINES STATEMENT BY THE HON. P. C. WEBB, MINISTER OF MINES, Appendix to the Journals of the House of Representatives, 1944 Session I, C-02

1944

5 January

TANK TRAP SPRUNG. WAIHI BEACH ROAD. PEOPLE INCONVENIENCED

When the tank trap on the Waihi Beach road was sprung during the early hours of the morning of Thursday, December 30, traffic to and from the beach was held up for several hours and patrons from Paeroa, Waihi and districts who had been attending the Wednesday night dance at the beach had to stay there until 8 a.m. when traffic was again restored. The heavy log when released dropped neatly into place on the concrete foundations and required considerable work and some blasting before the road could be again used by traffic...¹⁵³⁴

Legend has it that there was a tank trap on the Rahu Road, but no mention of it has been found.

AJHR 1945

For the year 1944

MINES STATEMENT BY THE HON. J. O'BRIEN, ACTING MINISTER OF MINES¹⁵³⁵

ANNEXURE A

SUMMARY OF REPORTS BY INSPECTORS OF MINES

NORTHERN INSPECTION DISTRICT (E. J. Scoble, Inspector of Mines) Quartz-mining.

E. J. Scoble, Inspector of Mines

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Golden Dawn Gold-mines, Ltd., Owaharoa.—Underground operations were suspended. The battery building was sold and dismantled during the year, and three men were afterwards engaged in treating the earth floor of same, together with material from an old tailings dump, by means of ground sluicing. The concentrates so gained are being held for shipment to Australia for final treatment.

Talisman-Dubbo Battery Site, Karangahake (E. Roberts and Mate)—Some 50 tons of material were obtained from this source, the yield being 144 oz. 16 dwt. of bullion, worth £734 0s. 8d.

Ascot Cinnabar Mine, Karangahake.—Work is suspended, and is not likely to be resumed, as the results were unsatisfactory.

¹⁵³⁴ <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19440105.2.17>

Hauraki Plains Gazette, Volume 53, Issue 32377, 5 January 1944, Page 5

¹⁵³⁵ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1945-I.2.1.4.3>

MINES STATEMENT BY THE HON. J. O'BRIEN, ACTING MINISTER OF MINES, Appendix to the Journals of the House of Representatives, 1945 Session I, C-02

1945**19 December****BOROUGH OF PAEROA. REVIEW BY THE MAYOR****Waitawheta Water Supply**

“In conjunction with the Hauraki Plains County Council we have gone several steps forward with the Waitawheta water supply scheme. This has been a slow process on account of the many ancillary conditions to be considered. The area through which the Waitawheta stream runs comes under the control of the Mines Department, Works Department, Forestry Department, Health Department, Railway Department. Negotiations with all of these Government departments have been proceeding satisfactorily but slowly.

“Representatives of Paeroa Borough Council and Hauraki Plains County Council together with the consulting engineer have made inspections of the various sites and a tentative site for the intake has been agreed upon. The borough solicitor, Mr C. N O'Neill has taken in hand the necessary steps to have empowering legislation enacted to overcome some of the difficulties and restrictions which at present exist.

“The engineer will when the empowering legislation has been passed carry out a trial survey and prepare tentative plans and estimates of the costs. When these are completed an effort will be made to obtain financial assistance from the Government and possibly the Rehabilitation Departments. This will be done in conjunction with the Hauraki Plains County who are sharing the cost and joining in the scheme.¹⁵³⁶

AJHR 1946

For the year 1945

MINES STATEMENT BY THE HON. J. O'BRIEN, MINISTER OF MINES¹⁵³⁷**ANNEXURE A****SUMMARY OF REPORTS BY INSPECTORS OF MINES****NORTHERN INSPECTION DISTRICT (E. J. Scoble, Inspector of Mines)
Quartz-mining****E. J. Scoble, Inspector of Mines**

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Golden Dawn Gold-mines, Ltd., Owaharoa. —The treatment of residues from the battery site was continuous for the year, but the concentrates recovered therefrom were not dealt with, though reported to contain profitable values.

¹⁵³⁶ <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19451219.2.23>

Hauraki Plains Gazette, Volume 54, Issue 32659, 19 December 1945, Page 5

¹⁵³⁷ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1946-I.2.2.2.3>

MINES STATEMENT BY THE HON. J. O'BRIEN, MINISTER OF MINES, Appendix to the Journals of the House of Representatives, 1946 Session I, C-02

Talisman Battery Site, Karangahake.—This is now held as the Grace claim by E. C. Roberts. Approximately 100 tons of material were treated for a return of bullion valued at £707.

1946

Recollections of Karangahake: 1938-1945

By Oliver Pipe

Johnnie Morris, a very old identity, had a small five or ten stamper battery close to the site of the present toilet block on the picnic area. He treated small quantities of ore for various tributers. Mr Ben Gwilliam (Sen) did the assaying for him and also for the Dubbo.

The hall, also located in this area, was very much the centre of things and local dances were well supported. At the dances a Mr Redfern and his daughter Emily (Mrs Bill Griffin) could always be relied on to sing a duet entitled "Willow Tit Willow Tit Willow". The removal of the hall was a great loss but I think the new hall is better situated.¹⁵³⁸

AJHR 1947

For the year 1946

MINES STATEMENT BY THE HON. A. McLAGAN, MINISTER OF MINES¹⁵³⁹

ANNEXURE A SUMMARY OF REPORTS BY INSPECTORS OF MINES
NORTHERN INSPECTION DISTRICT (E. J. Scoble, Inspector of Mines)
Quartz-mining

E. J. Scoble, Inspector of Mines

Page 24

Grace Claim, Karangahake.—Approximately 200 tons of material were treated from this property for a return of 76 oz. 8 dwt. of bullion, valued at £449 17s. 4d.

Morris' Battery Site, Karangahake.—A final clean-up gave a return of 11 oz. 5 dwt. of bullion worth £43 0s. 7d., after which all plant was sold and transferred to a claim at Komata.

Waitawheta Claim, Karangahake.—Production amounted to 26 oz. 16 dwt., valued at £131 14s. 5d.

Prospecting R. Schulzki and mate were prospecting both on the surface and underground in the vicinity of the old Dubbo Mine, Karangahake. Good values were got in places, but the quantity of stone available is yet to be determined.

¹⁵³⁸ <https://www.ohinemuri.org.nz/journals/journal-36-september-1992/recollections-of-karangahake-1938-1945>

Recollections of Karangahake: 1938-1945. Ohinemuri Regional History Journal 36, September 1992

¹⁵³⁹ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1947-I.2.3.2.3>

MINES STATEMENT BY THE HON. A. McLAGAN, MINISTER OF MINES, Appendix to the Journals of the House of Representatives, 1947 Session I, C-02

1947**6 October****WATER BILL PASSED****REVOCATION OF SLUDGE RIGHTS****FIRST STREAM IN DISTRICT**

A privilege which miners in the Waitawheta area have enjoyed since 1896 has been revoked with the passing of the Paeroa Borough Council Water Supply Empowering Bill by the Legislative Council last week. Now that the Waitawheta stream, above the Dubbo has been reserved for the taking of water for the use of the Paeroa borough it is now no longer permissible to empty mining tailings into the stream.

Previously several attempts have been made to have the use of streams as sludge channels revoked, but until the passing of the Paeroa borough's empowering bill all have been unsuccessful. The Waitawheta stream is the first in the Goldfields district to be removed from the Mining Act's rights.¹⁵⁴⁰

¹⁵⁴⁰ <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19471006.2.17>

Hauraki Plains Gazette, Volume 56, Issue 32918, 6 October 1947, Page 5

1948**24 March**

BEING REMOVED

PIPES AT KARANGAHAKE

FORMER WATER SUPPLY. RELIC OF OLD MINING DAYS

Another of the few remaining signs of the one-time very extensive goldmining activity of Karangahake is now passing away.

The four-foot diameter sheet iron pipes which have lain neglected in the Karangahake gorge on the far side of the Ohinemuri river from the highway, are now being disconnected, hauled across the river on a rope and carted to the railway station by a gang of men who are camped at Karangahake. Even allowing for the present cost of sheet metal and the extreme difficulty of procuring it there has been much speculation as to what use could be made of this battered, rusty, old pipe-line.

The explanation is that the Tauranga Borough Council is salvaging it to provide boxing for the concrete lining of a new diversion tunnel for its McLaren's falls hydro-electric scheme.

The pipe-line at Karangahake was constructed over forty years ago to carry water from a dam in the Ohinemuri river a few chains above the railway tunnel to the Woodstock battery at Karangahake, and it was used for about ten years till the Woodstock was taken over by the Talisman which had a better water-power supply of its own from the Waitawheta gorge. The dam was demolished about a quarter of a century ago by the Ohinemuri County Council as it was a potential menace in flood-time and at various times since then the very solid totara timber it contained has been salvaged by county employees for the repair of bridges, etc.

The removal of the pipe-line will recall to old residents a peculiar occurrence when the supply was first used. The pipe withstood satisfactorily its initial pressure tests and then it collapsed and much of it had to be rebuilt. Current rumour had it that the engineer in charge, Mr Frank Rich, was kept short of money for the job so provided metal of the minimum thickness and this proved of insufficient strength to hold up the weight of the water when the pressure was reduced, but the real explanation was that as no air vents were provided a vacuum was created inside the pipe when the water was turned off at the dam and allowed to drain out of the pipe at the battery.¹⁵⁴¹

¹⁵⁴¹ <https://paperspast.natlib.govt.nz/newspapers/HPGAZ19480324.2.21>

Hauraki Plains Gazette, Volume 57, Issue 3974, 24 March 1948, Page 5

1957

Karangahake Hall

Karangahake School and District 70th Jubilee 1889-1959

On December 7, 1957, Karangahake was en fete for the official opening of its new hall. Over 400 people from as far afield as Auckland, Hamilton and Rotorua, gathered to celebrate the biggest community achievement since the mining period. The hall had been tastefully decorated with flowers to enhance and not detract from the very attractive contemporary colour scheme. Bunches of balloons added a festive air to the novel ceiling effect. From beginning to end the evening was one of healthy, happy enjoyment and friendly, sparkling conviviality. The official opening ceremony commenced with Mrs N. S. Donaldson's reading of the verse she wrote especially for this auspicious occasion, after which Mary Cotter presented the lady guest of honour, Mrs A. E. Kinsella, with a spray of pink carnations. Mr J. Cotter, chairman of the Hall Committee, welcomed the official party and traced the history of the building of the hall from the planting of the trees some 60 years ago on one of Karangahake's heights. He then announced that the oldest resident, Mrs Ritchie, was 83 years old that day and she was presented with a spray by Pauline Henry. Other speakers were Mr W. Crosbie, on behalf of the old identities, Mr W. H. S. Browne, riding member, and Mr H. R. Morrison, county chairman. Mr A. E. Kinsella, member for Hauraki, then officially opened the hall and he and his wife led off in the first waltz. The Havills' Orchestra, truly one of our most prized assets, did an excellent job throughout the evening and a delicious home-made supper was served by the local ladies.

But this is not the end of the story. This grand hall was not built as a War Memorial, so did not carry the £1 for £1 Government subsidy. It was built by the sweat and determination of the people of Karangahake and Mackaytown, who felt the need of a community centre. To raise initial funds socials were held in the school and that was when we first learned to value our Music Makers, who have always given their services free of charge. Many obstacles had to be overcome but finally, with the help of the Lands and Survey Department and the Mackaytown Domains Board, the project began to take definite shape. A site was chosen on the far bank of the Ohinemuri River with two main objects in view. First to keep clear of the busy main highway, but still be very accessible and central; and secondly, it was a site with ample parking space adjacent. In 1956 permission was granted to fell trees on local domain land and sufficient trees were felled to supply timber for the hall and some to sell to defray costs of milling.

February of 1957 saw the first foundations laid. To obtain further funds debentures were issued and several competitions took place, these earning over £200. A local contractor bulldozed the section, the Ohinemuri County Council gave the levels and the concrete foundations were laid. From that day on, or to be correct, every week-end from that date, Karangahake men were on the job. All labour was voluntary and very few men in the district had a spare week-end for 12 months. Gradually the building progressed until all could see what they had been striving for. This hall, which measures 42ft. by 60ft. contains every modern facility. The supper room is a delight to all the women,

with its careful planning and labour saving equipment. Catching the eye is the contemporary colour scheme which was recommended by a specialist and carried out to great effect by the "working bees." The entrance is light and airy with its shades of white and fiesta yellow. In the main hall the lower portion of each wall has a very dignified appearance with varnished ply-wood showing attractive grained effects. The paint work includes such shades as daffodil, flame, white and mist blue. The four smaller rooms are in toning contemporary shadings and look most effective.

The estimated value of this hall exceeds £5,000 and it is with immense satisfaction that the people of Karangahake will soon be able to say "We owe nothing on our hall." The only finance used in this project, other than local contributions, proceeds of dances, donations, and debentures, is the amount of £300 generously granted by the Government. It is estimated that the local men of Karangahake, in their spare time, have given nearly £3,000 worth of labour. This is one hall that will never leave Karangahake but will remain forever and a day to enhance the living and relaxation of the grand community-spirited people of this district.

- G. Nash.¹⁵⁴²



Karangahake Hall est. November 1957. Staples collection.

It was burnt down 7 September 2011.¹⁵⁴³

¹⁵⁴² <https://www.ohinemuri.org.nz/historic-texts/karangahake-school-70th-jubilee/karangahake-hall>

¹⁵⁴³ <https://www.nzherald.co.nz/bay-of-plenty-times/news/karangahake-hall-destroyed-by-fire/XG7JAHTTN4RK4SU4HN5PXWWMLY/>

1959

Waitawheta Water Supply

Ohinemuri Regional History Journal 4, September 1965

Undoubtedly the biggest undertaking ever attempted by the Borough was the Waitawheta Water Scheme and it was a most protracted affair. First mention in the records was in 1923 when Hauraki Plains County initiated discussions on a joint scheme but it was received without much enthusiasm despite the fact that the 1923/24 Summer was a very dry one.

However, difficulties and poor pressure from the Ohinemuri County Supply soon made Council aware again of the desirability of a better supply and a preliminary investigation of the Waitawheta area was carried out but nothing further done. In 1929 the local supply was again troublesome and a report was obtained which suggested a reservoir in town. The depression following this time ruled out any possibility of progress and it was not until 1937 that Council felt in a position to consider the matter again. In February 1938 Mr. P.P. Worley, Consulting Engineer, submitted a very comprehensive report on water supply for the Borough and came down very strongly for a supply from Waitawheta as the only source in the whole district capable of providing an adequate supply for as far ahead as could be foreseen. The estimated cost for a satisfactory scheme which would supply 1 million gallons a day was £25,000.

Again the matter lapsed and was not revived until 1940 when an approach was made to Government to hold the land in the watershed as a water reserve and perhaps establish a district water scheme as a rehabilitation project. It was found that as the stream was in a mining district special legislation was required to safeguard the stream from being used as a sludge channel. It took 3 years of preparation and negotiation before the Paeroa Water Supply Empowering Act 1947 was passed and this Act was a tribute to the endeavours of Mr. E. Edwards, Mayor, Mr. C.N. O'Neill the Borough Solicitor and Mr. M.C. Baker, Town Clerk.

More conferences were held between the Borough Council and Hauraki Plains and Ohinemuri Councils but were to some degree inconclusive. The estimate for the scheme had now risen to £4700. Ohinemuri eventually advised that they were no longer interested in a joint scheme. Hauraki Plains decision hinged on the amount of Government subsidy available. Eventually a deputation was taken on behalf of the two Councils to the Ministers of Works, Lands & Internal Affairs on 18th October 1949. It was favourably received but later some difference rose between the two Councils as to features of the facility and cost sharing and at one stage Hauraki Plains wrote that it did not intend to go ahead with a joint scheme. Some 2 months later this decision was reversed and in December 1950 a formal application for subsidy was lodged.

Great was the disappointment when the Minister of Works wrote that any subsidy granted would only apply to the County share of costs and not to the Borough. The Minister also advised that Piako County should also be brought into discussions on supply from the Waitawheta. Another round of investigations and conferences followed. So much delay occurred that in 1952 the Borough Council decided to "go it alone". In 1953 steps were taken to

raise a loan of £42,000 for renewing the pipes throughout the Borough in preparation for the new scheme. This was commenced in 1954 and took just on 2 years to complete. A loan of £80,000 was applied for in 1955 but permission to proceed took 14 months to obtain. In the meantime the amount was increased to £86,500. A loan poll was taken and carried by 160 votes for and 80 votes against the proposal. Tenders were called late in 1957 and one from the Carrington Building Co. Ltd. accepted. Messrs. Provincial Plumbers Ltd. of Waihi were the chief sub-contractors.

The work was a major undertaking, much under exceedingly difficult conditions and the perseverance of the workman on the job was indeed a credit to them. The pipe line measures 33,700 feet (about 6½ miles) from the Borough boundary via the Waitawheta Gorge to the intake above Dickey's Flat. The pipe line crosses 2 large swing bridges and passes through a 500 feet long tunnel before going under the bed of the stream to reach the treatment plant. Rising costs and additional features added to the scheme after the original tender was accepted resulted in the completed job costing just over £95,000. The first draw off from the supply was taken shortly prior to Christmas 1959 although the final work had not been completed at that stage. For the first time for nearly 40 years Paeroa Borough had an adequate supply of water. More remains to be done to make the supply perfect in all respects but all honour is due to the Councillors through the years who spent many many hours working for the day when the Waitawheta scheme would be realised.¹⁵⁴⁴

This scheme included two large suspension bridges made of Jarrah. The one at Karangahake was recently removed. The one between the headworks and the treatment plant remains (for time being). It is over 60 years old now. Can it be retained? No, now replaced.

The downstream end of the tunnel is adjacent to the headworks of the Crown water race (c. 1896).

¹⁵⁴⁴ <https://www.ohinemuri.org.nz/journals/journal-4-september-1965/waitawheta-water-supply>

Waitawheta Water Supply. Ohinemuri Regional History Journal 4, September 1965

1960-63

Karangahake Picnic Reserve

By M. W. PARKER, ASSISTANT COUNTY CLERK

This portion of the old town site contains an area of 3 acres 2 roods 10 perches and was vested in the control of the Ohinemuri County Council as a reserve for recreational purposes on 27th October 1960.

After reading a reference to the reserve in the Hauraki Plains Gazette while visiting old friends in the district, Mr. M. L. McNamara wrote to the Council on 31-1-61. He said that one afternoon he had climbed the Trig via the old road leading to No. 8 [level - E] where as a youth he had his first job on wages. He commented that the views towards Paeroa were magnificent and surpassed anything he had seen anywhere in N.Z. or Australia. He added that the one drawback was that the road was almost impassable, and offered the Council £100 toward the cost of clearing the track leading to the summit.

Cr W.H.S. Browne reported to the Council that £100 would not go far towards the cost of the work and to have the track cleared would require a very large expenditure. In view of this report Council resolved that Mr. McNamara be asked to consider making a donation toward the development of the parkside reserve.

On 20th March 1961 a cheque for £100 was received from Mr. McNamara who told the Council to use the money as it deemed most appropriate and useful. At that time it was suggested by Council that a plaque or some form of acknowledgement be placed at one of the entrances to the reserve, but this money was held in trust.

In October 1963 Council received strong protests from the Karangahake School Parent Teachers Association and School Committee about the unsatisfactory state of the picnic area. The popularity of the spot and lack of facilities for the number of people using the area had created a definite health hazard.

At the Council meeting in November 1963 the Engineer was authorised to spend up to £1,000 from the Land Subdivision Reserve Fund on the erection of a concrete block building containing toilets and changing facilities. This building was completed in time for the Christmas holidays and Mrs. Jock McLeod was appointed caretaker. Mrs. McLeod has been commended on numerous occasions for her work in keeping the facilities in a very tidy and clean state.

The Ministry of Works have assisted with the development of the reserve being responsible for providing rustic tables and the planting of flowering trees. In March of this year permission was granted to a local resident to operate a pie-cart on the reserve as an amenity for the users. Council is responsible for the present upkeep of the reserve but the gift money held in trust was transferred to the Paeroa Lions Club in April 1969 for the provision of amenities at Karangahake.

Note: The substantial Notice Board on the Reserve was erected by the Paeroa Rotary Club, the information regarding the history of Karangahake being

supplied by our Historical Society. The unusual Concrete Bus Shelter was the contribution of Mr. Bruce Sayer.¹⁵⁴⁵

Karangahake Sign

The Paeroa Rotary Club is to be congratulated on erecting a substantial dual sign to mark the site of the former Karangahake Township near the entrance to two spectacular Gorges and the junction of the Ohinemuri and Waitawheta Rivers. This County Reserve Area is now a popular Picnic Spot for wayfarers and explorers. The Paeroa Historical Society was happy to supply the information on the signs in memory of Karangahake's stirring mining days and its intrepid people. (see back cover of journal).¹⁵⁴⁶

¹⁵⁴⁵ <https://www.ohinemuri.org.nz/journals/journal-12-october-1969/karangahake-picnic-reserve>

Karangahake Picnic Reserve. Ohinemuri Regional History Journal 12, October 1969

¹⁵⁴⁶ <https://www.ohinemuri.org.nz/journals/journal-7-may-1967/karangahake-sign>

Karangahake Sign. Ohinemuri Regional History Journal 7, May 1967



Karangahake Picnic Reserve. Date c. 1965.

Staples Collection. Photographer unknown. Photograph taken from Taukani Ridge; above the Woodstock kiln?

The toilet block, information signs, strange bus stop and concrete steps are all present. When were the concrete steps installed?

“Gold Camp”

This was a tourist attraction. It was situated across the river from the present picnic reserve and was operated by Mr Lindsay Aitchison (with help from casual labour). It opened on Labour Weekend 1970 and continued until about 1975. Various attractions

included old mining machinery operated by a water wheel, gold panning, displays of old photographs, etc.¹⁵⁴⁷



Gold Camp gcc-18247, 12 June 1971, BoP Times. Tauranga City Libraries.¹⁵⁴⁸

The Gold Camp sign has blown down. At centre is the overshoot water wheel driving a two stamp battery and berdan. Water comes from the Hauraki Stream.

At left are a caravan and hovel.

The public were encouraged to cross the Ohinemuri using the pipeline bridge, which was gated to try to prevent this, or by boat/punt which the “miner” would sometimes operate. A trough of crushed quartz was available for the public to try their hand at panning.¹⁵⁴⁹

Who was the operator?

¹⁵⁴⁷ Karangahake School and District Centenary Reunion 1889-1989. Gary Staples editor. Page 48.

¹⁵⁴⁸ <https://paekoroki.tauranga.govt.nz/>

¹⁵⁴⁹ By memory of the writer.

Appendices

Interpretation Themes

Notes

- Process sequence and decision making (these still apply today):-
- Where is the gold, how do you find it?
- Find gold/ore
- It is worthless without a battery, unless you can sell the claim eg “shepherding”
- How to fund the battery
- How to get it to the mine site
- Where to put it; need space, and preferably hillside
- Transport of ore to battery – expensive
 - Pack
 - Horse
 - Road
 - Tramway
 - Ropeway
- How to power battery
 - Water power
 - Steam (wood, coal)
 - Electricity
- How to work mine
 - By hand (picks, drills, explosives)
 - Compressed air
 - Electricity
- Which battery process/recovery rate/techniques/technologies/costs
- Sell gold/bullion to fund all of above. Phew!

Most didn’t manage this!

Considerable evidence of this infrastructure remains, and is accessible.

At Karangahake:-

- Progress in processing techniques/gold recovery. Failure after failure
- Wet to dry to wet crushing in stamp mills
- Grinding in pans and then tube mills
- Mercury amalgamation to cyanide
- Coarse to fine grinding
- Air agitation
- Bullion refining
- “Waste” from the Karangahake batteries reprocessed at the Waihi-Paeroa Gold Extraction Company, dredged from the river at Mill Rd, Paeroa.

Talisman Battery Flow Chart

- We can walk through the flow chart

More

- Schools of mines; Dr Black
- Communities were linked, eg Thames, Te Aroha, Waitekauri...
- Karangahake environment rugged and spectacular; made mining very challenging, but being photogenic meant many photographers came, leaving a wealth of images.
- Early access was relatively easy from Paeroa, c.f. Waihi
- Suspension bridge capital of the world
- Ohinemuri catchment had over 22 water power supply dams
- Paeroa municipal water supply from Dickey's Flat

Spellings

G. N. McGruer

F. R. Daw

Cassel

Dickey's Flat

Dougherty, more recently Doherty

Scotchman's Gully

General Report on the Ohinemuri Gold Field, Province of Auckland, to 31st March, 1875.¹⁵⁵⁰

(H3 Page 6)

After years of resistance to every influence, the Native chiefs, Te Hira te Tui and Te Moananui, consented, about the 23rd December, 1874, to give up the Ohinemuri Block for gold-mining purposes. They however stipulated for some delay before completing the arrangement. In January and the beginning of February, Mr. Mackay was busily engaged in settling boundaries, defining Native reserves, and other matters; and on the 15th February, 1875, the Hon. Dr. Pollen and the Hon. Sir Donald McLean proceeded to Ohinemuri, in the "Luna," with their staff, to complete the necessary preliminaries for the opening. The deed was signed by the principal Native chiefs on the 25th February; and a few days' delay took place, in order to afford time for preparation of the necessary Regulations, Proclamations, &c.

The Ohinemuri Block extends from the southern boundary of the Hikutaia Block on the Thames River to the Mangaiti Stream, which forms the southern boundary of the Te Aroha Block; thence by the boundary of the Tauranga Block to East Coast; thence to the southern boundary of the Whangamata Block, excluding Native reserves at Mataora and Waihi; thence to point of commencement by the southern boundary line of the Hauraki Gold Mining District. The western boundary of the gold field runs at the foot of the ranges, leaving the flat lands between the hills and the River Thames as Native reserves; the estimated area of the block is 132,175 acres. By the opening of this block the Government secure the power of connecting the Thames district by main lines of roads with Tauranga and Waikato, and within the last few days Mr. Mackay and Captain Turner have laid off the most practicable lines of road.

On the 3rd of March, 1875, the Ohinemuri Block was opened as a gold field, under "The Gold Fields Act, 1866," by Proclamation issued at Auckland, at 10 o'clock a.m. that day, in the Provincial Government Gazette No. 11. Extracts from the Proclamation and Gazette were at the same hour read by me in front of the temporary Warden's Office at Ohinemuri. The Gazette referred to contains also the following —

1. Proclamation exempting from occupation for mining purposes, &c, a piece of land, described as Reserve B, at Ohinemuri, and known as Mackaytown.
2. Proclamation exempting from occupation for mining purposes, &c, a piece of land at Ohinemuri, measuring 500 feet in length and 300 feet in width, and described as Reserve A.
3. Proclamation reserving from occupation for mining purposes certain lands adjacent to the East Coast, with the said block now occupied by the Natives for residence or cultivation.
4. Proclamation making regulations for the Ohinemuri Gold Field.
5. Proclamation opening Mackaytown or Reserve B for occupation for residence or business, under certain regulations therein set forth. The issue of 770 miners' rights commenced at about nine minutes past 10; and though great excitement prevailed, accompanied, by much struggling to be the first recipients, that operation was completed without any disturbance in about seven minutes. As the circumstances under which it became necessary to distribute so large a number of miners' rights as

¹⁵⁵⁰ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1875-I.2.2.4.6>

THE GOLD FIELDS OF NEW ZEALAND, (REPORT ON)., Appendix to the Journals of the House of Representatives, 1875 Session I, H-03

nearly as possible at the same time are somewhat peculiar, I will briefly describe the *modus operandi*.

Applications for miners' rights had been received for two days previously, and up to 10 o'clock on the night of the 2nd clerks were at the same time engaged in making out the rights and counterparts. Each applicant, on paying his money, received a ticket with a consecutive number thereon, denoting the number of his application. The applicant had the option of applying for himself only, or might include, by payment of the necessary amount, the names of any number of miners. To expedite the issue of these rights, they were torn from the books when all were filled up, and a piece of paper pinned thereto having a number thereon corresponding with the number on the application ticket. It only remained to arrange the front of the building suitably, to obtain a sufficient number of clerks for distributing the rights almost simultaneously, and to place in their hands the miners' rights, with the pieces of paper numbered consecutively thereto attached. The front of the building was divided into seven compartments. At six of these compartments clerks were stationed, and outside large notices were placed; numbered from 1 to 35 for compartment No. 1, 36 to 70 for compartment No. 2, and so on, thus enabling the men at once to perceive at which compartment their rights would be issued. The seventh compartment was devoted to the issue by Mr. Mackay, in a similar manner, of rights for which he had personally received applications during the previous week, and for which no check-tickets had been issued. At the close of business on the 3rd March additional rights had been issued, and the total number issued to date is 1,069.

Population. —It is difficult to form any other than an approximate idea of the population. Including those settled at the lower landing-place on the Waihou—which is variously designated "Creagh's," "Belmont," or the "Puke"—also the township of Paeroa at the head of the navigation of the Ohinemuri, and the inhabitants of Mackaytown, I am of opinion that the total number may be estimated at about 1,200.

Other Statistics. —Miners' rights, 1,069 ; business licenses, 6; publicans' licenses issued in special licensing district, 15; number of claims registered at Karangahake, 36; at Waitekauri, 8 ; at Rotokahu [Rotokohu], 2; elsewhere, 6; total number of men's ground therein, 373. Warden's Court: Number of cases disposed of, 10 ; ditto not disposed of, 5. Revenue: Miners' rights, £1,069 ; business licenses outside township, £21; business and residence allotments Mackaytown, £303; survey fees do., £35; registration mining claims and transfers, £34; Warden's Court fees, £21; kauri trees, £20.

Township of Mackaytown.— This township, called Reserve B in the Proclamation, is entirely under the superintendence of James Mackay, jun., Esq., the Agent for the General Government at Ohinemuri; to whom I am indebted for the following information :— Number of business allotments taken up, each at £5 per annum, 52; number of residence ditto, each at £1 per annum, 43.

Reserve A. — Under a Proclamation published in the Provincial Government Gazette of the 8th March, the occupation of this reserve was authorized for mining purposes by "such person or persons as should, after due investigation, and the hearing of all persons desiring to be heard therein, by the Warden of the said gold field, be found by him to be the first or original discoverer or discoverers of gold in the said exempted land." The investigation referred to was held by me at Ohinemuri on Friday, 12th March, and after hearing the various claimants I decided on the following morning in favour of John Thorpe and party.

Other Minerals discovered. —Several seams of coal have been discovered, of apparently good quality, and of easy access. Active arrangements are being made for working the same. Reports have been made of the discovering of iron, copper, silver, and cinnabar ores, but at present I can give no authentic information relative thereto.

Prospects of the Field. —At this early stage it is difficult to express an opinion as to what may be the future of this field. Many who had expected to find alluvial gold were disappointed, and this, together with the uncertainty that existed as to who would become possessed of Reserve A, miscalled the prospectors' claim, threw a very perceptible gloom over the field for the first fortnight. Hundreds of men who had been present at the opening, some of them perhaps unwilling to go through the labour of prospecting for themselves, others probably unprepared with funds for remaining here, were to be seen returning with or without swags to the Thames. I am of opinion that few of these men of any experience in gold mining, if questioned, would have pronounced the field a duffer. Those who remained, however, have set to work in earnest. Few are to be seen lounging about the township, and some have already fair hopes of success: 5/16ths of a share in the Karangahake Claim—or Reserve A—of ten men's ground, has been sold by a Native for £45. Gold has been struck in that claim and in the Banyan Claim on the opposite side of the Ohinemuri River, and at Rotokahu district about three miles, where very encouraging prospects have been obtained. Rumours of fresh discoveries of gold, or likely reefs, come in daily. On the whole, I am of opinion that Ohinemuri presents very favourable indications of becoming a good payable quartz-mining district.

I have, &c, W. Fraser, Warden.

Ohinemuri, 31st March, 1875.¹⁵⁵¹

¹⁵⁵¹ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1875-I.2.2.4.6>

THE GOLD FIELDS OF NEW ZEALAND, (REPORT ON)., Appendix to the Journals of the House of Representatives, 1875 Session I, H-03

Ohinemuri Gold Rush

Ohinemuri Regional History Journal 34, September 1990¹⁵⁵²

By Alistair M Isdale B.A.

It is to be hoped that the article under the above title on page 18 of the September 1989 Journal [see Journal 33: Ohinemuri Gold Rush¹⁵⁵³ - E] was read with due regard to the warning implied in the account of its origin by W Delisle Hay, in 1882, seven years after the event. That is too soon for historical research, but just the appropriate interval for pub lore to ripen.

The 1875 newspapers - and newspapers are not supposed to be noted for minimising things - give a more sober account.

The 1882 story starts: The chief Te Hira has been overruled by his counsellors, and has reluctantly consented to the sale of a portion of his territory".

The "Thames Advertiser" of February 20, 1875, says, "There was apparently some reluctance to sign the treaty, but after Te Hira and Te Moananui had come forward and received from the lips of the Native Minister an explanation as to the points in the treaty, there was quite a rush".

As for "sale", the agreement or treaty was not to sell, but to "cede" the use of land for gold mining. This was to save the Ohinemuri lands from being taken for debt, the wily James Mackay having made advances over a period of years - against the security of the land. Te Hira did not want to lose the lands for debt, and Mackay presented the alternative of cession and opening the Ohinemuri.

"Steadfastly for years Te Hira resisted the opening of the Ohinemuri; but since he gave his word that it should be opened his conduct has been without a fault....The whole affair would have been upset but for Te Hira". (Ibid, Feb. 22)

A few days after the signing on February 18, as noted in the Advertiser of February 26, there was a meeting, at which cheers were called for Te Hira. "The old gentleman, who appeared highly gratified at the compliment, waved his hat and whip in response". So much for the 1882 story, "Already he is disgusted with the advent of the pakeha, and talks of retiring with his principal adherents to some wilder solitude".

He had been dealing with the Europeans for a long time, and the real issue had been to get a proper price for the land, as mentioned in the "Thames Advertiser" of September 3, 1870, which noted that the people of "the Upper Thames are sticking together to get their own price for the land" and were "pretty wide awake here". On September 30, 1870, there was mention of Te Hira's sister, Mere Kuru "and her Amazons", who kept out surveyors.

The 1882 story has her more reconciled than her brother Te Hira in 1875, and "qualifying herself to become a leader of modern Maori fashionable society". The 1875 newspapers show her less reconciled than Te Hira. The Advertiser of January 16 mentioned surveyors "laying out the township of Ohinemuri on the 165 acres of the Paeroa. Three or four years ago, when the Ohinemuri was thought to be on the point of being opened, an attempt was made to lay out a township on the Paeroa estate - with the assistance of three or four viragos like herself, Mere Kuru fairly chased the surveyors off the ground, with all their pegs and other materials. Now she was shaking her head dubiously".

¹⁵⁵² <https://www.ohinemuri.org.nz/journals/journal-34-september-1990/ohinemuri-gold-rush>

¹⁵⁵³ <https://www.ohinemuri.org.nz/journals/journal-33-september-1989/ohinemuri-gold-rush>

The second paragraph has "we" disembarking at the Paeroa landing and going at once to the Warden's camp, "not far off", just before the opening day of March 3, 1875, with several pages on a wild six mile ride from there to the diggings.

Early in 1875 there was a very temporary diggers' encampment near the Paeroa landing, but well before March 3 there had been a general shift to the entrance to the Karangahake Gorge, with an encampment at first called Gorge Town and then Mackaytown, complete with the Warden's big marquee with a 50 foot frontage (15 metres).

This was replaced some months later by a wooden building, and when Mackaytown became a "deserted village," this was shifted to Paeroa and left abandoned in a field.

From such a place one could have something like the description of "looking out towards the wooded plain as it swims in the morning sunshine, towards the towering hills in the distance". Not the heat and black dust of many fires at the actual Mackaytown on a partly burnt off fern ridge close to said hills. A fine romantic eye can dispense with the trammels of time and place.

As for a "scene of glorious confusion" at the encampment, the Thames Advertiser of February 27 noted that "the survey of Mackaytown was finished... The streets are all laid off down to the banks of the river. The front street is on the main track to Tauranga, and this is all reserved for occupation under business licences, each allotment having a frontage of 66 feet. Many of these are already occupied. The Police Camp and Warden's offices are pitched in a street running at right angles to this main street". Pitched means tenting at this stage, including the great marquee.

As for the way from Paeroa to Mackaytown, road works had been going on for some time, in hot and dusty conditions, from early in 1875.

The Thames Advertiser of March 4 tells of a reporter with pigeons who, from a river steamer landing, on March 2 "marched off to Mackaytown. 'The first man I saw toiling along the dusty road, with a swag, was the Mayor of Thames'". Paeroa was lively.

On the way to Mackaytown, "beyond Mr C F Mitchell's place the Ohinemuri stream had to be crossed twice. At the first a flat-bottomed dinghy rowed by a man of colour cost threepence. At the second a young fellow pikaus people over for 6d".

At last he arrived at Mackaytown, "whose tents were before me, shining white against the dark green fern". Things looked less clean when he actually arrived on the "busy scene". "Everybody is dirty. Large spaces of fern have been burned off, so the ground is covered with a fine black dust which begrimes everybody within a few minutes of arrival.... Mackaytown is situated on a fern ridge. On the left it drops down into a deep gully, while on the other it sweeps down to the Ohinemuri".

The partly burned off fern ridge does not exactly fit with "stumbling over stumps and roots and boulders, splashing into deep mud and mire". It was a time of heat and drought, with only the established swamps still miry.

"Mackaytown stores include those of Cashel, McCloughen, Jack Leydon, etc., I found James Rae superintending the erection of a building in what is at present the main street. There is the sound of the hammer all around." (Much of this wooden building was in the shape of "calico houses", with canvas stretched over wooden frameworks.) "Beyond the gully on the left is a rise which has been set aside as a 'digger's camp'." W Delisle Hay completely misses the commercial side of Mackaytown, several miles from his imaginary camp near Paeroa.

"On the flat on the other side of the Ohinemuri is the embryo township which has sprung up under the wing of Mr Lipsey - Lipseyville."

For the rush next day, on the 3rd March, 1875, the 1882 account has "two or three thousand" gathered near the "Warden's tent", apparently a small one.

Actually the reporter quoted on March 4, speaking of March 3, wrote, "1200 men are here now." That was everywhere. Only some were at Mackaytown on the morning of March 3. For on the evening of March 2, "As night fell, squads of men, evidently those who had left mates behind to secure their miner's rights, left the town (Mackaytown) without beat of drum... clerks and officials all day (2nd) and till 3 in the morning were filling up miner's rights for which application had been received", with "upwards of 800 applications," during the 2nd.

The reporter heard 100 rights had been applied for by local Maori people - "I am glad to see they are going into things with the spirit." This is far from the 1882 story with "queer old tattooed worthies... younger men... evidently anxious to get excited too, if they could only understand what all the fuss is about. Yet there is a contemptuous air about them, a kind of pity for the curious insanity that is rife". Quite a different spirit, and very patronising - by W D Hay.

Pub lore did not miss having to hide and watch horses overnight 2nd - 3rd. The Advertiser of March 4 mentioned horses, "some hidden in fern and teatree", and also "many" thought "securely tethered" having disappeared overnight, while some "slept alongside their horses". Pub lore also added bullocks.

The Advertiser of March 4 does describe how as the time drew near to pick up miner's rights for the diggers waiting with their pegs to put in on the high ridge on the other side of the river, the "horsemen were mounted ready for the rush... the scene was like Derby Day on a small scale".

It also described how Mackaytown was astir from 6 00am, and while waiting for 10 00am, not only the "anxiety but the black dust" and heat intensified. The black charcoal dust from the fires was "so dense it was difficult to see through for even a few yards. It was an intolerable nuisance, getting into ears, eyes and nostrils, and into every pore already opened by perspiration.... the heat is strong, there is scarcely a puff of air".

There were similar conditions on the ridge across the river, described as "the burnt spur, where in addition to those who had arrived the night before, more kept arriving during the morning to join those who had held vigil. There were men up there "marching about with pegs excitedly and whispering in groups... There is a splendid view from this spot", including "the multitudinous tents of Mackaytown," a short distance away across the river. "The ground is covered with men and pegs", (not yet driven in). At 9 50 Sergeant Elliott and 4 constables arrived. Pegging would start when men arrived with miner's rights after the reading of the proclamation by Warden Fraser who did not speak from a stump, but "mounted the rostrum", prepared in advance. As for "no one can hear a word", the report featured on March 4 next day, wrote on the spot up above, "We can see the crowd listening to the proclamation being read". Perhaps some of the diggers up on the ridge where the reporter was, told W D Hay they could not hear - from there.

There were indeed cheers when the Warden finished, and then a stampede, but that had been prepared for, with an estimate of half an hour to deal out the numbered bundles of rights.

It was certainly not a case of "everyone rushes at the clerk's table.... dumps down his one pound note for the 'miner's right', which is his licence and authority". The

payments had already been made, by men who had received "a numbered card as only receipt", to pick up rights "for himself and as many mates as he thought proper". Those payments beforehand would be as likely in sovereigns.

"A rude table is rigged up in front of the Warden's tent, at which clerks take their places", is far from the 50 feet long stout counter along the front of the great marquee, with "the spaces between the upright posts convenient sites for the regulation of the numbers", with a stout railing two feet out in front of the long counter, behind which waited 8 clerks, Warden Fraser, Registrar Allom and several police.

As intended, the stout railing in front held against the first rush, and amidst "indescribable hurry and confusion", in half an hour all the 800 off miner's rights were issued, exactly as estimated.

The 1882 description of a 6 mile wild ride from the giving out of rights to the diggings is a fine feat of imagination. Actually, as already noted, the diggings on the "burnt spur", not picturesque mountain scenery, were so close that those up there across the river could see, if not hear, the Warden giving his proclamation speech.

The reporter, quoted on March 4, on March 3 was busy with notes on thin paper for his pigeons, which brought on the spot news to Thames in around half an hour. He noted that movement began at Mackaytown at 10 07, with "clouds of dust, horsemen". In a very short time, at 10 20, he noted, "Horsemen flying over the ranges, men running to meet them... Behind the first horses men on foot in relays. Cloud of dust all the way to the camp. A Maori has won the race, and is first on the ground with rights." (An interesting point missed in 1882.)

The main obstacle for the short course was the small Ohinemuri River, and the Advertiser of March 4 described some trying slippery boulders, and then preferring to swim on the deeper water nearby, and some doing both in turn. "Many the duckings stumbling over a slippery boulder. Some swam horses across at another spot, until they approached a perpendicular hill, when they dismounted and walked... By far the greater number trusted to their own legs... It was amusing to see them in single file crossing the creek at full speed and ascending the steep hills opposite. In some cases relays of miners lessened the labour and increased the speed."

The two main hazards were the river crossing, and a swamp on a little flat on the other side if one went that way, while all had to contend with the steep ascent of the burnt spur - in some places more steep than others, if shorter.

"Horsemen started off with a rush, but many in their hurry came to grief at the first crossing; others stumbled and fell in a narrow swamp beyond Lipsey's camp. Others gave out before the face of the famous burnt spur was reached, and amidst all the crowd of horses were men on foot scampering as if their lives depended on their speed."

"Men and horses were all fagged long before they reached their destination, but the men who brought miner's rights had other miners in waiting, who, taking hold of the rights, scampered wildly over the spurs, pausing to drive a peg and have a word of dispute with others, and then rushing off at breakneck pace to get to their next comer and so on."

That kind of race "continued for about an hour, the goal apparently the large projecting rock on the burnt spur, known as Fryingpan Rock, on the face of the burnt spur where the prospectors' reserve had been pegged off. From this point, where a large number of spectators assembled, the rush diverged in various directions, but without, so far as I could learn, any violence or rows."

A group of police reinforcements came running up to the spur after the rest "but there was no need for their services".

Not nearly so interesting as, "Words give place to blows... Fierce fights are waged over many an inch and yard of ground... I fear that even revolvers and knives are shown, if not used."

Now there was a grain of truth in the last bit, even if no actual fighting. The Advertiser of March 4 had, "a number were armed in anticipation of resistance to their progress, one foolishly and ostentatiously with a six shooter in his hand, as if to challenge all comers". Who preferred to give way. He was the first back at the Warden's office to register a claim after pegging.

The grimy "burnt spur" must be considered rather a comedown beside the romantic Victorian imagery of, "The wild and beautiful solitude of primeval nature... within the gorge... splendid mountain scene.... steep hill side, beneath and among the trees that cast their shadows all over the golden ground.... the grim defile."

If not six miles, the very short course was severe enough on horses. "All down the route are horses standing, utterly done up. Some had been over in the swamps, it was a wonder two or three men had not been killed. There was not a bad horseman in this race." (Indicating no actual injuries. Pub lore would take care of that. "The unlucky rider screams with pain, for his legs and ribs are broken", wrote W D Hay.)

As for the next day, March 4, there was no need on the burnt spur for "trees to fall beneath the axe", nor "Parties are told off to cut and construct a road." Meaning for the six miles from the dream encampment to the dream diggings.

Actually, it was just on this day that roadmaking, which had so far made at least practical access from Paeroa to Mackaytown, stopped. "James Mackay resigned" very annoyed. However, the Auckland Provincial Government refused to accept his resignation, and was stung by protests to resume operations, mainly with Armed Constabulary. First the river pay crossings were improved, by block cuttings to give grades up the banks. (I found the marks still there.) Then Captain Turner bypassed the two crossings altogether, by a way over what became Turner's Hill.

The 1882 story goes on, "Miners began to build up huts and habitations and to bring up from the river their swags, provisions and tools". They did bring up from the river tools to work claims on the burnt spur, but other matters could remain where they slept at Mackaytown, or even nearer Lipseytown. But it is interesting that instead of 6 miles we have them merely bringing things up from the river, with some semblance of reality breaking into the dream, no doubt from the lips of one of Hay's informants.

The description of three months later is definitely dreamworld. "A rough young town now hangs upon the mountain's shoulder.... Down below, a couple of crushing mills are already set up, and are hard at work, belching forth volumes of smoke".

Actually, the "Thames Advertiser" of June 3, 1875, told of a Mackaytown which had gone backward rather than forward, especially after the Neavesville goldfield near Thames of April 10 drew many men away, while "Waitekauri Every Time" drew off many more. There had been some construction of huts to replace tents, and actual wooden buildings by the Auckland Provincial Government for Warden's office and police, and a very few wooden buildings of some size for commercial interests. But a great deal of the construction that replaced tents, especially for the business licences, was in the shape of those "calico houses".

June 3 told of a recent storm. "The gale on the night of May 31 reduced the National Hotel to a heap of ruins, and the famous 'tent' of miner's rights is a thing of the past. Sundry calico houses came to grief."

Instead of two batteries, there were none. The winter rains went on, if not the battery, and more diggers left.

The "Thames Advertiser" of March 6, 1876, summed up the first year. "On March 3 there was a mild celebration of the opening of the Ohinemuri", at Paeroa. "After the famous rush to peg on the 3rd of March at Karangahake, many were greatly disappointed that the gold was not so plentiful as they had been led to expect, and miners and storekeepers cleared out in large numbers. A faithful few remained, with the result that Waitekauri has been brought into prominence, and new ground lately opened at Owaharoa bids fair to take the lead". Indeed, it would be the first to get a battery going (small), followed by the great battery at Waitekauri and a moderate sized one at Karangahake. The Advertiser of September 22, 1876, with its long list of mine productions, large and small, gave around 300 tons put through for only 24 ounces - and Karangahake "gold" was largely silver. (As land was "ceded" for "gold", the silver was "deemed" to be part of the gold.)

The Thames newspapers covered Ohinemuri mining in great detail, and any share movements, at both Thames and Auckland Stock Exchanges. But there was nothing even corresponding to "O'Gaygun's Claim", or any share movements resulting from a lucrative discovery.

A very few diehards clung on, going into Karangahake mountain itself rather than the burnt spur, and by 1883 there was some movement. The very silvery gold, however, posed processing problems, and late 1885 into 1886 saw trials of a La Monte furnace, followed by a Railey plant of more modest pretensions. In 1889, the first field test in the world of the Cassell cyanide process was made at the Crown battery, Karangahake, leading to big and profitable production at both Waihi and Karangahake. W Delisle Hay did write an entertaining story.¹⁵⁵⁴

¹⁵⁵⁴ <https://www.ohinemuri.org.nz/journals/journal-34-september-1990/ohinemuri-gold-rush>

Ohinemuri Regional History Journal 34, September 1990. Ohinemuri Gold Rush

See also: <http://www.ohinemuri.org.nz/journals/61-journal-33-september-1989/1245-ohinemuri-gold-rush>

And: <https://www.ohinemuri.org.nz/journals/journal-52-september-2008/the-karangahake-goldrush>

Ohinemuri Regional History Journal 52, September 2008. The Karangahake Goldrush

Isdale, in the above report, refers to a Thames Advertiser article of 4 March 1875. This is it complete.

OHINEMURI OPENED.

By our own reporters.

Preparations

Mackaytown, Wednesday, 4 p.m. During last night, and in fact, all day yesterday, subsequent to the exposure of the prospectors' claim and the exhibition of the gold found there, there was a feeling of intense anxiety exhibited by all located in the district. There was no rowdyism, but preparations were in progress. As night fell, squads of men, evidently those who had left mates behind to secure their miners' rights' left the town without beat of drum. The population were congregated in small-knots, and the clerks and officials were busily occupied all day, and all night, too, for the matter of that, at least up to 3 o'clock in the morning, filling up those miners' rights for which application had been received. At an early hour this morning a start was made at the same work, and before the applications closed there were upwards of 800 applications made, and rights made out to a similar extent. The whole township was alive at 6 o'clock in the morning, and I say if the time passed as heavily up to 10 o'clock for the rest of those who were waiting as it did for me, it must have been miserable. There was a general adjustment of watches. As many as could procured their time from the Warden, so as to be ready for all emergencies.

By the way, before going further, I may say that the Warden, Capt. Fraser; Mr Allom, Receiver of Goldfields Revenue, and a retinue, arrived at Mackaytown on the previous night, and made an immediate start in the performance of their duties, Captain Fraser signing the miners' rights which had already been filled up, and clerks, under the supervision of Mr McKenzie and Mr Allom, filling up those for which application had been made. This continued up to the moment of reading the proclamation. By this time, and in fact for some hours previously, large crowds had assembled around the building from which the miners' rights were to issue, and most of them seemed determined to hold possession of the positions, which they had secured until such time as they were relieved from anxiety by being made happy possessors of miners' rights for themselves and parties. The arrangements for issue of rights were as follows:-A man made application for a miner's right in his own name, and as many others as he thought proper—of course he only included his mates in his application—and the list of names being made out, was handed to the clerk, who gave the applicant a numbered card. This was the only receipt given, and applicants were informed that they must present themselves and their ticket at 10 o'clock on the 3rd instant to receive their miners' rights.

The building from which the miners' rights were to issue was a large frame and canvas building, 50 feet in length, and 20 feet wide. The long counter which served as a desk traversed the whole-length of the front of the building. The canvas was hoisted from the front of the counter, and the spaces between the upright posts of the building formed convenient sites for the regulation of the numbers. The first space was allotted for Mr Mackay who had received about 150 applications for miners' rights, and had given no receipts for money. In order, therefore, to prevent any mistakes, he superintended the distribution of those rights himself. The next space was for those who held tickets numbered from 1 to 35. The other compartments were numbered in like manner. A clerk was placed in front of each compartment provided with the books of miners' rights contained within the numbers of his compartment. The

miners' rights were made up in bundles with the number of the ticket previously issued attached, so that an applicant had only to present his ticket, and all the rights for which he had applied were at once handed to him. In front of the building, and within about 18 inches or 2 feet of the-counter, there was a strong fence erected, so as to prevent any pressure on the clerks, and this was not by any means the worst arrangement which had been made. The distance was such that the clerk could conveniently reach the outstretched hand of the applicant, receive his ticket, and hand him back his rights.

As the hour for reading the proclamation approached, the excitement intensified, and impatience was visible on every face. Horsemen were mounted ready for a rush towards the site of the prospectors' claim as soon as they became possessed of their "authority." Everything on four legs which appeared to be able to carry an anxious miner even a portion of the road which he had to travel was engaged or stolen, during the previous night, and during the course of the morning the scene around the Warden's camp was more like a Derby day on a small scale than anything else. There was the same intense personal anxiety depicted on the faces of all present, the same nervousness regarding the result, the same calculation of chances, and the same want of enjoyment also, for not only was anxiety sufficient to prevent enjoyment, but the black dust which rose in clouds so dense that it was difficult to see through it, even for a distance of a few yards, proved an intolerable nuisance. It penetrated the ears, the eyes, the nostrils, and lodged in every pore of the skin which had already been opened by perspiration. The heat was strong. There was scarcely a puff of air, and amidst this accompaniment Europeans and Maoris assembled, a motley group, arrayed in curious dresses or undresses. It was a real Vanity Fair. How the seconds were counted up to ten o'clock! Watches were consulted and compared. Will the time for the proclamation for the issue of miners' rights never arrive? The minutes grow into hours in the estimation of the crowd in waiting. At length a bustle is observed amongst those who are pressing for places against the rails, and Mr Mackay, mounting on the counter and standing outside the building, addressed the assembled diggers. Short but ardent cheers greeted his appearance. It was the beginning of the end.

Mr Mackay said that he congratulated the miners that the long-wished-for time had arrived for the opening of the Ohinemuri block for goldmining purposes. He hoped the place would fully answer all their hopes and expectations, and gratify the-wishes of all present. He stood there as agent for the General Government to hand over to Captain Fraser the proclamation of the goldfield and the control of it, for Captain Fraser had been Appointed Warden. (A voice: "It could not be in better hands." Cheers.)

Mr Mackay then handed over to Captain Fraser the Gazette containing the proclamation.

THE WARDEN'S INTRODUCTION. Captain Fraser, R.M., the Warden of the new field, then mounted a rostrum in front of the Government offices, and introduced himself to the assembled miners as follows: —"On the authority of a proclamation in a Gazette of the Auckland Provincial Government, No. 11, dated this day, and which I now hold in my hand. I announce the land known as 'Ohinemuri Block' to be a proclaimed goldfield under the 'Goldfields Act 1866.' The boundaries of that block are defined in this Gazette, open to the inspection of the public. On the authority of a subsequent proclamation in the said Gazette, I have to further announce that, under the tenth section of the 'Goldfields Act, 1866,' there is exempted from occupation, for mining purposes, residence, or for business under any miners' right or business

license, a piece or parcel of land situate at Te Kahakaha, within the said Ohinemuri goldfield, and known as Mackaytown, or Reserve B, the boundaries of which are referred to in the said proclamation. And there is exempt from occupation for mining purposes, or for residence, or for business under any miner's right or business license, all that piece or parcel of land situated at Karangahake, within the said Ohinemuri goldfield, measuring 500 feet in length and 300 feet in width, known as Reserve A, the boundaries whereof have been marked and defined on the ground. Also all the lands adjacent to the East Coast of the North Island between Te Papiri on the north and Nga-kuri-a-whare on the south within the said Ohinemuri goldfield, now occupied by aboriginal natives of New Zealand for residence or cultivation. And I have further to announce that for the regulation of the said goldfield certain regulations have been made, also set out in the said Gazette. The before mentioned reserve, known as Mackaytown, or Reserve B., is open for occupation for residence or business under certain regulations set out in the said Gazette."

THE ISSUE OF MINERS' RIGHTS.

The announcements were received with cheers, but these were scarcely completed ere a stampede for the compartments of the Warden's office set in, and each endeavoured to outvie the other in an effort to gain priority of place in front of the several clerks issuing rights according to the numbers of the tickets held by applicants. The strong barricade in front of the building was sufficient to stand the severe test of this first and principal attack. There was intense excitement all round, and the utmost eagerness was evinced by the clamorous throng now intent upon outstripping each other in the race for priority of occupation. The scene would have perplexed the photographer, for out of some hundreds assembled only those who had gone to the township on a mere visit or intent on other business were calm at this time. It requires the talent of a Hogarth to depict their countenances or picture the scene. They were each so intent upon reaching forward to grasp the coveted rights as they were handed out, that little notice was taken of the crushing and scrambling over the shoulders of one another, at the imminent risk of the limbs of many, and especially those nearest the barricades. Under the circumstances, they may be said to have been very orderly and peaceable. There was no attempt to bar the approaches to the compartments to the prejudice of certain sections of applicants, as it had been stated would be attempted, and there was very little need for the presence of the greater number of the Armed Constabulary, who had taken up their quarters in the vicinity in anticipation of active duty.

Among the first to get away with their rights were Messrs P. Austin, Porter, S. Young, J. Leydon; and several natives. The scene for some half hour, during which no less than 800 miners' rights were issued, was one of indescribable hurry and confusion. The tall and the short, the lean and stalwart, were huddled together in one compact mass, each endeavouring to steal a march over his companion in procuring the miner's right or rights represented by his ticket. Inside the offices were Warden Fraser and Registrar Allom, with several policemen, witnessing the proceedings while some eight assistants issued the miners' rights. An attempt was made by one miner to enter by the back way in order to procure a certain number of miners' rights. The person in question stationed himself at the back entrance, and watched his opportunity to enter. He was instantly observed by Captain Fraser and the police, who speedily ejected him. His excuse for entering in this manner was that a certain official whom he named, was in possession of his miners' rights, and he had only entered in that way according to instructions. Whether this was so or not, he was rightly served by the

Warden, who ordered that he should be compelled to wait until the crush was over before receiving the rights for which he applied.

"A HORSE! A HORSE!" This heading is scarcely applicable, because the cry had been raised for several days previously, and had perplexed not a few in consequence of the inclination for going astray possessed by many such animals. The collection of horseflesh was astonishing. Animals of every description, from thorough-breds, three-quarter-breds, and no breed at all were represented, in every possible nook and corner. Some of them were hidden in the fern and tea tree scrub, and many a man who went to rest on the previous night confidently believing that he had securely tethered the steed which was to assist him to a pile claim next morning, found himself minus the steed when he awoke. The search was intensely ludicrous to those who knew the tricks played upon others. It is quite certain that some of them slept alongside their horses in order to secure them. A considerable bonus was given in some cases for a strong, fleet animal, and the strain upon some of them was very great. More than one horse after the race fell down and refused to eat or to rise, from the exhaustion caused by the rush to be first on certain ground. The miners had them hidden in every conceivable place in order to prevent accidents, and the race to get mounted was in some cases very fatiguing. In others, relays awaited the approach of the horse or man, and the pace was very swift between these stations.

CROSSING THE CREEK.

The helter-skelter across the creek, which was unavoidable, was perhaps the most amusing, and was watched with great interest by numbers who stationed themselves on the rise of the hill for that purpose. In some places men would be seen swimming across, miner's rights in hand, to gain the opposite bank in advance of others. Others would attempt to run over the slippery boulders and through a strong stream, whilst others again would run and swim alternately, according to the depth of water at the place they elected to cross. Many were the duckings in the stream through stumbling over a slippery boulder which would persistently block the crossing. Some swam horses across in another spot, and retained their seats until they approached a perpendicular hill, where they dismounted and took to SHANK'S PONY.

How they managed to hold on to the scrub or fern and so gain the summit was perhaps a marvel to themselves after it was all over. By far the greater number trusted their own legs to carry them swiftly over the ground, and it was highly amusing to see them in single file crossing the creek at full speed and ascending the steep hills opposite. In some cases relays of miners did much towards lessening the labour and increasing the speed.

ARMED MINERS.

A number of men were armed in anticipation of resistance to their progress, and one of them foolishly and ostentatiously carried a six-shooter openly in his hand, as if to challenge all comers. If time had permitted he would no doubt have been taught a lesson by some more plucky and less bombastic individual. Whether it was the weapon that frightened others off, or the frantic appearance of the man, we cannot say, but the party in question is said to have been first on his ground, and the first to return to the Warden's office. If rightly served, he ought to have been detained for his folly.

ANOTHER VERSION OF THE RUSH.

Then the issue of miners' rights commenced, and the scene was one to be remembered. There was a scramble, a rush, or a crush, as is indescribable, and which

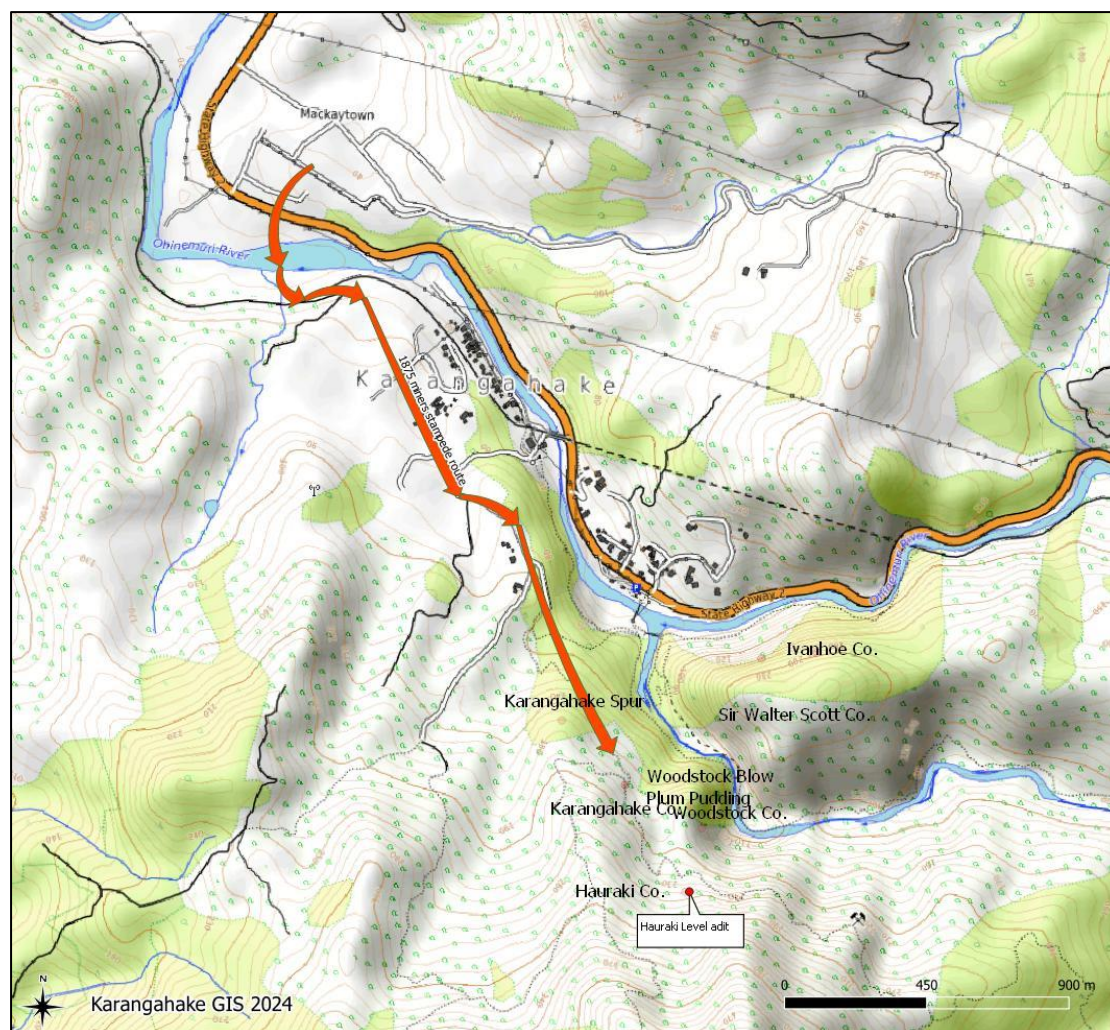
could have been scarcely looked for in a large open space such as that in front of the offices. As each received his rights, he struggled through the crowd and rushed off madly, his utmost desire being apparently to outstrip every one else in the race towards the prospectors' claim. The race could not have been more exciting. The horsemen started off with a rush, but many in their hurry came to grief at the first crossing. Others stumbled and rolled over in the narrow swamps beyond Lipsey's camp. Others again gave out before the face of the now famous burnt spur was reached, and amidst all the crowd of horses were men on foot scampering as if their lives depended on their speed. It was without exception the most exciting race I have ever seen. Men and horses were all fagged long before they reached their destination, but the men who brought miners' rights had other mates in waiting, who, taking hold of the rights, scampered wildly over the spurs, pausing to drive a peg and have a word of dispute with others, and then rushing off again at break-neck pace to get to their next corner, and so the game went on. All sorts of contrivances were adopted to achieve the great point of success, namely, peg in alongside the prospectors. Some in their eagerness pegged into the reserve, thus affording chance for others. The race continued for about an hour, the goal being apparently the large projecting rock on the burnt spur, known as the Fryingpan Rock, on the face of the burnt spur where the prospectors' reserve had been pegged off. From this point, where a large number of spectators assembled, the rush diverged in various directions, and pegging out took place with all possible eagerness, but without, as far as I could learn, any violence or rows.

BUSINESS AND RESIDENCE SITES.

Quite a furore set in for these when the excitement of the pegging out of claims had subsided. Mr Mackay, the Government Agent, with whom rests the issuing of certificates for these sites, was besieged with applicants for good sections. Owing to some alleged bungle in the survey, a fresh survey was ordered to be made and the plan was not completed, so that Mr Mackay intimated that he would be ready to issue certificates of license until 10 o'clock on Friday morning. In the meantime allotments were pegged off and money lodged for same.¹⁵⁵⁵

¹⁵⁵⁵ <https://paperspast.natlib.govt.nz/newspapers/THA18750304.2.11>

Thames Advertiser, Volume VIII, Issue 1984, 4 March 1875, Page 3



A suggested route followed by the stampeding miners. The destination was around the Karangahake Spur. The route roughly cleared before the stampede became the early County Road? That is the suggestion made by this researcher.

Blast and Reverberatory Furnaces

[Bill Cox](#)

Still just a learner.....

[Answered September 11, 2018](#)

A **blast furnace** is usually used to produce iron from iron ore. This is a vertical shaft furnace that is loaded with coke, iron ore and limestone and a strong 'blast' of air is injected at the bottom to burn the coke to generate carbon monoxide, which reacts with the iron ore to remove the oxygen, thereby releasing the molten iron metal. The limestone forms a lower melting-point 'slag', which cleans the iron by removing some of the impurities. Typically then the iron is sent to the next process, these days normally oxygen blowing, which burns out much of the carbon and other impurities to produce 'steel', which is basically just iron containing a small amount carbon and traces of other elements that improves its performance.

By contrast, a **reverberatory furnace** is basically just an open flat hearth with a firebrick roof over the top. It is an older-type furnace that typically would be used for the extraction of copper. The idea is that copper oxide concentrate is mixed with coke and silica sand (to form the slag), and placed on the floor or hearth of the furnace and then a massive flame is applied over the top of the material to melt it. The radiant heat is reflected from the roof (hence the name of the furnace) to heat the ore mixture, and the carbon takes the oxygen from the copper, producing carbon monoxide and carbon dioxide, thereby releasing the copper metal, which is tapped from the furnace from time to time.

The problem with the reverberatory furnace is that it is not very energy-efficient and therefore has tended to be replaced by other technologies such as flash-smelting, which has the additional advantage of being able to utilize much lower grade ores.

Freiberg Process.—

Report by Professor Roberts-Austen, F.R.S., Assayer to the Royal Mint, and Professor of Metallurgy at the School of Mines, upon the Processes in Use at the Saxon Government Works at Freiberg.

From the various reports made by the direction of the New Zealand Government, as well as from the statements appearing in the New Zealand Press, it would appear that, besides being rich in freemilling auriferous quartz, New Zealand possesses considerable deposits of antimonides, tellurides, and other refractory ores, both of gold and silver, as well as complex sulphides containing, in addition to the precious metals, lead, copper, zinc, and iron.

Reference to the map accompanying the " Handbook of New Zealand Mines," 1887, will show how widely distributed are the ores, both of lead and of copper, which form one of the main sources of production of gold and silver.

With reference to the applicability of the Freiberg process to the treatment of the ores occurring in New Zealand, it may be pointed out that, in order to render such a process a commercial success, there must either exist a sufficient amount of suitable ores and fuel within a reasonable distance of the works, as is the case at Freiberg, or the ores must be sufficiently rich and abundant—and, further, the means of transport must be sufficiently cheap—to counterbalance the expense of carrying ore from mines distant from the smelting-works. The network of railways in the United States has led to the system of sending ores to "custom" works, which works are situated in

the centre of mineral districts, and obtain their supplies of fuel by railway-carriage at reasonable rates. Such "custom" works appear to have been erected at several places in New Zealand, one example being that given in the "Report on the Mining Industry of New Zealand," 1887: they do not, however, seem to have proved commercially successful. The La Monte process, employed at the works referred to, did not essentially differ from the cupola treatment of argentiferous and plumbiferous materials in use at Freiberg. Ores suitable for such treatment exist, it is true, in considerable quantities; but the districts in New Zealand where all the materials required for the furnace-charge can be obtained in sufficient quantities and at reasonable rates appear at present to be but few, the country being still comparatively wanting in the means of transport which render " custom " works profitable elsewhere.

As the means of communication become extended, it would appear to be probable that ores from all parts of the colony will be treated at a few large works suitably situated. It may be well, therefore, to consider the process adopted at the Freiberg smelting-works, which receive from all parts of the world argentiferous ores, the same being paid for in accordance with a certain fixed tariff.

The Process of Smelting at Freiberg. The smelting-works were originally established at Freiberg by the Saxon Government, to treat the ores obtained from the mines of the district. There are two works, of which the more important, the Muldenhiitte, is situated about three miles from the town of Freiberg; the other, at Halsbriicke, being somewhat more distant. The Muldenhiitte is situated on the slope of a hill....

11—C. 3. Page 81¹⁵⁵⁶

MINING MACHINERY AND TREATMENT OF ORES IN AUSTRALIAN COLONIES.

Appendix to the Journals of the House of Representatives, 1889 Session I, C-03

[The article goes on with a very detailed description, should you wish.]

¹⁵⁵⁶ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1889-I.2.1.4.4/7>

MINING MACHINERY AND TREATMENT OF ORES IN AUSTRALIAN COLONIES.

Appendix to the Journals of the House of Representatives, 1889 Session I, C-03

Ohinemuri Goldfield. A wonderful rant

<https://paperspast.natlib.govt.nz/newspapers/WT18860109.2.25>

Waikato Times, Volume XXVI, Issue 2107, 9 January 1886, Page 3

Getting Gold***A Gold-mining Handbook for Practical Men.***

JCF Johnson, 1905

Page 71

Probably more mines have been ruined by bad mill management than by bad mining, though every experienced man must have seen in his time many most flagrant instances of bungling in the latter respect. Shafts are often sunk on the wrong side of the lode or too near or too far away therefrom, while instances have not been wanting where the (mis)manager has, after sinking his shaft, driven in the opposite direction to that where the lode should be found.

A common error is that of erecting machinery before there is sufficient ore in sight to make it certain that enough can be provided to keep the plant going. In mines at a distance from the centre of management it is almost impossible to check mistakes of this description, caused by the ignorance or over sanguineness of the mine superintendent, and they are often as disastrous as they are indefensible. Another fertile source of failure is the craze for experimenting with untried inventions, alleged to be improvements on well-known methods.

A rule in the most scientific of card games, whist, is “when in doubt lead trumps.” It might be paraphrased for mining thus: “When in doubt about machinery use that which has been proved.” Let some one else do the experimenting.

The success of a quartz mine depends as much on favourable working conditions as on its richness in gold. Thus it may be that a mine carrying 5 or 6 oz. of gold to the ton but badly circumstanced as to distance, mountainous roads, lack of wood and water, in some cases a plethora of the latter, or irregularly faulted country (Fig. 17), may be less profitable than another showing only 5 or 6 dwt., but favourably situated.

It is usually desirable to choose for the battery site, when possible, the slope of a hill which consists of rock that will give a good foundation for your battery.

The economical working depends greatly on the situation, which is generally fixed more or less, in the proximity of the water. The advantages of having ample water for battery purposes, or of using water as a motive power, are so great that it is very often desirable to construct a tramway of considerable length, when, by so doing, that power can be utilised; hence most quartz mills are placed near streams, or in valleys where catchment dams can be effectively constructed, except, of course, in districts where much water has to be pumped from the mine.

If water-power can be used, the water-motor will necessarily be placed as low as possible, in order to obtain the fullest available power. One point is essential. Special care must be taken to keep the appliances above highest flood-level. If the water in the stream is not sufficient to carry off the tailings, the battery should be placed at such a height as to leave sufficient slope for tailings' dumps. This is more important when treating ore of such value that the tailings are worth saving for secondary treatment. In this case provision should be made for tailings, dams, or slime pits.

Richard Knibb Davis.

A meeting of creditors in this estate was held yesterday afternoon at the office of the Official Assignee. Fourteen creditors were present or represented by proxy. The following statement by the debtor was read:—

"I have practiced as an accountant in Auckland for the last four years. Latterly, during the last twelve months, I have speculated largely in gold mining interests. At the end of May last year I entered into an agreement with the Woodstock Goldmining Company, Karangahake, to erect a furnace and subsidiary connections, in order to work the mine upon the smelting process. The price was to be £4000, to be paid out of the proceeds of the smelting, as set out in the agreement. There was also a subsequent agreement, amending and embodying the first. I will produce both agreements at the meeting.

I received one-half of the mine as bonus for erecting the furnace. At several interviews with the proprietors after having commenced operation, their attention was drawn to the fact that, in our mutual interests, it was desirable the work should be done in a thoroughly substantial manner. They gave me then assurance that any extra cost beyond the £4000 should be allowed to me. This extra cost, including fluxes, amounted to 2450, making the total outlay £8500 or thereabouts.

My liability on this account amounts to £4000 (about), and the rest is out of my own pocket. The smelting process at Karangahake has not yet been in operation, although everything is in readiness for a 21 days' run. In consequence of the result of similar operations at the Thames being so unsatisfactory in the matter of expense, and the failure of Mr LaMonte to fulfil his agreement with regard to price, or cost per ton for smelting, a difficulty has been caused in obtaining the services of experts. The delay in getting returns for my outlay necessitated my calling a private meeting of my creditors in February last. The majority in number and value on that occasion decided to let me go on for four weeks under supervision of three creditors then appointed, and since then the state has been virtually managed by these supervisors.

In June, 1885, I bought the Smile of Fortune and Radical claim, together with water-race and battery at Owaharoa, for the sum of £4500, on terms extending over two years. The first payment (£500) became due in the following October, but I have paid nothing on account of this purchase. Since the meeting of my creditors the supervisors have arranged with the vendors to take back the property, and prove on the estate for £3000. I expended £1577 in developing these mines, and this expenditure shows a loss of £1239. The product of the mines has been £338; the balance has been paid out of my own pocket, with the exception of a small amount for wages.

I entered into sundry other goldmining speculations of a minor character, all of which also turned out unsatisfactory. About six years ago I purchased an estate of 3223 acres at Kaipara, and paid for it £5800 cash. In consequence of the depreciation of live stock latterly the returns from this property have been unprofitable, and been a drag upon my resources. I have also made sundry investments in local companies, which have turned out badly.

Six years ago I was in possession of £12,000 in cash and clear of debt. I settled £3000 of this in trust for the benefit of my wife and children. My schedule of assets shows a surplus of £2500 over my liabilities, but it is more than probable there will be a large deficiency if realisation is effected at the present time. It was on the petition of one of my nonconsenting creditors that I was adjudicated a bankrupt."

Mr. Garlick expressed a wish to have a fuller examination of the debtor's books and accounts, and on the motion of Mr. Abbott the meeting was adjourned until his afternoon, in order that the supervisors might report as to the present position of the debtor's affairs.¹⁵⁵⁷

RK Davis: Postscript

OBSERVER, VOLUME XXVII, ISSUE 22, 16 FEBRUARY 1907

The Lamont furnace fiasco at the Thames and Ohinemuri was brought to mind last week by the meeting of creditors in the twenty-year-old bankrupt estate of It. K. Davis, to receive the cheerful announcement of a long-deferred dividend of 1s 5d in the £. About 1885 a party of smart Yankees came to Auckland to boom a new-fangled water-jacket furnace that was going to save every pennyweight of precious metal — silver and the baser metals included — in the goldfields 'ore. An Auckland syndicate put several thousands pounds into the enterprise, and erected one of the furnaces on the beach at the Thames, at the foot of the Moanatairi Creek. Hopes ran high with regard to the new notion during the erection process, but after the furnace had been working a few weeks, and had produced little else than a tremendous heap of bottle-glass-like slag, it suddenly closed down, and was never heard of again. The Lamont process had been a ghastly failure so far as New Zealand was concerned.

At that time R. K. Davis was a well-known citizen of Auckland. He became dazzled by the new scheme, and being interested in the Woodstock mine at Karangahake — now part of the Talisman — he conceived the idea of erecting a Lamont furnace for the Woodstock company. Mr Davis spent all the money at his command upon the furnace, which, however, did no better in Ohinemuri than at the Thames. The result was that he shortly afterwards became bankrupt, with liabilities to the amount of £10,496. For twenty years the estate has been hung up, and Mr Davis drifted away long ago to Sydney, where he still lives, in feeble health.

Not long ago a proposal was made to annul the bankruptcy on payment of 3d in the £, and but for a discovery made by the Official Assignee it would have been agreed to. This vigilant official discovered that Mr Davis will become entitled to a legacy of several thousand pounds on the death of a relative now well advanced in years, and took pains to secure on behalf of the estate the bankrupt's rights in the matter. It is the sale of this reversionary interest for £844 that enables the payment of the present dividend. Its amount, by the way, would have been larger, only that the creditors gave practical proof of their sympathy with Mrs Davis, who still lives in Auckland, by agreeing that she should rank equally with themselves in respect of £650 that she had lent to her husband prior to his bankruptcy.¹⁵⁵⁸

¹⁵⁵⁷ <https://paperspast.natlib.govt.nz/newspapers/NZH18860610.2.4>

New Zealand Herald, Volume XXIII, Issue 7660, 10 June 1886, Page 3

¹⁵⁵⁸ <https://paperspast.natlib.govt.nz/newspapers/TO19070216.2.6>

Observer, Volume XXVII, Issue 22, 16 February 1907, Page 4

Regulations for Ohinemuri Gold Fields Under The Gold Fields Act, 1866.

The framework and constraints under which miners operated was dictated by the mining regulations current at the time. To help understand the actions and decisions made, let's summarise some of the regulations in force at the opening of the Ohinemuri Goldfield (1875).

- A Miners' Right for the Ohinemuri Gold Field was required, issued by the Warden on payment of a fee of one pound (£1).
- The area of land which may be occupied for mining by one miner shall not exceed 15,000 square feet [1394 sq m or 0.344 acre] in each claim taken up by him, but any party of miners, not exceeding ten in number, each being actually present and engaged in the marking out of any land for may mark out an aggregate area of land equal in extent to 15,000 square feet for each miner in such party.
- Working. Every claim shall be bona fide and continuously worked from day to day, and there shall be employed therein or thereon at least one miner for every man's ground comprised in such claim.
- Forfeiture of Mining Claim. Any claim not worked in accordance with the provisions of these Regulations shall be deemed forfeited, unless under protection, or circumstances be proved sufficient, in the opinion of the Warden, to excuse any default in such working.
- Permission to retain a claim or interest therein unworked may be granted by the Warden, and the same shall be thereon protected for such time as the Warden shall think fit. There are a set of conditions to be met.
- All protected claims or interests must be marked by a notice, with "protected" and the owner's name, address, and particulars of the claim or interest, posted on the ground.
- The area of a machine site shall not exceed half an acre.
- The area of a residence site shall be thirty-three (33) feet frontage by sixty-six (66) feet [2178 sq ft or 202 sq m or 0.05 acre].
- Any miner may use timber (other than kauri) for building or mining purposes, or for firewood.
- Any person requiring kauri timber must apply to the Warden, who will give permission to cut the same on payment to him of the sum of one pound five shillings (£1 5s.) for each tree required by the applicant.
- Every miner taking up a claim or other authorised holding shall within ten days thereafter cause his title to the same to be registered in a book kept for that purpose by the Mining Registrar, and if he shall make default in so doing his title to such claim shall be deemed to be forfeited.¹⁵⁵⁹

[So the size of a claim was effectively determined by the number of miners that could "man the ground", ie keep it worked, forestalling the possibility of forfeiture. This (in theory) prevented claims being taken up, and held for speculative purposes instead of being worked. This "shepherding" of ground was at times a considerable problem.]

¹⁵⁵⁹ Extracted from: AJHR_1875_I_H-15 Mining Regulations

Regulations for Ohinemuri Gold Fields Under The Gold Mining Districts Act, 1873.

[Although the goldfield was opened under the Gold Fields Act, 1866, it was quickly joined to the South Hauraki District under "The Gold Mining Districts Act, 1873."¹⁵⁶⁰ PDF [here](#).]

AJHR 1886. NEW ZEALAND.

GOLDFIELDS CLASSES AND SCHOOLS OF MINES. (REPORTS ON).

Presented to both Houses of the General Assembly by Command of His Excellency.
No. 1.

Professor J. G. Black, M.A., D.Sc, to the Hon. the Minister of Mines.

University Laboratory, Dunedin, 24th May, 1886.

I have the honour to forward my report on the work done in the goldfields classes and schools of mines for the session 1st November, 1885, to 30th April, 1886. These classes were conducted in accordance with a programme or scheme drawn up by me at your request, and submitted to and approved by you. In carrying out the programme with my colleague, Mr. Montgomery, I had the assistance of Messrs. Fenton, McLymont, and Goodlet....

In all these operations the men took a most intelligent interest, and worked at them with such success that a very large number of men on the Thames can now assay their own ores with quite sufficient accuracy for their own purposes.

The direct advantage to the miners of being able to do this will be seen when it is stated that the silver in the silver-bearing stone of Waihi and Karangahake does not exist in the stone in the state of metallic silver, but chiefly as the grayish-black sulphide and variously-coloured chloride, and in these states of combination is not visible at all as silver. Most of the gold also in the silverbearing ore exists as a blackish sulphide of gold, probably in combination with the sulphide of silver, and thus escapes the notice of the miner who is prospecting on the old lines. It is only when the gold and silver are brought out either by the fire-assay process or by the wet chemical processes that the value of the stone is known. Much stone on the Waihi and Karangahake, containing gold and silver worth from £10 to £100 per ton of stone, has been overlooked for years for want of a little of this kind of knowledge. I have heard, since my visit to the Thames, of several instances of large quantities of stone, showing to the eye neither gold nor silver, being taken up by members of Mr. Fenton's assaying class, and turned rapidly to their own advantage. A practical acquaintance with the methods of testing stone puts the mining prospector in a position to profit directly by his own discoveries, instead of having to get sample after sample tested by the professional assayer for a fee which he can, in many cases, ill afford, besides subjecting himself to tedious delays, long journeys, loss of time, and the risk of having some one else, better informed, in the meantime jumping his claim.

I look on a practical knowledge of the process for assaying silver- and gold-bearing stone as an incalculable boon to the miners on the Coromandel Peninsula, and a boon that, in the interests of the colony, the Government would do well to provide...

¹⁵⁶⁰ http://www.nzlii.org/nz/legis/hist_act/gmda187337v1873n48347/

Gold Mining Districts Act 1873 (37 Victoriae 1873 No 48)

After spending four days at the Thames, lecturing and conducting classes, I proceeded with Mr. Fenton and Mr. Goodlet to Karangahake, about fifteen miles inland, leaving Messrs. Montgomery and McLymont in charge of the Thames classes. Warden Kenrick, who, as usual, had made all necessary arrangements, accompanied me to Karangahake and presided at the first meeting, which was attended by 150 miners. As there was no room at Karangahake large enough to accommodate such a crowd, Mr. R. K. Davis put his La Monte furnace at our disposal. This building was in course of erection and nearly finished, and through the efforts of Mr. Hazlett, the foreman, it was soon put in a condition suited to the purposes of the classes.

Next day about thirty of the miners took a half-holiday to go through the assaying processes with Mr. Fenton. Mr. Smith, the professional assayer at Karangahake, very kindly put his plant at our disposal for that purpose. This was really a kindness, as we were utterly destitute of balances and crucibles, and it is an unheard-of thing for an assayer to expose his delicate balance and fine crucibles and weights to the rough handling of outsiders; but in the keenness of the interest taken by both Mr. Davis and Mr. Smith this was quite forgotten for the moment. About 180 miners turned up at the second lecture, and on the third day from 70 to 90 of the miners were engaged in relays all the afternoon assaying with Mr. Fenton, many of them taking an active part in all the processes except the weighing of the fine metals, in which they could not participate owing to the small size of the balance-room.

In the evening at 7 o'clock we found about 220 men assembled for the testing class and lecture, and we found the furnace-room far too small to accommodate them in the usual way. Steps were immediately taken, however, to plank the rafters, and in this way 70 or 80 men had accommodation overhead, and there they remained in perfect silence, looking down on the proceedings at the testing table for four hours.

At this meeting Mr. McLaren, Mining Inspector, presided, and, by his geniality and enthusiasm and knowledge of the men, did good service in explaining from the chair the object of the classes, and urging all to avail themselves of the facilities for technical instruction in their own industry now placed at their disposal.

The meeting here was opened about 7 p.m. and it was after midnight before it broke up. It was indeed, without exception, the most enthusiastic meeting I have ever had on the goldfields. Most of the men had come with paper and pencil, and those who were not themselves taking part in the processes were taking, as well as they could, notes of the proceedings. I was never so impressed as I was that night at Karangahake with the intelligence, perseverance, and energy which the miners can bring to bear on any subject in which they are intensely interested. Here we had many of them analysing and assaying silver ores, with quite sufficient accuracy, by the usual laboratory and furnace processes, while three days before very few of them could identify silver ore when they saw it, much less could they form any idea of the proportion of silver which it contained.

While staying at Karangahake I visited, with Warden Kenrick, Messrs. Gavin, Davis, Fenton, and others, the principal mines in the district—the Woodstock, Diamond, Adeline, Golden Crown, &c. In these visits, as indeed everywhere on the goldfields, the mine managers gave, in the frankest manner, all information about their mines and operations, and thus put me in a position to compare with each other the processes employed in all parts of the colony. I had at Karangahake also the advantage of Mr. Gavin's experience as manager of many a mine. He, like Mr. Fenton, knew every mine and miner from Coromandel to Waiorongomai, and, as the result of years of

close observation, could show the outcrop and underlie of every known reef in that rough country...¹⁵⁶¹

AJHRs

1887

GOLDFIELDS, ROADS, WATER-RACES, AND OTHER WORKS 1887 IN CONNECTION WITH MINING (REPORT ON)

APPENDIX TO THE JOURNALS OF THE HOUSE OF REPRESENTATIVES, 1887 SESSION I, C-05

Mr. H. A. Gordon, F.G.S., Inspecting Engineer, to the Hon. W. J. M. Larnach, C.M.G., Minister of Mines.— Mines Department, Wellington, 5th May, 1887.

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Tramway from Karangahake Track to Railey's Battery. —There has been a new battery erected in the gorge of Waitawheta Creek, about a mile and a half above the junction of this creek and the Ohinemuri River, for the treatment of gold- and silver-ores. From the parcels of ores which have been treated it has given very satisfactory results. The side of the range from the Karangahake Track is very steep down to the creek where the battery is erected. A dray-road could only be constructed at a great expense, and the character of the country is more suitable for the construction of a self-acting inclined tramway, which is estimated to cost £400. Of this amount the Government has authorized a subsidy of £200

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Karangahake District.

Gold has been found in this district for many years, but until recently nothing of any importance has been obtained. The Ivanhoe and Sir Walter Scott Companies have worked with success for the last two or three years, but beyond this the other claims have not attracted much attention. It was known several years ago that there was silver in this district. Samples of quartz were forwarded to Melbourne from the Maria claim for analysis, which showed the stone to be rich in silver; but, being unacquainted with the mode of treatment, it was thought nothing about. Another company, called the Woodstock, have now taken up the ground that was formerly held by the Maria Company; but they cannot make it pay with the ordinary battery-process. A great deal of work has been done in this mine. Over 300 tons of the ore was selected and treated at the battery, which averaged 2oz. of gold per ton, the average value of the gold being £1 5s. per ounce. This company have two lines of reefs in their ground, one of which is 6ft. wide, and the other averages 3ft. wide. A low level has been constructed on the latter lode, which is rich in sulphide of silver. Some of this was treated at the battery, but only yielded from ½oz. to 1oz. of gold per ton, while the silver was nearly all lost in the treatment. A few tons of this lode was sent to the La Monte smelting-furnace, which was erected by Mr. Davis at Karangahake, from which 600oz. of bullion was obtained, of the value of 9s. 6d. per ounce. This furnace was afterwards purchased by the company. The lode contains a

¹⁵⁶¹ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1886-I.2.1.4.11>

GOLDFIELDS CLASSES AND SCHOOLS OF MINES. (REPORTS ON)., Appendix to the Journals of the House of Representatives, 1886 Session I, C-04b

larger percentage of gold near the surface, but the deeper the workings the richer it gets in silver, and poorer in gold. The capital of this company is £36,000, with 10s. per share declared paid up, and calls have been made to the extent of 1s. 9d. per share on 36,000 shares.

Kenilworth Company. —This company is a re-formation of the Hauraki Company, which was one of the oldest companies in the Karangahake District. In former years there was some rich auriferous quartz obtained at a high level. Their mine adjoined the Woodstock Company's ground on the south end. They sent some of the picked quartz to the La Monte Smelting-works, which yielded from £4 to £15 per ton, and the remainder of the stone was treated at the battery, and yielded 10dwt. of gold per ton, the gold being worth £2 9s. per ounce. This stone was taken from a high level. There are 25,000 shares in this company of £1 each; 40,000 shares are held in reserve, and a call of 8d. per share has been paid on the remainder. This company had also suspended operations at the time of my visit, pending the trial of the new plant that has been erected here by Mr. J. Railey [I. Railey].

Crown Company. —This company has been at work, off and on, for about four years without giving any return to the shareholders. There are nine different lodes in their ground, averaging from 6in. to 10ft. wide. The lowest level that they have yet constructed is over 500 ft. above the level of the creek. The lode in the lowest level is from 4ft. to 6ft. in width, and contains very rich sulphides of silver. About five hundred tons of the ore is taken out and stacked at the mouth of the tunnel awaiting treatment at Railey's battery. There is another level on this lode 80ft. higher up, which is stoped out for 68ft. in length. Fifty-one tons of the ore from this level was treated at the smelting-furnace, and averaged £8 16s. per ton. There have also been several parcels of picked stone from the upper levels treated by the ordinary battery-process, which yielded from 5oz. to 6oz. per ton, the bullion of which was of a value of £1 7s. per ounce. This has every appearance of being a valuable mine as soon as a proper plant is erected to treat the ore. There are 20,000 shares in this company, of £1 each, and £2,000 has been paid in calls.

Adeline Company. —This company's mine is situated the furthest south of any of the claims in the Karangahake District, and is about 840 ft. above the level of the junction of the Waitawheta Creek and the Ohinemuri River. The reef that they are working on averages about 12in. wide. Sometimes it gets as narrow as 6in., and in one place it widened out to 2ft. They have stoped out about 60ft. along the reef, and about 70ft. high. The quartz from this lode was assorted in two divisions—the best quality put in one heap, which averaged 24oz., and the second quality 8½oz., to the ton. A large parcel of this stone was crushed at the Moanataiari battery at Grahamstown, where the tailings were afterwards purchased by Mr. Brown, of Tararu, for £12 10s. and £6 8s. per ton respectively. The total quantity of quartz crushed from this mine up to March last was 168 tons from the upper level and 38 tons from the lower level, which made a general average of 9¼oz. of gold per ton. The value of the gold got from the quartz already crushed is £2 13s. per ounce. There are two reefs in this claim, both of which are being worked. They run about 20° east of north. The level that the company were working on is stoped out, but they have a No. 3 Level constructed which gives them 85ft. of backs. This company has only been at work for fifteen months. They have ten wages-men and four contractors. The capital of the company is £20,000, in £1 shares, none of which has been called up, while dividends to the amount of £2,500 have been declared.

Rose Company. —This company's mine adjoins the Adeline, and has the same two reefs which pass through the latter company's ground. The stone is similar in character, but not nearly so rich. The ground has been worked, off and on, for three years. It was formerly held by the Martha and Hidden Treasure Companies. Several parcels of stone have been crushed, which went from 3oz. to 7oz. of gold per ton, and the value of the gold was £2 10s. per ounce. Mining operations were for a time suspended, pending the erection of Railey's reduction-plant, but they are now breaking out quartz, and getting it treated at these works. The capital of this company is £20,000, in £1 shares, very little of which has yet been called up.

Diamond Company. —This company's mine is further north than the Adeline and Rose Companies on the same line of reef. Nineteen tons of stone was crushed from a high level, which yielded 95oz. of gold, of a value of £2 10s. per ounce. Five tons was taken from a parallel lode about 12in. thick, and sold to the smelting company, but I could not get at the amount that it fetched. Both these lodes contain sulphide of silver. They were, at the time of my visit, constructing a level from the county road which will give them 70ft. of backs, all other operations being suspended until this level is completed. There were only four men at work. The capital of this company is £20,000, in £1 shares, of which 2d. per share has been paid up.

There are several other mines at work which I did not visit, amongst which is the Sutro Company's mine, who are getting their quartz treated by the new plant recently erected by J. Railey. The large amount of silver in the lodes in this district requires a different mode of treatment from that which has been adopted.

New Reduction-works. —A full description, with plans, of these works, is given further on; therefore it is only necessary to show some of the results of the treatment adopted. There can be no doubt that these works have been a great benefit to the mining companies in this district, as by the treatment of the ore a much larger percentage of bullion has been attained than hitherto has been extracted by the battery-process. At the same time these works do not give the percentage of bullion which may be expected from a more complete plant. Mr. Railey estimates that his present mode of treatment gives about 75 per cent. of the bullion; but even this percentage is very questionable. He states, however, that he is certain a much larger percentage would be got if a roasting-furnace was erected in connection with his works. This new plant, however, has been the means of active mining operations being commenced in the whole of the mines in the district, and has done a great deal in showing that they can now be profitably worked. Since this plant was erected in November last about 400 tons of stone has been treated; and the following statement will show the results from some of the ore from various mines:—

It will be seen from this that the bullion is of low value, owing to the large percentage of silver in the ore, and so long as ore was treated by the ordinary stamping-battery very little of the silver was obtained.

Treatment of gold and silver ores. P59

The treatment of gold-bearing quartz has for several years been carefully considered, and different methods from time to time adopted to extract the gold from the stone; but, where gold is finely disseminated in the quartz that is generally found on the northern goldfields, giving it the appearance of finitesimal atoms of gold, silver, silica, sulphur, and iron being all blended together,—which in point of fact they are—it has not yet been definitely determined which is the most successful and economical method of extracting the metals. The amount of silver in the gold gives it a light-yellowish appearance, which to the uneducated eye presents very little attraction. In

crushing this character of auriferous stone it has to be ground up to a pulp before the gold can be separated from the silica, and in doing this has so far baffled the proprietors of stamping-batteries to get anything like a fair percentage of the gold from the stone by this process of treatment. While the contention of the gold-saving process was going on, another new feature was discovered about two years ago—that a great deal of the stone was, in addition to gold, rich in silver, which occurred in the form of sulphides, chlorides, and tellurides. Attention is now being directed to get some process of treatment whereby both gold and silver can be saved, and several plants are being devised, some of which are erected, to cope with this important question.

The first plant erected to extract the whole of the metals from the stone was the La Monte smelting-furnace at the Thames, which was expected by a few to quite revolutionise the system of treating ores; but, alas! it did not come up to expectations, as the character of the ore was not suitable to this process of treatment, owing to the large expense of procuring flux, and also the large amount of flux required to conduct the operations. This mode of treatment is suitable to the class of ore there is at Sunny Corner, and for many of the mines in the Silvertown district in New South Wales, where gossan and galena are abundant in the stone, which are the principal fluxes required; and where the stone is poor in galena, copper also is said to serve the same purpose. At Sunny Corner the ore contains copper, galena, and a very large percentage of gossan, along with gold and silver; so that the expense of smelting is almost reduced to a minimum, there being nothing but lime to purchase to mix with the ore, which is delivered at the works at a cheap rate. At the time of my visit to the mines in the Sunny Corner district, one of the La Monte -furnaces was in operation, and was giving satisfaction as far as extracting the metals from the ore was concerned. The only thing that the company complained against was that the furnace did not smelt the quantity of ore that the patentees guaranteed it to do; and when in Sydney, one of the patentees, Mr. Kahlo, showed me the different monthly sheets of expenditure in connection with the amount of ore smelted, which ranged from £2 3s. to nearly £4 per ton. The average cost of treating 4950 tons was £3 4s. 21/4d. per ton. It will therefore be seen that if it costs this amount to treat ores which do not contain a large percentage of silica, but contain the principal fluxes, the cost of treating the class of ore there is on the northern fields must be considerable, when the ore contains over 90 per cent. of silica, and does not contain the fluxes required. The La Monte furnaces are suitable for galena ores; but for the form in which silver occurs in the Karangahake and Waihi districts, being principally as sulphides, chlorides, and, tellurides, with at least 90 per cent. of silica, these furnaces are not suitable, because the large amount of flux required to make the slag run freely prohibits this class of treatment from being adopted. Two of the La Monte furnaces are erected, one at Grahamstown, and the other at Karangahake. The former was worked for several months, and the latter only made a small trial-smelting.

Another new plant has been recently erected at Karangahake, and only started operations on the day of my visit to the district. As this plant is quite different from any there is in the colony, and great expectations are entertained as to its success, a description of it will not be out of place. Mr. Bailey, the owner, kindly gave me the use of the plans, so that I could make myself acquainted with the design, and he also explained to me the mode of treatment at the different stages.

Railey's Plant.

[Washoe Process ¹⁵⁶²]

This is a combined stamping and grinding-plant, but still quite different from any that has heretofore been erected in the colony. The machinery is driven by a Pelton water-wheel 6ft. in diameter and 18in. in breast, working under a head of water equal to 44ft., and is calculated, when driving the machinery at full speed, to make ninety revolutions per minute, which appears to me to be driven at too high a speed to give the greatest percentage of power. According to the experiments made with this wheel in California, the most efficient effect was obtained when the periphery of the bucket-line of the wheel was travelling at about half the velocity of the water. The velocity due to 44ft. head, taking fractions into account, is about 50ft. per second, and, the diameter of wheel being 6ft., the velocity of the periphery would be 25ft. per second if based on the experiments mentioned, or eighty revolutions per minute. This water-wheel is placed at the side of the Waitawheta Creek, at as low a level as can be got for floods not to interfere with its working. It is geared with bevel-wheels to a vertical shaft, about 60ft. in length, which in its turn is geared to a horizontal shaft with bevelled gearing, on which shaft pulleys are fixed for belts to work to drive the whole of the machinery.

In order to lift the water out of the Waitawheta Creek for the purpose of driving the machinery, Mr. Railey constructed a timber weir across Waitawheta Creek, which raises the level of the water 9ft. This weir is on a similar principle to the timber dams that are constructed in canyons in the mining districts of America. It is made of frames of squared timber of 12in. by 10in. and 12in. by 13in., set about 5ft. apart, and standing edgewise up the stream. The up-stream side has a slope of 1 to 1, and the uprights, which are three in number, are standing at right angles, to this slope. The ends of the sloped beams, as well as the bottom of the upright pieces, are well stepped into the bed-rock. There are longitudinal beams bolted on the face of the frames about 3ft. apart, the ends of these beams being let into the rock on the sides of the creek; and on to these beams are spiked two thicknesses of 2in. planking, to make the dam or breast of the weir water-tight. There is no puddle or concrete used to make it watertight, but simply some loose stuff thrown in on the bottom end and at the side of the planking where it butts on to the rock.

At one side of this weir there is a sluice-gate constructed to regulate the flow of water into the flume which conveys it to the battery. The width of the weir on top is 130ft., and since its construction there has been as much as 4ft. deep of water flowing over this width, and the structure shows no signs of weakness. This is a cheaply-constructed weir where there is solid rock to be got in the bottom and sides, but it is not suitable when there is only a loosely-cemented gravel bottom and similar sides.

The stamping-battery consists of ten heads of stamps of the same description as that ordinarily used; but, instead of quicksilver and blanket-tables being used, the tailings are discharged through the gratings into a small chute, and are carried into a series of settling-vats. No attempt, so far, is made to save any of the metals. These settling-vats are twelve in number, each 6ft. by 5ft., and 3ft. deep, placed in two rows alongside each other, and have openings at the top which allow the muddy water to flow out of one into another until it has passed through eleven of these vats. By this means, the metals having a higher specific gravity than the slime, they are supposed to all settle in the vats. When one of the vats is full, the tailings are taken out of it on to a platform

¹⁵⁶² From: Diamond Jubilee 1902-1962, p46

ready to be treated in the grinding- and amalgamating- pans. Having twelve of those vats, it always allows eleven of them to be used for settlers while the other is being cleaned out.

The tailings that were taken out of the settling-vat are now put into the grinding-pans, which are four in number, in certain charges. These grinding-pans are a combination of the Spanish arastras and Wheeler's pans, and are similar in construction to those used by Mr. J. Brown, of Tararu, only the muller is differently constructed. The annexed plans of these pans and separators will enable any one to see the principle on which the ore is dealt with. There is a false bottom cast in one piece, and held to the bottom of the pan by bolts. The inside diameter of the pans at the bottom is 4ft. 2in. and at the top 4ft. 8in., and they are 18in. in depth. There are twelve cast-iron shoes of haematite iron, held to the bottom of the muller with one rivet in the centre, and cast-iron catches, which go into clutches in the bottom of the muller to keep each shoe in its place, and prevent it from swinging on the single rivet with which it is held. These shoes are placed about 1in. apart, and are also placed so that there is a space of about 4in. between them and the outside of the pan, and there is also the same space left between the outer edge of the false bottom and the outside of the pan, while the space between the inner edge of the false bottom and the inner side of the pan is filled up with wood, the space left on the outer side being for quicksilver. On the top of the muller three curved guides are placed to regulate the grinding of the tailings.

Before starting these pans they are first charged with quicksilver in the recess between the edge of the false bottom and the outside of the pan. The charge of tailings is then put in with water, and also a little salt and sulphate of copper, and a wooden cover is bolted on the top, after which the pans are set in motion. A jet of steam passes through the cover into the pan, and the temperature is maintained up to about 200 degrees. After each pan has been working for about three-quarters of an hour more quicksilver is added, and the grinding continued, the pans being driven at sixty-five revolutions per minute, until the whole is in a pulp. The stuff is then run out of the pans from a cock at the bottom into small chutes, which carries the stuff into the separator. The pan is then charged as before and grinding continued, the principle being to grind each charge separate, and not to be continually grinding and continually running of the slimes.

There is a separator to each two grinding-pans. These separators are 6ft. 6in. in diameter and 2ft. 6in. in depth. The bottom and flange round the bottom are made of cast-iron, but the sides are made of wrought-iron plates. There is no grinding done in this pan. On the bottom of the muller there are fixed curved wooden slips, 2in. in depth. The muller, revolving at the rate of twelve revolutions per minute, with these curved wooden slips, causes a contracting influence to the centrifugal motion of the water, and tends to collect all the fine particles of quicksilver and amalgam which come from the grinding-pan. This process is carried on for some time with a plentiful supply of clean water, until the whole of the quicksilver is separated from the slime. A cock is then opened, and the slime run off into a chute and over a ripple-box before allowing the tailings to run to waste. The quicksilver and amalgam are then run off into bags and filtered, after which the amalgam is ready for retorting.

In erecting this plant there is provision made for erecting a dry crushing-plant for rich ores, which Mr. Railey contemplates doing as soon as the plant comes to hand. Mr. Railey states that he was for several years employed at a plant of this description in Mexico, and there the company guaranteed the owners of the ore 80 per cent. of the metals it contained by assay; and if he succeeds in giving the same percentage on this

field—which I question—he will have accomplished far more than has heretofore been done, and be the means of making many of the mines in this district remunerative for working.¹⁵⁶³

[For Drawings of Railey's patented pans, see page 73 in the above publication. There is also considerable discussion of battery types and processes in this publication.]

GOLDFIELDS

Appendix to the Journals of the House of Representatives, 1887 Session I, C-06

Warden's Report, Mr Warden Stratford. Page 4

Karangahake

The failure of the La Monte furnace at the Thames to melt ores at a reasonable cost injuriously affected the mines in the district which had been taken up chiefly with a view to the treatment of the silver present in the stone, and which could not be saved by the ordinary battery process. The smelting-furnace erected for the Woodstock Mine was started during the year, but 38 tons only of silver-ore was smelted. The return from this was 600oz. of bullion, valued at 9s. 6d. per ounce, and the cost of smelting £13 5s. per ton. It is not probable the furnace will be again used. the expense of smelting being too great.

The erection of Railey's Battery on the Waitawheta River, and the success attending his process of treating ores, have given a certain amount of encouragement to the owners of mines in the upper portion of the district, and parcels are being crushed from the mines in the vicinity.

Since Railey's Battery started, 179 tons 5cwt. has been reduced, yielding 1,340oz. of bullion, the lowest price being 4s. 1d. per ounce, and the highest £2 14s. 6d. There are several parcels of quartz stacked ready to be sent to the mill, the largest being 400 tons from the Crown Mine; but the owners are waiting for the completion of the tramway. The cost of sledging is so great that in the meantime large quantities cannot be profitably treated at the battery.

Monastery Mine.—This mine is situated nearly opposite Railey's Battery, and across the Waitawheta River. Eight chains of a tramway connects with the battery. Twenty-three tons has been crushed for a return of 159oz. of bullion, value 15s. per ounce. Twelve tons is stacked at the mine. One ton of ore sent to Freiberg was valued in London at £31 per ton, but the result of the treatment at Freiberg is not yet known. Six men are employed.

Woodstock.—This mine is now worked by two parties of tributers, who have crushed 22 tons at Railey's for 333oz. of bullion, valued at £154 15s. On account of the Woodstock Company, 201 tons were crushed at the Ivanhoe battery, which produced 184oz. 3dwt. of bullion, value £1 4s. per ounce.

Crown Mine.—Twenty tons, crushed at Railey's, produced 101oz. of bullion, valued at £69 16s.; and 400 tons of quartz is stacked at the mine.

Imperial.—A reef has been cut in this mine within 5 chains of the tramway to Railey's Battery, and very good-looking stone, with gold showing, is in sight.

¹⁵⁶³ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1887-I.2.1.4.5/3>

GOLDFIELDS, ROADS, WATER-RACES, AND OTHER WORKS IN CONNECTION WITH MINING (REPORT ON)., Appendix to the Journals of the House of Representatives, 1887 Session I, C-05

Adeline Mine.—This mine is the richest at present worked at Karangahake. The cost of sending quartz to Railey's is at present too great to admit of economically working the mine. A parcel of 40 tons is in transit, but no more will be sent until the tramway is completed.

Mining Inspector's Report, Mr G. Wilson. P16

Karangahake District.

Monastery Gold-mining License.— The ground held under this license comprises about nine acres, and is situated on the east side of the Waitawheta Gorge. This ground was formerly held by the Gladys Company who obtained some splendid stone from a reef which is supposed to be a continuation of the Golden Crown lode. Owing to the want of communication with the then existing batteries, and the great cost of making a road to these through the gorge, which was estimated at £4,000, this company did not see its way to start work, and consequently the mine was forfeited on account of not working. The present owners saw an opportunity of profitably working the mine when they learned of the position that Mr Railey had fixed on for the erection of his reduction plant which is situated about 7 chains higher up on the opposite side of the gorge, and at once started vigorously to work to make the necessary connections between their workings and the battery by the construction of tramways, of which there are three sections, the first being a self-acting wire-tramway. This leads into a hopper at the head of the ground-tramway, which is 200ft below the working-level. The second section is a ground-tramway, which winds round the face of a rocky cliff for a distance of 8 chains to a platform constructed opposite the battery. From this point another wire-tramway is connected with the battery-machinery to haul the trucks across the river. The whole of these connections are now completed and working satisfactorily. The reef in this ground is exposed on the surface for a height of about 400ft. upwards from the river, the average width of which is 12ft. It is expected that there will be a parcel of 50 tons ready for treatment at Railey's Battery in the course of the present month.

The parcels already treated gave a result of £5 3s. 9d. per ton by Railey's treatment. One ton of ore has been sent to Freiberg for the purpose of arriving at the best mode of treating this class of ore. A parcel of 2cwt. was also sent to San Francisco for the same purpose. The return from the latter was £9 18s. 7d. per ton of 2,000lb.; the return from the former has not yet come to hand.

Woodstock Mine:--In connection with this mine there is a very complete smelting-furnace on the La Monte principle. This furnace has been connected with the mine by a very extensive system of ground- and wire-tramways and hoppers. There are two wire-tramways, which are 700ft. and 1,000ft. in length respectively. One ground-tramway 2,800ft long is constructed round the contour of the hill to the hoppers at the head of one of the wire-tramways, and from the foot of the wire-tramway a long horse-grade tramway is constructed to the furnace. A trial of a few days was given to the furnace, when 28 tons was put through for 603oz. of bullion, which, however, was nearly all silver, as it proved to be worth only 8s. 10d. per ounce. After the trial of the same class of furnace at the Thames this was considered sufficient proof that the smelting-furnace was better adapted for galena ores than those in the Thames and Ohinemuri Districts. After this trial the mine was for some time idle, being protected; but latterly portions of it have been let to tributers, who intend to make trials of the stone at Railey's new reduction-plant. There is about 500 tons of quartz to grass from this mine which has not been treated.

Imperial Gold-mining License.— This mine is being worked under the management of Mr. Robert Clements, who first prospected the ground by trenching on the surface. The cap of a reef was here found, in which gold was occasionally visible. An upper level was then driven on this reef for 50ft. This still showed a little gold, but as the best prospects were obtained from the floor of the drive, a winze was started, in which it was found that the deeper they went the stone, or quartz, became the richer. This winze was sunk 25ft., when they were beaten out by the water. A second level was then started, which will give over 200 ft. of backs. This level has been driven 50ft., 30ft. of which was on the reef, with golden stone visible all the way. About another 60ft. of driving will reach under where the winze was sunk. This mine, when it is developed, has the appearance of becoming one of the leading mines of the district. A road or tramway will require to be constructed from No. 2 Level to the top of the lower section of the tramway which is being constructed between the hill-road and Railey's Battery.

Sutro License is under the management of Mr. W. Morgan. Above the road a level has been driven for 170 ft. on the reef, which has proved to be poor in this part. The ground is also exceedingly hard, consequently the progress has been very slow. Fifty tons of ore have been treated at Railey's new reduction-plant, which gave about 7½-oz. to the ton; but this was nearly all silver, the value being only about 11s. per ounce. As the cost of carriage was 12s. 6d., and of treatment at the battery £1 10s. per ton, this return was far from being payable.

Adeline Mine. —During the year this has been the most prominent and payable mine on the Karangahake Goldfield, profits amounting to £2,500 having been divided among the shareholders. The reef, which is about 1ft. wide, has been opened up at three different levels, in which altogether there has been 676 ft. driven and timbered, 285 ft. of winzes and passes made and timbered—in all, 70 fathoms of stoping work, for an output of 104 tons, which yielded 996oz. 10dwt. gold, valued at £2 12s. 6d. per ounce. This mine is being worked under the management of Mr. J. L. Hall, formerly manager of the Tokatea Mine, Coromandel.

Rose Mine. —This mine adjoins the Adeline Mine, and is also under Mr. Hall's management. The reef in this mine is the same as is worked on the Adeline. Its general bearing is 15° east of north. The first crushing from this mine went under 4oz. to the ton; but the present quartz being broken out is expected to go 5oz. to the ton.

Diamond Mine. —This mine is also working on the same reef as the Adeline, and is under the management of Mr. A. J. Poulton, who has had two levels driven, and made three crushings from the reef. The returns were 5oz., 8oz., and 7oz. per ton respectively. No. 1 crushing, of 5oz. per ton, was obtained by the ordinary stamper process, and No. 2, of 8oz., and No. 3, of 7oz. per ton, at Railey's new reduction-plant at Karangahake, the value of gold in both cases being about the same. When there is a proper mode of communication opened up between the mine and battery, this ought to be one of the foremost dividend-paying claims of the district.

There are a number of other mines on this portion of the field whose owners are busy prospecting their ground, and, where reefs have been found, getting out trial-crushings, such as the Josephine, Dubbo, Specimen Hill, &c. The quantity of quartz treated in this district at both of the batteries (Ivanhoe and Railey's) was 1,130 tons 1,220lb., for 2,447oz. 15dwt. retorted gold.¹⁵⁶⁴

¹⁵⁶⁴ <https://paperspast.natlib.govt.nz/parliamentary/AJHR1887-I.2.1.4.6>

Railey

Waikato Times, Volume XXVIII, Issue 2259, 1 January 1887, Page 2

MR GRACE M.H.R. AT KARANGAHAKE.

The Member for Tauranga paid a flying visit to the Karangahake district last week, accompanied by the county chairman, Cr. Nicholls and your correspondent. The Te Aroha route was taken, and Mr Grace appeared favourably impressed by the district. From the hill track the enormous expanse of unoccupied fertile land was conspicuous, and Mr Grace observed that it was shameful that so many thousands of acres of magnificent land was untenanted by man or beast.

Karangahake being reached, Railly's new plant was made. The descent to this is as easy as falling off a log, and savours somewhat of that operation, the plane being considerably more inclined than the persons descending it. The time occupied in getting down the track is not worth mentioning. It was, however, some seconds. Mr Railley was caught in the act of weighing out the Sutro amalgam, and received his visitors with an easy grace.

Mr Railey himself is highly reputable at Karangahake. He is less of a man than an institution, a characteristic citizen of a grand nation, he is that desirable hybrid of intellect and muscle which should be to New Zealand what the yeoman was to England. The modus operandi of the entire plant was shown to Mr Grace and the triumph of the new system over the old "smashing up" process was evidenced by the fact that out of amalgam taken from the crushing of 16 tons Sutro dirt only 17½ were taken from the plates. This represents what would be saved by the ordinary battery, the ballance 480 ounces, or rather the bullion contained in it would have under that system been sent to the bottom of the creek to await the advent of a more scientific generation. Mr Grace expressed himself highly pleased and surprised. He was then deputationised by a number of mine managers and others, and was well received throughout the district.¹⁵⁶⁵

[Note the three different spellings of Railey.]

Te Aroha News, Volume IV, Issue 188, 22 January 1887, Page 2

OHINEMURI COUNTY COUNCIL.

The monthly meeting of the above council was held in the Council Chambers, Paeroa, on Saturday last. Present Crs F. Cock (chairman), E M Corbett, W. G. Nicholls, F. Strange, J. Moore, H. Butler, J. Walsh, and T. M. Humphreys. Minutes of the previous meeting were first read and confirmed. Correspondence. — Outward ; Re Proposed Goldfield Works: To the Hon Minister of Mines, applying for £ for £ subsidies on the undermentioned works: 1. Making connection with the battery tramway at Waihi, and the Silverton, Union, Rosemont, and Winner, mines, at an estimated cost of L300. 2.

Making connection by ground tramway between the Karangahake-Te Aroha hill track and Railey's Quartz Reduction plant; estimated cost L400. This would serve to connect the Adeline, Crown, Dubbo, Diamond, Rose, Welcome, Leamington, and

GOLDFIELDS., Appendix to the Journals of the House of Representatives, 1887 Session I, C-06. P16-17

¹⁵⁶⁵ <https://paperspast.natlib.govt.nz/newspapers/WT18870101.2.21>

Waikato Times, Volume XXVIII, Issue 2259, 1 January 1887, Page 2

other mines with the new quartz reduction works. 3. For wire tramway to connect the Monastery mine with the above new plant; estimated cost L200. 4. For continuation of the main Karangahake-Te Aroha hill track at an estimated cost of L600, and drawing attention to the fact that a Government subsidy of L400 for this latter work granted to the Thames County Council prior to separation, had never been allocated; and referring to Mr H. A. Gordon, Inspector of Mines, who had recently visited the district to report on the proposed works.¹⁵⁶⁶

Te Aroha News, Volume IV, Issue 189, 29 January 1887, Page 3

The great sensation of the week here has been the return got from the parcel of quartz treated for the Adeline mine at Railey's plant. The stuff dealt with was five tons of ordinary general dirt and the return obtained therefrom was 83oz of retorted gold, or at the value of 11½ ounces per ton. From the stamper boxes and plates 47oz 10dwts of gold was obtained and in the subsequent treatment of the crushed ore with the pans and settlers, 35 ounces 10 dwts of the precious metal was recovered. This yield beats that secured from similar stuff at the Moanatairi battery, Thames, by 5 ounces per ton, and it surpasses anything of the kind hitherto obtained from the treatment of any general dirt in this district.¹⁵⁶⁷

Waikato Times, Volume XXVIII, Issue 2272, 1 February 1887, Page 2

LATEST FROM THE GOLDFIELDS.

(BY TKLEGIAPH. — OWN CORRESPONDENT.) Paeroa, Monday.

The following is the account of the Crown crushings at Railey's, given me by the manager to-day: Amalgam from the plates, 42ozs; ditto from the settlers and pans, 335oz. This shows that upwards of eight times the quantity of amalgam was saved by Railey's process, namely, the Mackay's pans as against the old process. The net bullion is 76ozs. 5dwt. Parcels of the same dirt crushed at the Ivanhoe Company's battery, Karangahake, Firth and Clark's returns per ton respectively, 4ozs. 10dwts., and 2ozs. 10 dwts.

Tenders for clearing the line of tramway to the new mill were opened to-day by the chairman of the county council. That of Joseph Kelly was accepted at £6 10s per chain.

The mill is now at work on Woodstock dirt. This will be followed by Monastery, Rose, Diamond, Dubbo, Leamington, and other claims crushing, each of which may be relieved on as likely to give A1 returns.¹⁵⁶⁸

Thames Advertiser, Volume XVII, Issue 5702, 3 February 1887, Page 2

The Woodstock Mine.

Another Splendid Yield,

¹⁵⁶⁶ <https://paperspast.natlib.govt.nz/newspapers/TAN18870122.2.15>

Te Aroha News, Volume IV, Issue 188, 22 January 1887, Page 2

¹⁵⁶⁷ <https://paperspast.natlib.govt.nz/newspapers/TAN18870129.2.11>

Te Aroha News, Volume IV, Issue 189, 29 January 1887, Page 3

¹⁵⁶⁸ <https://paperspast.natlib.govt.nz/newspapers/WT18870201.2.7>

Waikato Times, Volume XXVIII, Issue 2272, 1 February 1887, Page 2

84 Ounces to the load,

(PER WIRE-CORRESPONDENT.) Paeroa, last night.—Our correspondent wires: The crushing at Railey's battery for the Woodstock mine, has produced the handsome return of over 274ozs of retorted bullion, 34ozs to the ton. Our correspondent adds: — Railey's battery has again proved its superiority by saving from eight tons of Woodstock ore over 274 ounces retorted bullion. By the ordinary battery process, the Woodstock Co. found that similar ore would not do for crushing, which caused a suspension of work in the mine. The bullion is worth probably 10s per ounce.¹⁵⁶⁹

Thames Advertiser, Volume XVII, Issue 5712, 15 February 1887, Page 2

Ohinemuri News. Last Night.

(PER WIRE-OWN CORRESPONDENT.)

Karangahake. Serious bush fires have been raging here all day Sunday, and at one time it was feared that a large amount of damage would result to mining property. The smithy belonging to the Crown mine was quickly reduced to ashes, and considerable difficulty was experienced in saving the fluming on Railey's water race, in fact, had it not been for the precautions taken by that gentleman in clearing off all inflammable matter around this plant some time since, the whole concern would have been consumed yesterday.

This morning a fire started on the west side of Paeroa, Puke road, and about midday it was raging furiously in the paddock of Messrs Wick and Williams. Towards night, fanned by a breeze from the north-east, it spread out, and bounding with considerable rapidity towards the junction of Ohinemuri and Waihou rivers destroyed a small grass paddock belonging to Messrs Williams and Nick. A large amount of fencing has also been destroyed, chiefly the property of Mr. Robson The loss is estimated at fully £300.

Considerable indignation is felt here about the action of the local body in delaying the work of constructing the tram-way to connect Railey's, plant with the County track. In a great measure the future of the whole of the district depends upon a cheap method of transporting quartz from four mines to the mill, and it was a very short-sighted policy on behalf of the Council not to push on with this work at all hazards. The very existence of the County depends upon the revenue derivable from goldfields - the ordinary rates only amounting to about £250 per annum, and therefore the Council should do its best to foster and aid the development of this industry by every possible legitimate means.¹⁵⁷⁰

New Zealand Herald, Volume XXIV, Issue 7875, 18 February 1887, Page 6

THE GOLDFIELDS.

BY telegraph.—OWN CORRESPONDENTS. Paeroa, Thursday.

Monastery.—872oz of amalgam from 20½ tons of ore. Retorting taken place to-night.

¹⁵⁶⁹ <https://paperspast.natlib.govt.nz/newspapers/THA18870203.2.16>

Thames Advertiser, Volume XVII, Issue 5702, 3 February 1887, Page 2

¹⁵⁷⁰ <https://paperspast.natlib.govt.nz/newspapers/THA18870215.2.17>

Thames Advertiser, Volume XVII, Issue 5712, 15 February 1887, Page 2

Adeline.— A start was made on Tuesday to send a parcel of five tons to Railey's, but the rain rendered the steep track too slippery to cart upon. If the local body do not cease their stupid stonewalling of the tramway, work in the mines will be almost utterly hung up during the wet season. It is stated that the trial parcels of Thames ores will be sent up to Railey's shortly.¹⁵⁷¹

Te Aroha News, Volume IV, Issue 192, 19 February 1887, Page 2

KARANGAHAKE. This district has been favoured by a visit from the "fire king," who threatened to wipe out all signs of civilisation in the neighbourhood of Railey's plant on Sunday last. The fire started somewhere about the dam, and it travelled up the side of the spur sweeping everything before it, and leaving nothing but ashes in its wake. If it had not been for the energetic efforts put forth by the residents and employees of the mill, the water race belonging thereto would have been destroyed. As it was the fluming was burnt through in several places, and a stoppage of two days was occasioned in effecting repairs. The Crown smithy was burnt down, and several whares occupied by Railey's men were also converted into ashes. On the whole, however, the damage is not so serious as it otherwise might have been, and this may be attributed to the forethought of Mr Railey, who, when first starting the plant, took the precaution to clear off all the bush surrounding the site. The heaviest item of loss has been that of firewood, of which there were about 100 tons cut and stacked ready for use, and of this the bulk has been consumed.

The crushing of 20 tons which is now under treatment at Railey's plant for the Monastery mine, should be completed to night, and a remunerative return is expected.¹⁵⁷²

¹⁵⁷¹ <https://paperspast.natlib.govt.nz/newspapers/NZH18870218.2.47>

New Zealand Herald, Volume XXIV, Issue 7875, 18 February 1887, Page 6

¹⁵⁷² <https://paperspast.natlib.govt.nz/newspapers/TAN18870219.2.7>

Te Aroha News, Volume IV, Issue 192, 19 February 1887, Page 2

Other Relevant Texts

By Aboriginal

Articles by John McCombie. These have been gathered together in a document:

“Aboriginal”. See it [here](#)

<https://paperspast.natlib.govt.nz/newspapers/AS18880808.2.5>

Auckland Star, Volume XIX, Issue 185, 8 August 1888, Page 2

(Parkes furnace)

<https://paperspast.natlib.govt.nz/newspapers/THA18910307.2.17>

Thames Advertiser, Volume XXIV, Issue 6860, 7 March 1891, Page 2

(Crown and Railey’s)

<https://paperspast.natlib.govt.nz/newspapers/THA18910317.2.15>

Thames Advertiser, Volume XXIV, Issue 6868, 17 March 1891, Page 2

(the above has been added to the document)

<https://paperspast.natlib.govt.nz/newspapers/THA18910323.2.19>

Thames Advertiser, Volume XXIV, Issue 6873, 23 March 1891, Page 2

<https://paperspast.natlib.govt.nz/newspapers/THA18910327.2.18>

Thames Advertiser, Volume XXIV, Issue 6877, 27 March 1891, Page 2

<https://paperspast.natlib.govt.nz/newspapers/THA18910508.2.15>

Thames Advertiser, Volume XXIV, Issue 6911, 8 May 1891, Page 2

<https://paperspast.natlib.govt.nz/newspapers/THA18910516.2.14>

Thames Advertiser, Volume XXIV, Issue 6918, 16 May 1891, Page 2

<https://paperspast.natlib.govt.nz/newspapers/THA18920323.2.18>

Thames Advertiser, Volume XXV, Issue 7180, 23 March 1892, Page 3

General abuse directed at mining reporters

<https://paperspast.natlib.govt.nz/newspapers/NZH18930828.2.60>

New Zealand Herald, Volume XXX, Issue 9290, 28 August 1893, Page 6

Rant about gold vs bullion, and the need for mine owners to assay

<https://paperspast.natlib.govt.nz/newspapers/NZH18921008.2.30>

New Zealand Herald, Volume XXIX, Issue 9004, 8 October 1892, Page 5

Another rant

<https://paperspast.natlib.govt.nz/newspapers/NZH18921121.2.24>

New Zealand Herald, Volume XXIX, Issue 9041, 21 November 1892, Page 5

<https://paperspast.natlib.govt.nz/newspapers/NZH18940409.2.43>

New Zealand Herald, Volume XXXI, Issue 9480, 9 April 1894, Page 5

Gold – Mines Of The Hauraki District, New Zealand.

By J. F. Downey, 1935

Open it [here](#)

Some additional press reports

1888

<https://paperspast.natlib.govt.nz/newspapers/NZH18880907.2.53>

New Zealand Herald, Volume XXV, Issue 9153, 7 September 1888, Page 6

Description of mines for Melbourne exhibition.

Notes

So next:-

- The Handbook of New Zealand Mines 1887
- Where did you find the 2'9" gauge for the incline?
- Parkes furnace ("D:\Historic Documents 2010\Philip Hart on Te Aroha\No. 107 tui.pdf") *Te Aroha News*, 11 August 1888, p. 2.
- Woodstock battery crosses the river
- Talisman first battery, take over dam in Waitawheta?
- <https://paperspast.natlib.govt.nz/newspapers>
- <https://www.archway.archives.govt.nz/>
- <https://www.atojs.natlib.govt.nz/cgi-bin/atojs>
- <http://www.aucklandcity.govt.nz/dbtw-wpd/HeritageImages/index.htm>
- <http://www.ohinemuri.org.nz/historic-texts/karangahake-school-70th-jubilee>
- <https://trove.nla.gov.au/>
- Early claims map
- Jarman
- Phil Hart
- Roads
- Hotels
- School
- Descriptions and diagrams of mining equipment:-
<https://paperspast.natlib.govt.nz/parliamentary/AJHR1889-I.2.1.4.4/7>
 MINING MACHINERY AND TREATMENT OF ORES IN AUSTRALIAN COLONIES., Appendix to the Journals of the House of Representatives, 1889 Session I, C-03
- White, Margaret Matilda, 1868-1910, photographer.
<https://www.aucklandmuseum.com/discover/collections/search?k=%22White%2c+Margaret+Matilda%2c+1868-1910%2c+photographer%22>
- <https://digitalnz.org/help/how-to-make-a-story>

Rand's Eyrie

Gold Camp

.....

Vine, H R : Views of gold mining in Karangahake and Coromandel

<https://tiaki.natlib.govt.nz/#details=ecatalogue.258221>

Entrance to the no. 8 level battery, Karangahake

https://ndhadeliver.natlib.govt.nz/delivery/DeliveryManagerServlet?dps_pid=IE1771

Updating fields in Word

By default, Word should automatically update fields when a document is opened. Many fields are also updated automatically when you go to Print Preview (click the File tab and then click Print). If you prefer, you can update fields manually.

To update a field manually, right-click the field and then click Update Field or press F9.

To update all fields manually in the main body of a document, press Ctrl + A to select all and then press F9.

Some fields in headers, footers or text boxes must be updated separately. Click in the header, footer or text box, press Ctrl + A to select all and then press F9. Page fields (which display page numbering) do not need to be updated manually (they update when you go the Print Preview).

To set a hyperlink base for all the hyperlinks or the URLs in a document¹⁵⁷³

Method 1: Word 2010

Open the document in which you want to use an absolute hyperlink.

On the File menu, click Info.

Click the Properties dropdown under the document window.

Click Advanced Properties.

Click the Summary tab.

In the Hyperlink Base box, type the path that you want to use for all the hyperlinks that you create in this document.

Click OK .

Another recommendation¹⁵⁷⁴

To prevent this issue happening in the first place there is an option to set in Word, hidden under a sub menu of a sub menu:

Select “File > Options”

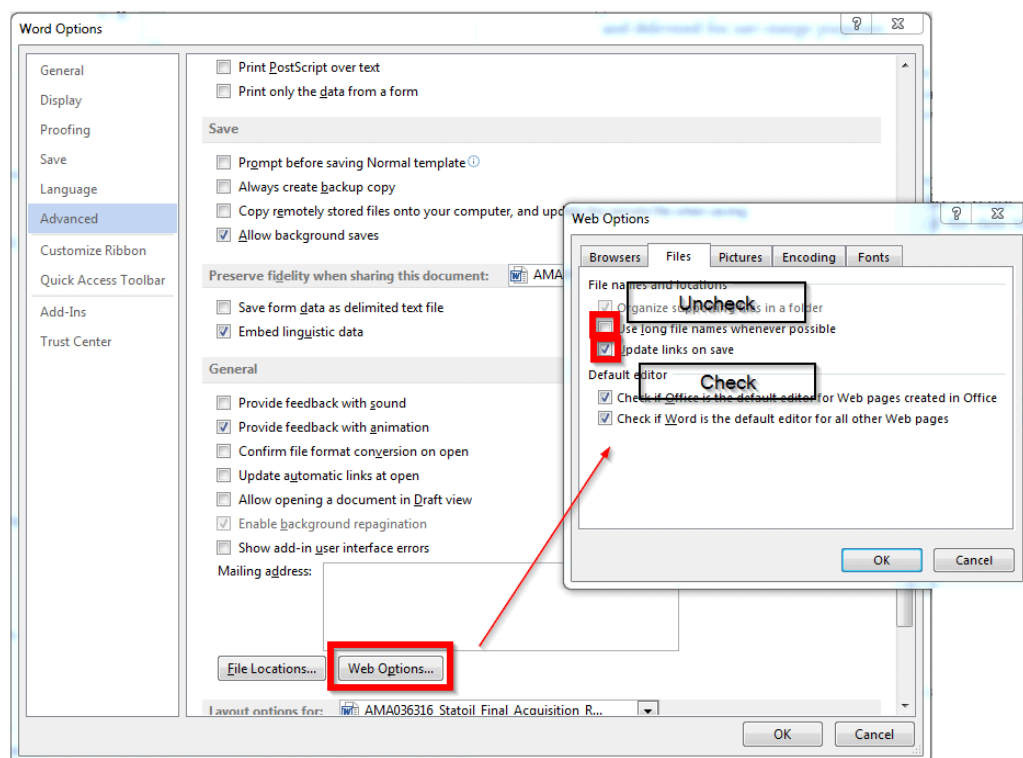
Select “Advanced”

Scroll down to “General” and select “Web Options”

Select the Files tab

¹⁵⁷³ <https://support.microsoft.com/en-au/topic/how-to-create-absolute-hyperlinks-and-relative-hyperlinks-in-word-documents-d6339b5a-98ba-a483-bac5-95bd33ff5a80>

¹⁵⁷⁴ <https://mattoppenheim.com/2016/09/16/fixing-relative-and-absolute-links-in-word-microsoft-office-2013/>



Bridges in Waihi, Frankton Rd

<https://paperspast.natlib.govt.nz/newspapers/OG19130528.2.13>

Ohinemuri Gazette, Volume XXIV, Issue 3095, 28 May 1913, Page 2

<https://paperspast.natlib.govt.nz/newspapers/NZH19130627.2.66>

New Zealand Herald, Volume L, Issue 15339, 27 June 1913, Page 7