

Railey's/Crown Battery site photographs

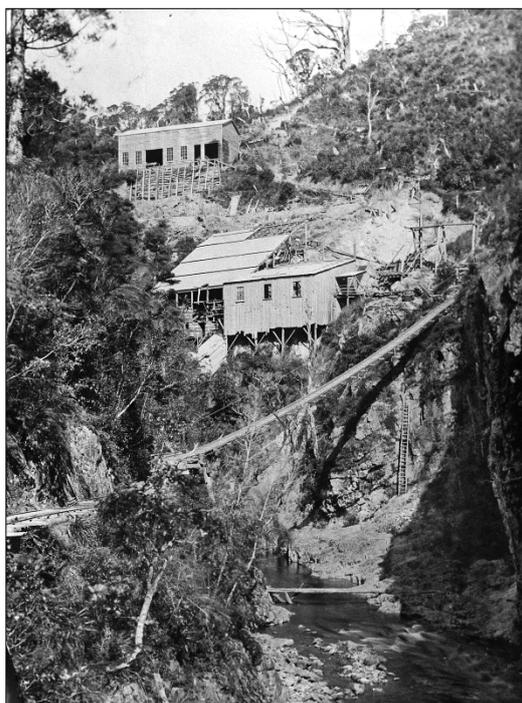
There are eleven known images of Railey's site and infrastructure, only five show buildings. It appears that none show Railey's battery! What was originally considered to be the battery is most likely the much later Crown compressor building.

Also available is a [document](#) collecting descriptions of the battery from the AJHRs.

Discussion below:-

Earliest photograph, May 1889

This image shows the construction of the Crown battery, and the Cassel plant further up the hill, replacing Railey's building/s.



Construction of Crown battery and Cassel plant.
M.M. White?

Date: May 1889¹ (see main document).

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.

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 <https://paperspast.natlib.govt.nz/newspapers/TAN18890511.2.12>
Te Aroha News, Volume VI, Issue 367, 11 May 1889, Page 2

Crown mine Compressor building.

This image² taken from well back on the tramway. Rails in place, but some vegetation growing over them. C. mid 1894? Photographer is Margaret Matilda White. She married Albert Reed in 1900, lived in Karangahake. The photograph she took of the Cox/Woodstock battery, image No B3575 can be no later than August 1894 (a new battery was built beside it at that date). This means a visit to Karangahake at least this early. This image could be from the same trip. Or, several images in the author's collection of Karangahake by White have the date 1898 hand written upon them. The compressor was completed March 1894.³

Group of several people on the bridge. Including children? Two handrail stringers.



Compressor building. MM White.

Large area clear of vegetation (from the slip August 1890?⁴). Benching above and east of the building left over from the Cassel buildings. Looks like some timbers remain on the middle bench.

Compressor building configuration, but with scaffolding on both sides. Why the scaffolding? Building still in progress?

Ladder up cliff from river.

The skyline shows many large trees (rata?), which appear to be gone in the next

photograph, confirming this is the earlier photo.

Compressor and swing bridge



Compressor and swing bridge.

Photo⁵ taken from the tramway leading to the bridge.

Bridge held up on cables, ie a swing bridge, not suspension bridge.

Two pipes cross beside bridge, the smaller one suspended on cables. Note the larger pipe supported on other side of stream by concrete pile.

Black diagonal lines appear to be scratches on the negative, not wires.

Stone pillar, and what might be a chimney pipe visible to right of building.

A building top right, maybe a dormitory

Uphill from the battery the building benches and slip scar are vegetating.

How was the single cable above the bridge actually used? Were there rails on the bridge

² 02 Railey's Battery and bridge, 1887.tif

³ <https://paperspast.natlib.govt.nz/newspapers/NZH18940323.2.70.13>

New Zealand Herald, Volume XXXI, Issue 9466, 23 March 1894, Page 2 (Supplement)

⁴ <https://paperspast.natlib.govt.nz/newspapers/NZH18900813.2.56>

New Zealand Herald, Volume XXVII, Issue 8383, 13 August 1890, Page 6

⁵ 03 Compressor and Swing bridge improved 2.tif

to start with? A short section of curved rails remain, with the suggestion of rail having been removed from lower down the platform. So no longer moving ore carts? Straightish rails removed to be used elsewhere?

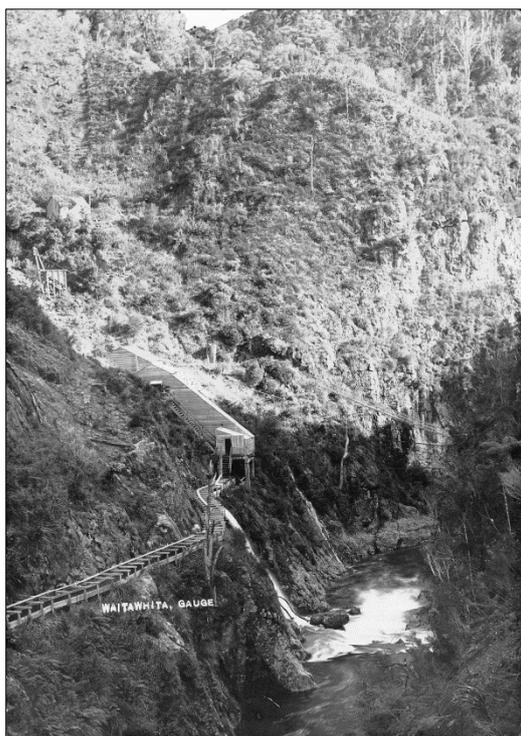
Downpipe from rear roof, for collecting rain water? Also shows on next photo.

Skyline now largely devoid of trees.

Waitawhita Gauge

Photo⁶ taken from Crown water race bench, looking downstream, maybe shortly after this bench was put in c. 1896/7⁷. It could not easily have been taken before. Bottom right corner of the image shows disturbed soil and vegetation (so recently cut?).

Interpretation of the building layout: the top section of the building houses the air



Waitawhita Gauge

compressor, securely located on flat ground. The bottom section is above the pelton wheel shaft and the end of the flume. Here water enters a pipe which carries water down to the pelton wheel nozzle/s, and a steel shaft brings the rotational energy up to the building. A continuous belt takes the power up to the compressor in a covered way. A well protected, important asset.

Water discharging via by-wash, no sign of pelton wheel exhaust at river level, so compressor not in operation.

Air and water pipes going across the river. To Crown mine?

Two shacks are above the battery, the lower one worse for wear.

The ore hopper under the cable, presumably collected ore from across the river, via the cable. Placed higher than the battery so that ore could move to the battery with gravitational assistance. But

how? May be a chute or pipe, but if so, it has been removed. No longer used.

The bridge hand rails have two stringers.

Stone pillar maybe visible just to left of upper most roof of battery. See previous photo. What was it for? Remains of the step furnace installed at the battery in 1890?

In 1890 the Crown Company erected a (maybe two) step furnace to dry their ore.^{8 9}

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 new battery today.

David Wilton photographed Merv Grafton beside it in 2007, but offered no explanation.

⁶ 03b Railey's Battery and water race, 1887.tif

⁷ AJHR 1997 and press reports.

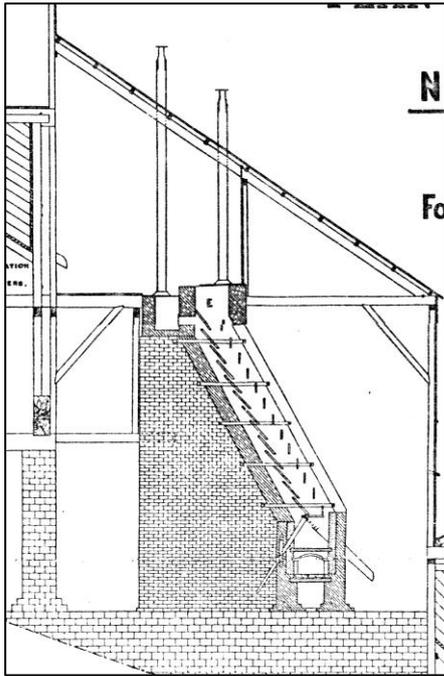
⁸ <https://paperspast.natlib.govt.nz/newspapers/TAN18900621.2.11>

Te Aroha News, Volume VII, Issue 482, 21 June 1890, Page 2

⁹ <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

Railey's site images discussion



To left is a detail cropped from “Plan of 40 Head Dry Stamper Battery” 1893 (new Crown battery), and to right is the image taken at the Railey/Crown battery site, 2007¹⁰

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<https://web.archive.org/web/20191223012229/https://thetresury.org.nz/RaileysBattery/RaileysBattery.htm>

Railey's/Crown dam images

Margaret Matilda White photograph.

Although some/all of these images were thought of as of Railey's battery and dam, it is possible that the structure (dam) was actually in Crown ownership when these photographs were taken. The photographs are presented here in what might be chronological order, judging by vegetation.

Looks to be earliest of the dam images¹¹, with considerably intact forest visible. It may therefore actually be Railey's dam.



Railey's/Crown dam. MM White

Note the raised section of dam to protect the flume intake.

Vegetation debris in the foreground, suggesting recent work.

Could be mid 1894.



Railey's/Crown damand water race

This image¹² was taken from the Crown water race bench on the true right bank; we can stand there today. It shows the wooden flume on the river's edge. The two large boulders are still present in the river. The upstream boulder sports two eye bolts on the upstream side. They look most like anchor points for stabilisation cable/s of a suspension bridge. Could there have been a bridge to the house from the Crown water race?

Two cables can be seen crossing the river, from the dark headland on the right.

The bench that held the flume is also still present, and more or less navigable on foot.

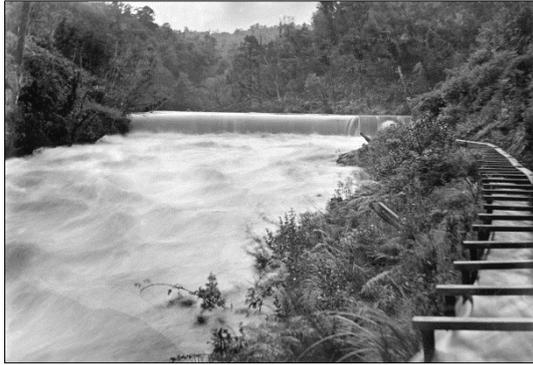
The dwelling that we see in a later photograph may already be there, just out of shot to right.

¹¹ 04 Dam on Waitawheta 1887.tif

¹² 05 Dam and water race on Waitawheta 1887.tif

Railey's site images discussion

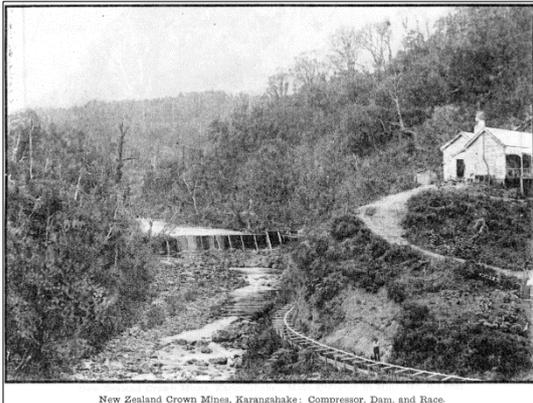
This image¹³ captured by a brave photographer during a flood of the Waitawheta River.



Railey's/Crown damin flood

He/she would be standing on the flume.

This image¹⁴ is from the Mines Record 1902, the caption reading: "New Zealand Crown Mines: Compressor, dam, and race". However, the structure above the race is clearly a dwelling, evidence of which can still be found (brick hearth, shards of glass and crockery). The image may of course be earlier than it's publish date, but suggests a long period of use for this compressor/site by the Crown Co,



New Zealand Crown Mines, Karangahake: Compressor, Dam, and Race.

Railey's/Crown damand dwelling

substantially overlapping with the large compressor installed in the "Crown stope" c.1896.

A man stands on the water race to give scale.

One cable can be seen crossing the river.

A closeup¹⁵ of the dam, highlighting its construction. Some timbers of the dam remain today, both sides of the river. Margaret Matilda White photograph.



Railey's/Crown damdetail. MM White

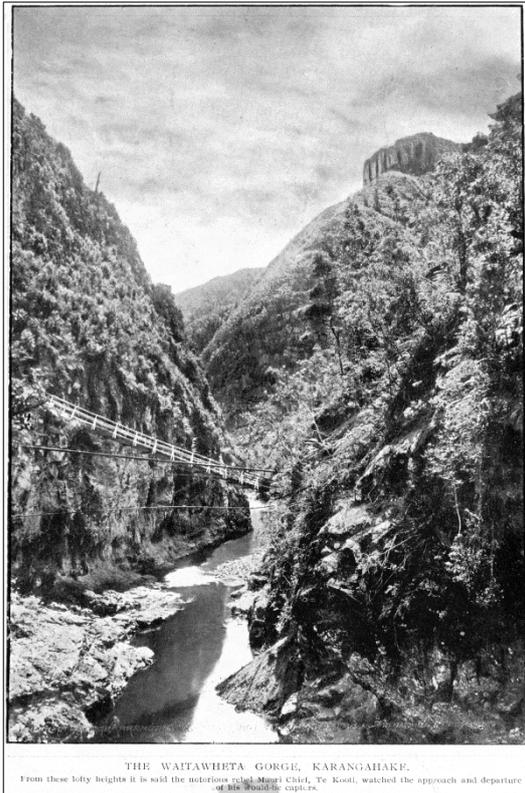
Could be mid 1894.

¹³ 06 Dam in flood.tif

¹⁴ Crown Mines Compressor, Dam, and Race Mines Record 1902.tif

¹⁵ Dam on Waitawheta close up, 1887.tif

Railey's site images discussion

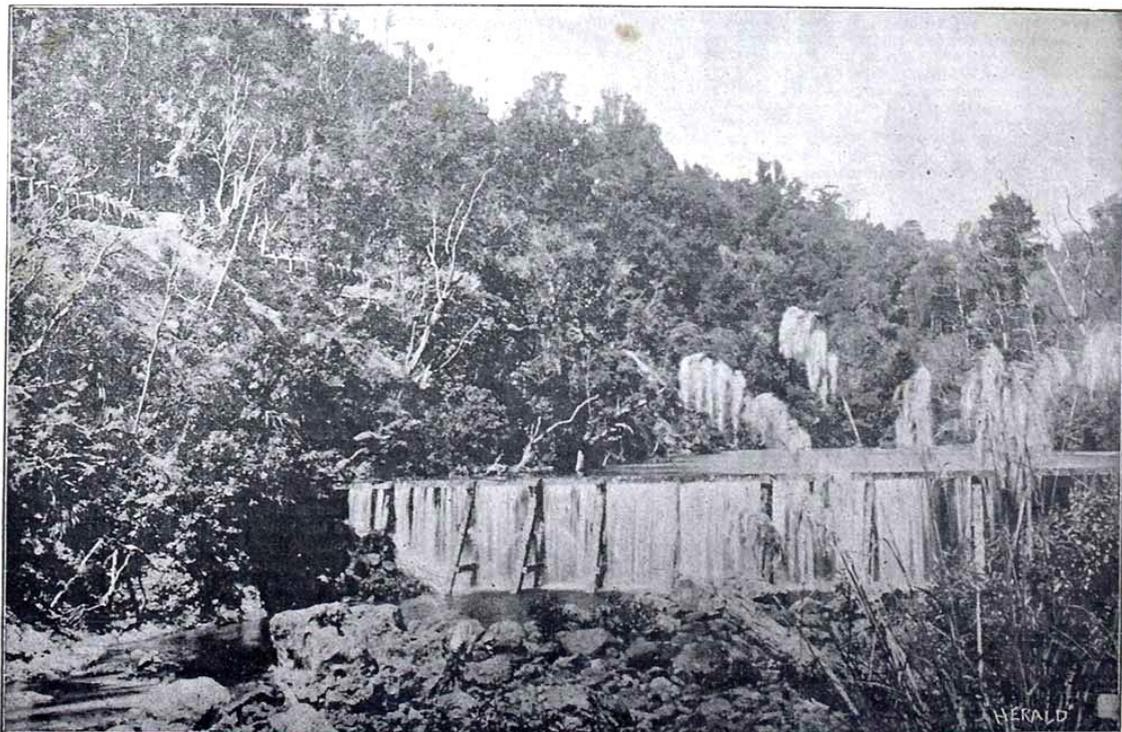


The Waitawheta Gorge, Karangahake

This view¹⁶ looking downstream shows the bridge, and compressed air pipe/s.

It comes from the publication: New Zealand's Northern Goldfields. No date was given. The caption reads: "From these lofty heights it is said the notorious rebel Maori chief, Te Kooti, watched the approach of his would-be captors".

The image¹⁷ below, from the Auckland Weekly News dated 23 July 1898, shows the recently installed flume (in the bush, mid to top left of image) for the new large pelton wheel/compressor, installed c. 1896.



Beattie & Saunderson, Photo.

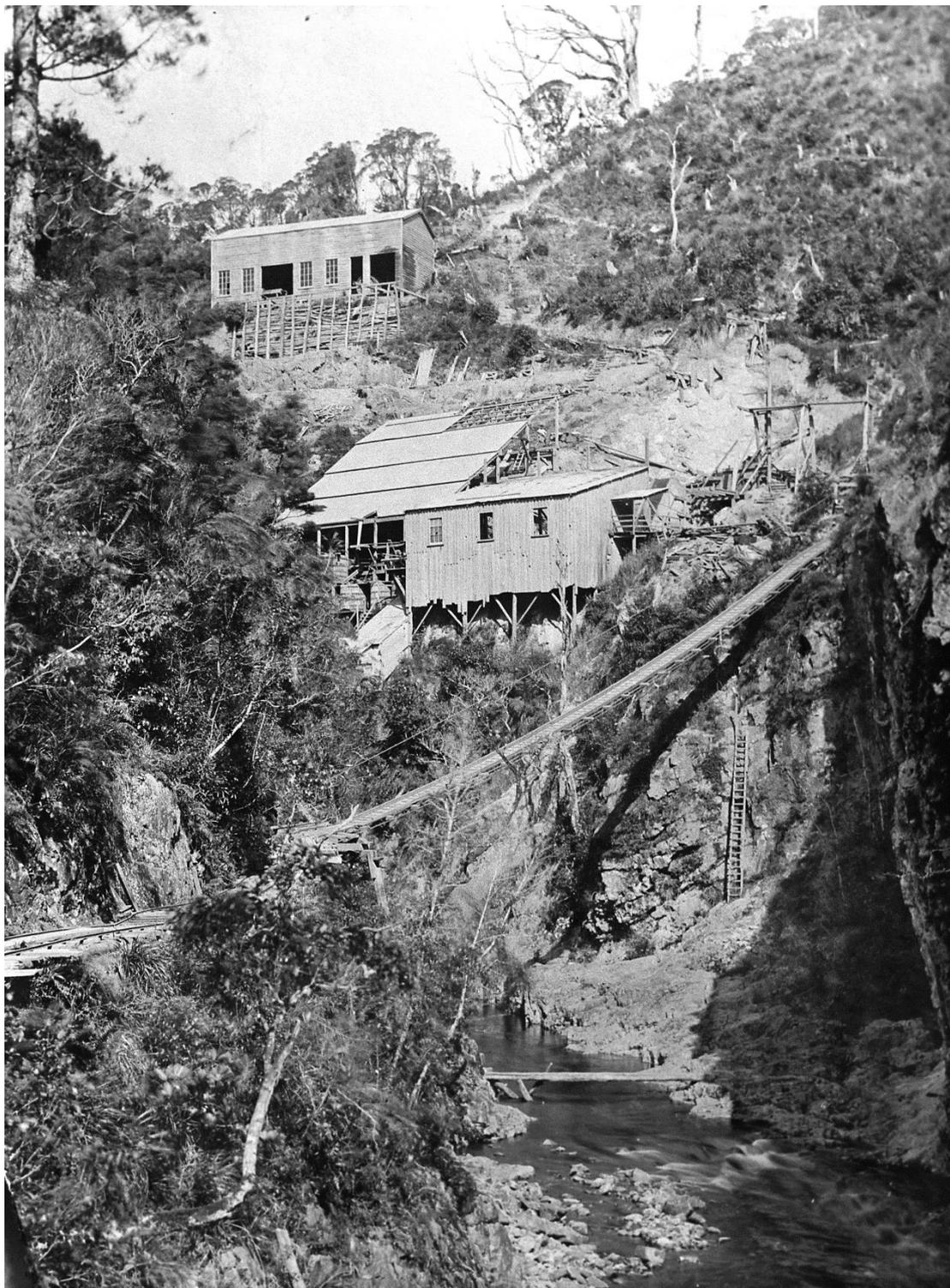
N.Z. CROWN G.M. CO.'S DAM AT WAITAWHETA GORGE, KARANGAHAKE.

¹⁶ The Waitawheta Gorge, Karangahake.tif

¹⁷ AWNS_18980723_p003_i002_x 23 JULY 1898.jpg

Full size images

Construction of Crown battery and Cassel plant May 1889.



Compressor building after slip c. 1894, maybe 1898.



Compressor and swing bridge



Waitawhita Gauge

