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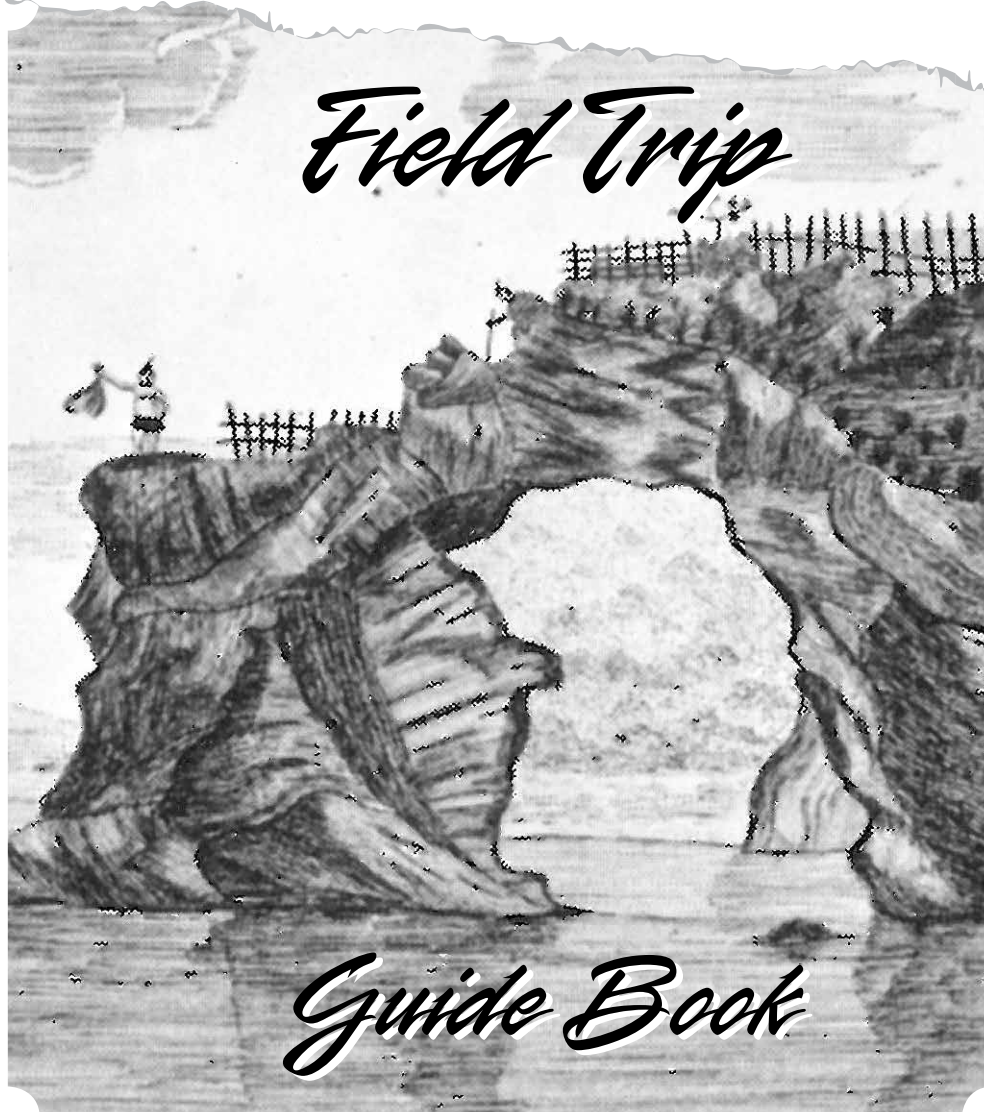
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Karangahake

*Phil Moore and Neville Ritchie, Coromandel Gold:
A guide to the historic goldfields of the Coromandel Peninsula*
(Palmerston North, Dunmore Press, 1996), pp 165 - 171



Bird's-eye view of Karangahake. Woodstock Battery at left foreground. Crown Battery at top distance.

Upon the official opening of the Ohinemuri goldfield on 3 March 1875 at least 600 men raced to peg claims on Karangahake Mountain. They were soon disappointed, however as no in-situ quartz could be found, and by late April the area was practically deserted.

Seven years passed before the first auriferous quartz reefs were discovered in March 1882, prompting a second rush. Many small claims were staked, although these subsequently amalgamated to form larger ones worked by companies. Within a few years virtually all the claims were acquired by the three most successful companies – the Woodstock Company, New Zealand Crown Mines, and Talisman Goldmining Company (which later took over the Woodstock).

Although some good ore was located on the main reefs, and a considerable effort expended in developing the mines, extraction of the gold proved particularly difficult. The usual method then in use for recovering the gold – dry crushing and amalgamation with mercury – was found to be quite unsuitable for the Karangahake ore. During the late 1880s several other methods were tried, without success.

The big breakthrough came in 1889 with the introduction of the cyanide process. This method had not previously been used on a large-scale commercial basis, and its trials by NZ Crown Mines at Karangahake was a world first. It enabled low-grade refractory ores to be worked profitably, with about 90 per cent of the gold and 50 per cent of the silver being recovered, in contrast to earlier processes which extracted less than 50 per cent of the total bullion content. Consequently, cyanide treatment gave a tremendous boost to the mining operations at Karangahake and elsewhere in the Ohinemuri district, and within a few years it was adopted by companies all over Coromandel Peninsula, in other parts of New Zealand, and overseas. Having overcome the problem of effectively treating the ore, NZ Crown Mines instituted a vigorous development policy, erecting a new processing

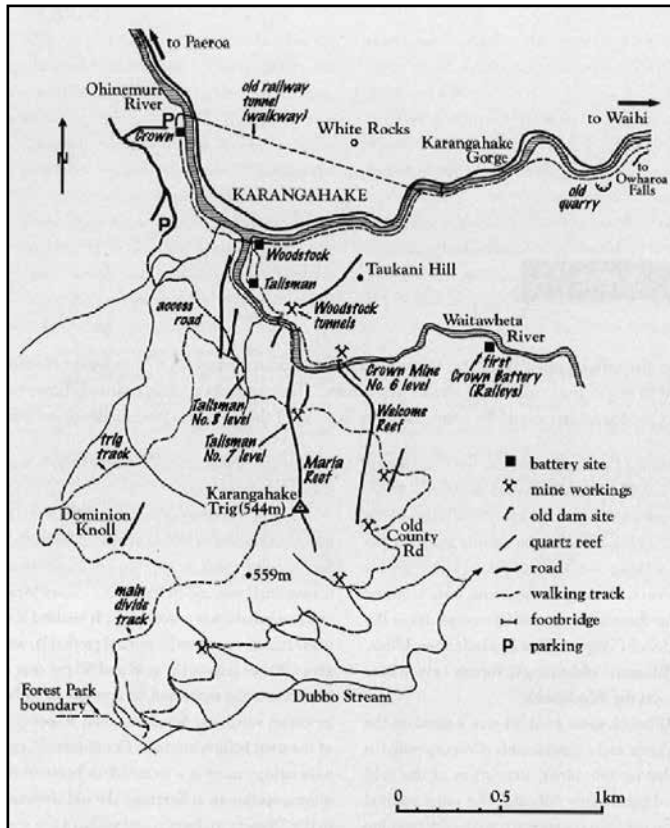
plant and considerably enlarging their mine. In the early years work had been confined to the Crown Reef, but in 1891 attention shifted to the Welcome Reef where six main levels were opened up, the lowest just above river level. From that level a large shaft was sunk to a depth of 160 metres, and a further six levels extended from it, along which a considerable amount of stoping was undertaken. At lowest levels water became a major problem, and in 1908 all the deeper workings were flooded. Although a new electric pumping plant was installed in 1910, which resulted in an increased output from the mine, by 1916 returns had seriously declined. The company continued prospecting for a while without finding any significant ore deposits, and in 1928 its holdings were forfeited to the mining warden. Altogether the NZ Crown Mines produced about 350,000 ounces of bullion.

At the Woodstock Mine further west some high-grade ore was extracted prior to 1887, which contained a considerable amount of free gold. Unfortunately, the rich ore occurred only near the surface, and as silver values rapidly increased with depth, the Woodstock Company struggled to make a profit. In 1890 it merged with the Kenilworth Company, with little immediate benefit. By 1894, however, use of the cyanide process had brought about much better returns, enabling the company to extend its workings along the Maria Reef and erect a new 40-stamp battery and cyanide plant. In 1901 a large shaft was also sunk from the No. 5 level, but financial difficulties arising from this work, combined with the high cost of pumping and mining operations, forced the company to halt its activities in 1903. The mine was then taken over by Talisman Consolidated Ltd, whose workings adjoined it to the south. By this time the Woodstock Company had produced about 140,000 ounces of bullion.

Although the original Talisman claim only covered 30 acres, the first batches of ore – processed in Germany and at the Crown Battery – gave such encouraging results that the small, local company (formed in 1894, erected its own treatment plant in 1895. A year later the Talisman and adjoining Bonanza claim were acquired by the New Zealand Talisman Goldmining Company, which immediately embarked on a major expansion programme involving the driving of seven main adits along the Maria Reef. In 1899, the company amalgamated with the Talisman Extended Company to form Talisman Consolidated Ltd. They constructed a new 50-stamp mill, and commenced opening up the No. 8 level. A shaft was also sunk from this level to a depth of 300 metres, from which a further eight levels were ultimately extended, the lowest (No. 16 level) being about 200 metres below ground.

After taking over the Woodstock Mine in 1904, the Talisman Company linked the two sets of workings, enlarged the Woodstock shaft, and extracted large quantities of ore from between the No. 8 and No. 13 levels. The Talisman soon became one of the most productive mines on Coromandel Peninsula, reaching its peak in 1914 when over 52,000 tons of ore were processed. However, the known ore reserves were quickly exhausted, and as prospecting at deeper levels revealed no further deposits, output rapidly declined. During 1919 several holes were drilled from the lower levels in an effort to locate payable ore at greater depth, but only base metal sulphides were encountered. The company went into liquidation in 1920, although tributers continued working parts of the mine for several years. By this time the Talisman Mine had yielded over 3,500,000 ounces of bullion, valued at almost £3 million.

In 1929 rising gold prices led to renewed interest in the Karangahake area, and Talisman Dubbo Goldmines Ltd was subsequently formed with the intention of mining a previously untouched section of the Maria Reef on the southern side of the mountain. Between 1930 and 1936 three new levels were opened up, and a considerable amount of stoping undertaken along the reef, which contained high gold values in places. But by 1938 the ore had largely been depleted, and the company ceased operations in December 1939 having produced just over 57,000 ounces of bullion.



Historic features and walking tracks in the Karangahake area.

Only two quartz reefs – the Maria and Welcome – were worked to any extent. The Maria Reef (or lode) averaged 2-3 metres wide, and was traced downward for over 700 metres from its highest outcrop on Karangahake Mountain. In all, 16 main levels were driven along the reef, the lowest being about 150 metres below sea level. The Welcome Reef, by comparison, averaged just 50 centimetres wide and was mined to a depth of only 300 metres.

Four fairly distinct ore shoots, known as the Woodstock, Talisman, Bonanza and Dubbo, were worked on the Maria Reef, and different zones of mineralisation recognised within them: an upper, oxidised zone, consisting of banded quartz with iron and manganese oxides and electrum; below this, a zone of enrichment containing a wide variety of secondary minerals including copper sulphides, mustard gold and native silver; and at the deepest levels, a primary ore zone, composed of base-metal sulphides (galena, sphalerite,

pyrite, and chalcopyrite), quartz and electrum, although below the No. 14 level the reef was found to contain very little gold or silver. Two distinct ore shoots were recognised in the Welcome Reef, and all the ore was oxidised, except at the very lowest levels.

Both reefs were probably formed along large, open fractures or fissures caused by faulting, during a single period of hydrothermal activity some 5-6 million years ago.

At least six different batteries operated in the Karangahake area, three of which – the Crown Talisman and Woodstock – were very substantial structures. These mills were largely water-powered, with water being supplied from dams across the Ohinemuri and Waitawheta rivers and conveyed by pipelines or open races. Ore from the mines was transported to the batteries by horse-drawn tramways or aerial ropeways, or a combination of both.

The first battery was built in 1876, but soon proved incapable of dealing with the Karangahake ore. It was remodelled in the 1880's and renamed the Hauraki Battery, though the recovery rate (of 40-50 per cent) hardly improved and it ceased operating by 1886. As other early batteries, such as the Ivanhoe, were also having difficulty treating the ore, a new method – using a La Monte smelting furnace – was tried out in 1885. Although it produced satisfactory results, the high cost of fluxes made the process uneconomical.

In November 1886 a new 10-stamp battery (Railey's) was erected well up the Waitawheta River. It treated ore from various mines, but despite employing 'improved' methods the recovery rate still only averaged about 45 per cent. The plant was dismantled in 1888. The same year another

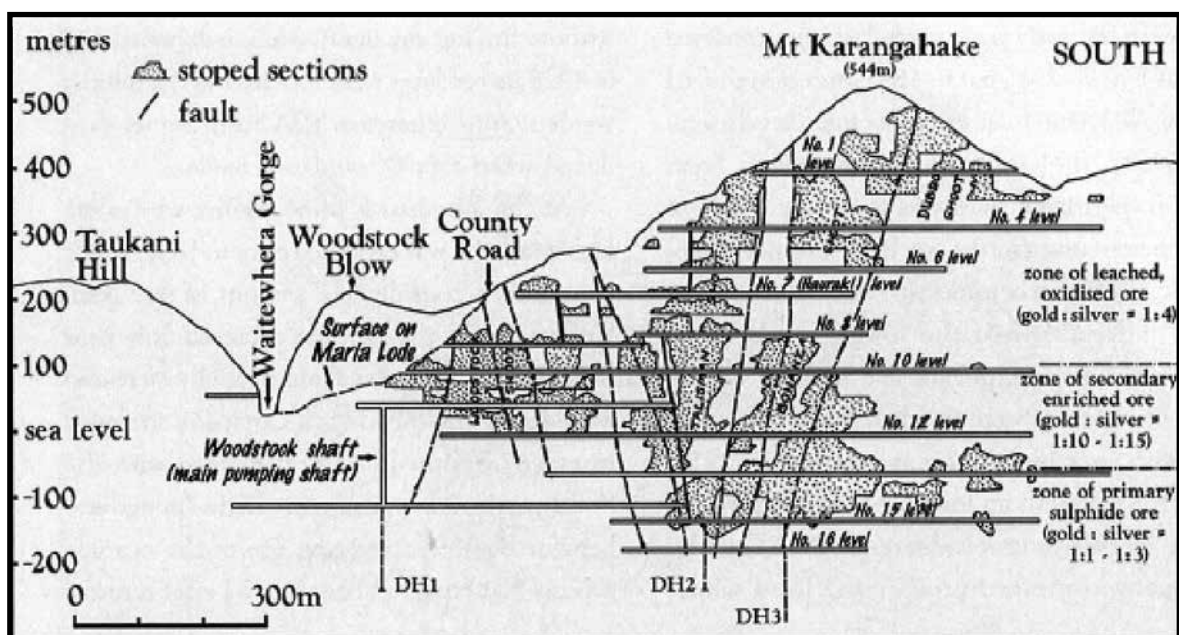
smelting works was built at Karangahake, utilising a different process from the La Monte method. Once again the cost of treatment proved astronomical, and the project was quickly abandoned.

With the introduction of the cyanide process in 1889, NZ Crown Mines set up a crushing plant on Railey's Battery site, and transported the crushed ore to Karangahake for treatment by the Cassell Company. However, finding the crushing plant's machinery, output and location to be rather unsatisfactory, Crown Mines began constructing a larger, more up-to-date mill near the present Karangahake Bridge, which was completed around the end of 1893. Initially, this consisted of 20 head of stamps and a cyanide plant, and processed 30 tons of ore per day. In 1896 the battery's capacity was increased to 40 stamps, and two years later to 60 stamps, which raised its throughput to almost 100 tons a day.

Meanwhile, the Woodstock Company had erected a 10-stamp battery (transported from Waiorongomai) at the mouth of the Waitawheta River in 1894. It was enlarged to accommodate 40 stamps, and changed over from dry to wet crushing in 1897. After Talisman Consolidated took over the Woodstock holdings in 1904, the building was used to house compressors, until destroyed by fire in 1910.

The original Talisman Battery, consisting of 10 head of stamps and a cyanide plant, was commissioned in 1895. It proved to be very inefficient, and processed only a small quantity of ore before being remodelled in 1897. A completely new mill, incorporating 50 head of stamps and a much larger cyanide plant, was then built, and began operations in September 1901. During 1909-1910 the battery was further improved by installing tube mills and an up-to-date smelting room. Over 50,000 tons of ore were processed in 1914, but just four years later the plant closed down.

By the time the Talisman-Dubbo Company began its mining operations in 1930, all of the Karangahake batteries had been dismantled. Consequently their ore was treated by the Golden Dawn Battery at Owaharoa, until they erected a new plant on the former Talisman powerhouse site (near the junction of the Ohinemuri and Waitawheta rivers) in 1938. However, it was forced to shut down just 18 months later and all the machinery was removed in 1940.



Iain Sharp, Heaphy.

Auckland, Auckland University Press, 2008. Pp 134 - 139

Career advancement arrived from an unexpected quarter, however, in the last months of 1852. In September a sawmiller named Charles Ring discovered flakes of gold near the small township of Coromandel in a waterway known as 'Driving Creek' because of its use in transporting logs. Quick off the mark, Heaphy wrote to the colonial secretary offering to make a geological survey of the Coromandel Peninsula. By the beginning of October he was installed as Commissioner of Gold Fields, supervising claims made by miners.

There is a delirious, somewhat tipsy quality to Heaphy's series of four pencil and water-colour cartoons, collectively titled *How we went to the diggings and what we did there*, which depict his first exploratory trip to Coromandel with the crew of the hydrographic survey ship HMS Pandora. Everybody involved probably thought he had struck the jackpot. The cartoons

were a high-spirited collaboration between Heaphy and the Pandora's first lieutenant, Theodore Morton Jones. The facetious inscriptions, which affect an idiosyncratic brand of mock medievalism, are in Jones's hand. The series is worth examining in some detail because it contains the only self-portraits by Heaphy of which we can quite certain and they reveal aspects of his personality that might otherwise be overlooked. He could not only take a joke at his own expense but make one. He had a lively sense of fun. He was evidently good company.

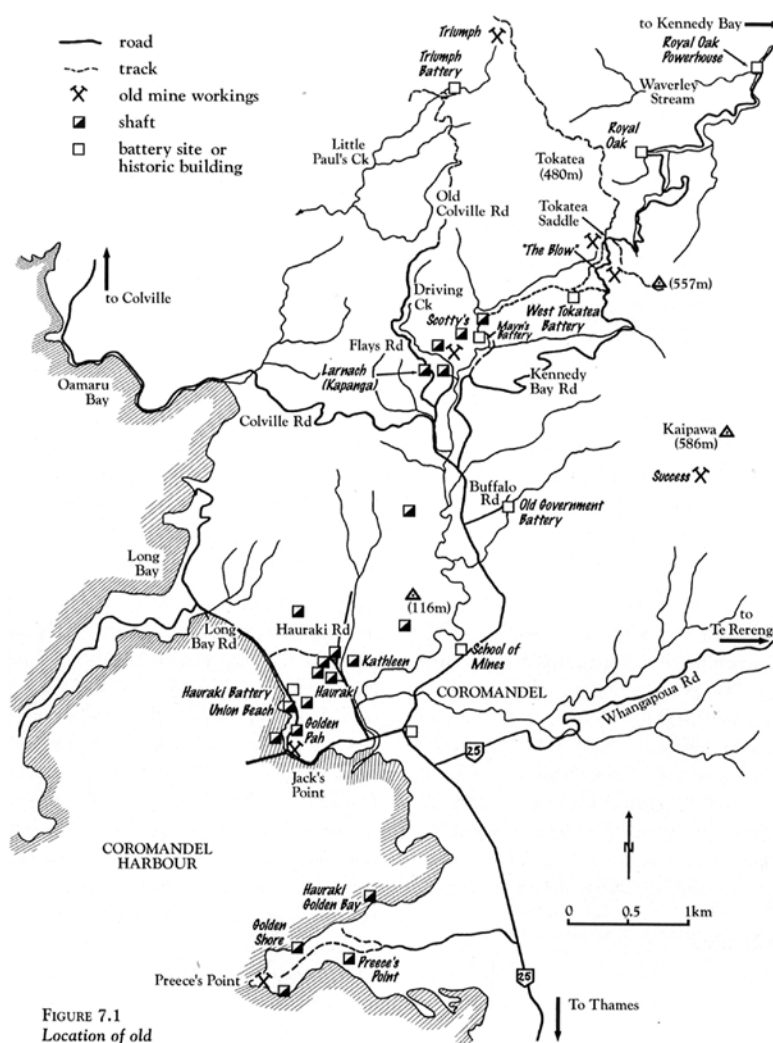
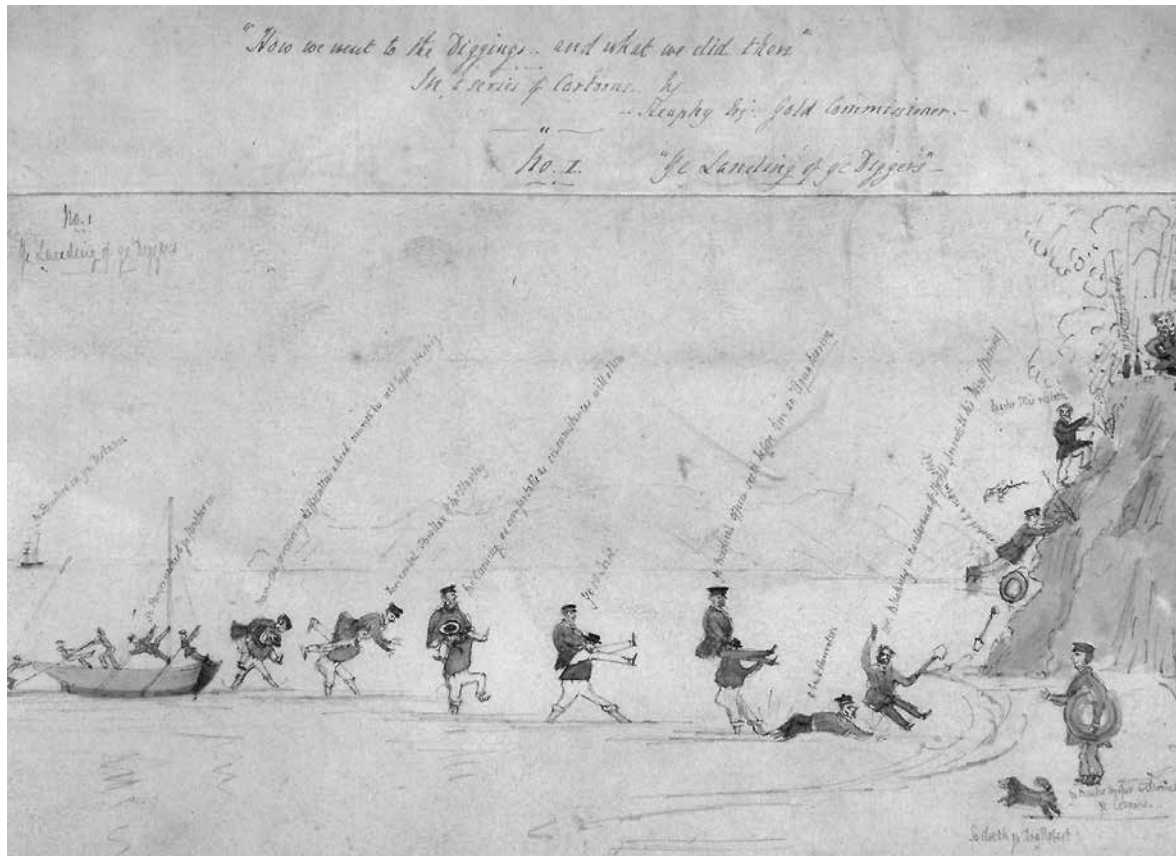


FIGURE 7.1
Location of old
mines and stamper
batteries in the
Coromandel area.

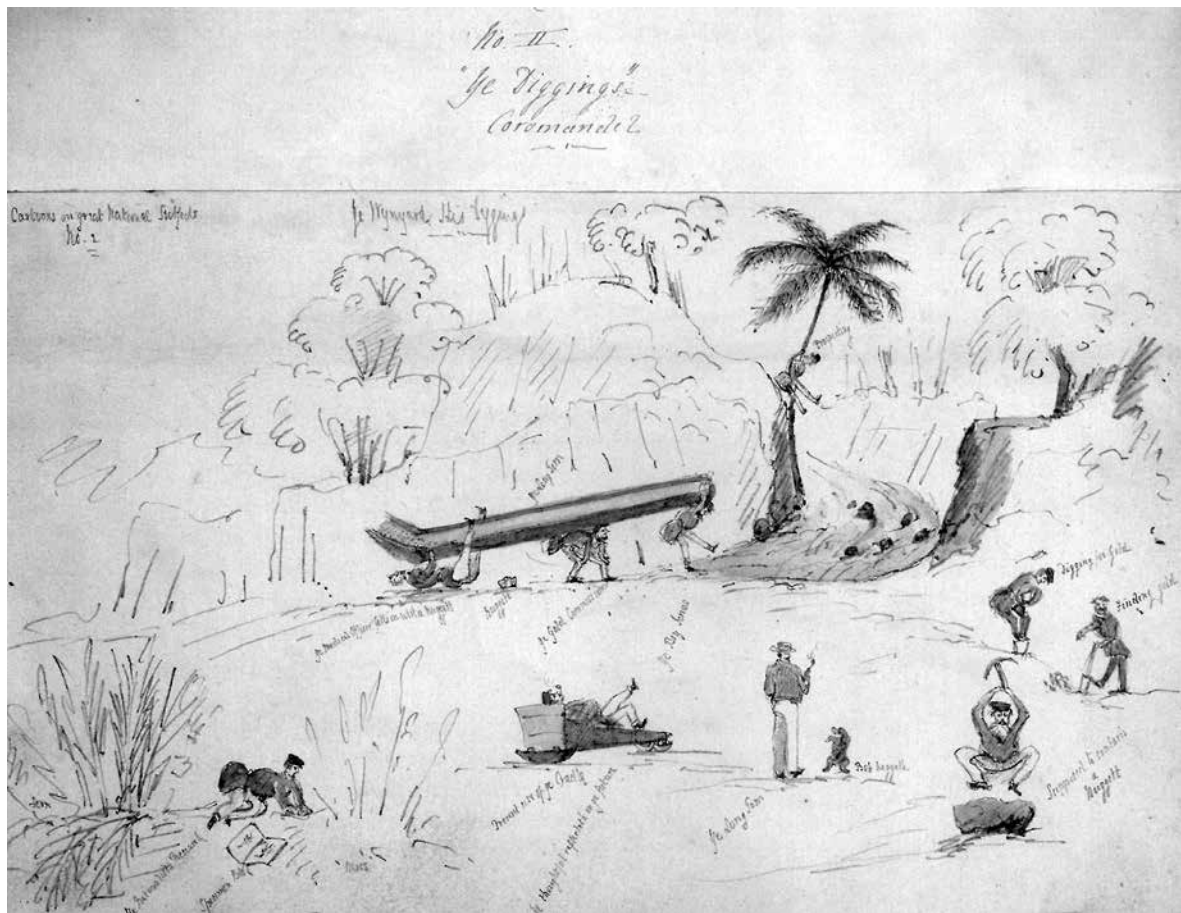
Moore & Ritchie, **Coromandel Gold**.
Pp 72

Headed *Ye landing of ye differs*, the first in the series shows a line of naval officers in red jackets, who wish to keep their feet dry, being carried from a rowboat to the shore by blue-shirted crew members. The operation is only a partial success. The marine nearest the beach has stumbled, tipping his rider into the drink. The inscription reads: 'Mr Blackney in exuberance of spirits precedeth his horse.' Other officers look likely to share the same fate before long. Three of those who have made it ashore are scrambling madly up the cliff with their shovels and pans, clearly eager to get at the gold. Two bottles labelled 'ye refreshments' at the top of the cliff provide further enticement to ascent. Heaphy's abstemious former clients, the Rechabites of Nelson, would have been scandalised. Even the little dog is given a caption; his name is Robert or, in the later cartoons, Bob.



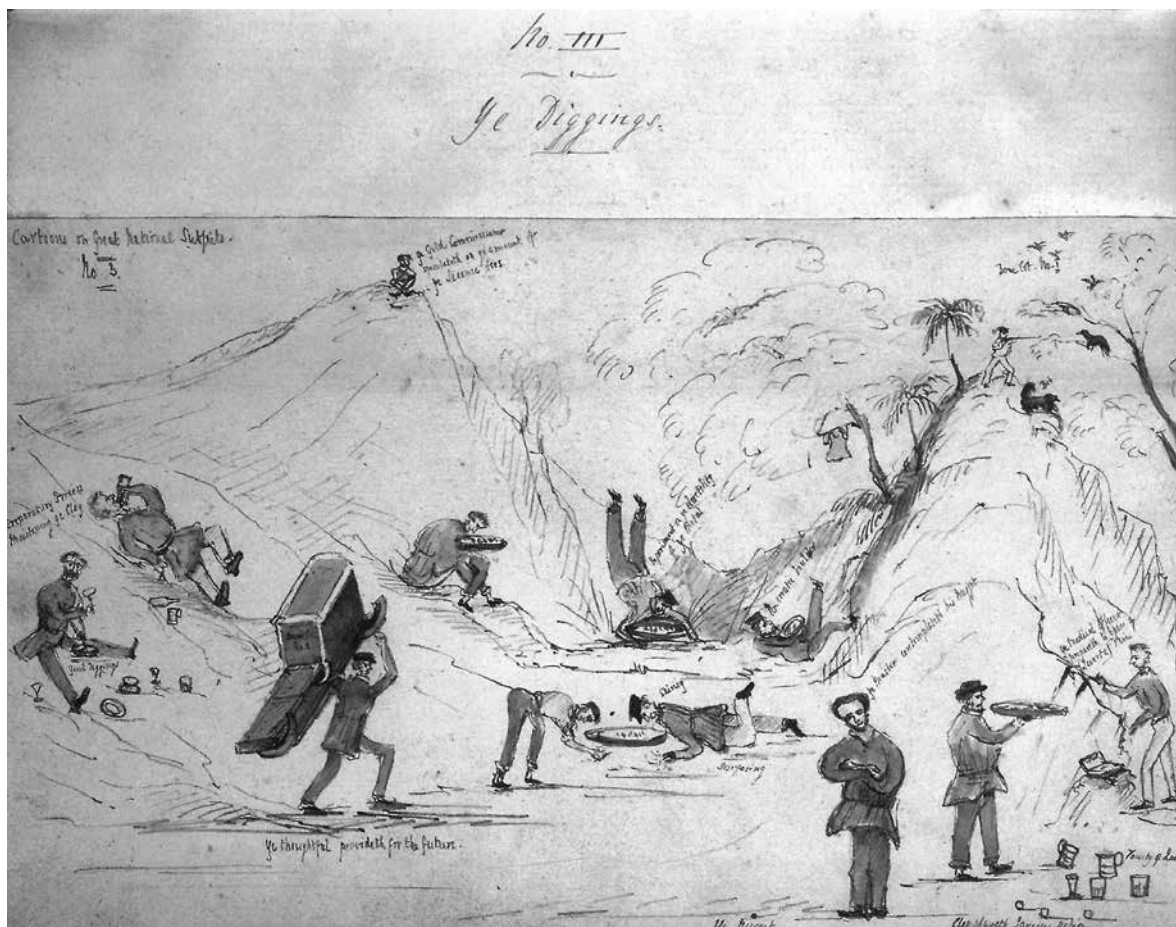
- No I -
 "How we went to the diggings, and what we did there."

The second cartoon, headed *Ye diggings – Coromandel*, shows the Pandora's officers engaged in various activities near a stream (presumably Driving Creek). Some pursuits are more productive than others. One figure (far right) has discovered an enormous nugget, but another is climbing a palm tree for no apparent reason and a third is sprawled on his back enjoying his pipe. Heaphy depicts himself among the three men carrying the long tom (a wooden trough with metal bottom and a sieve at one end). Captioned 'ye gold commissioner', he is the bearded man in the middle, bent over double and bearing the weight of the mining device on his back. The man at the rear, who has tripped on a large nugget and landed on his backside, is the ship's surgeon, John Jolliffe, captioned 'ye medical officer'. The youthful figure at the front of the long tom is the author of the inscriptions, captioned 'ye boy Jones'.



- No II -
 "Ye diggings - Coromandel."

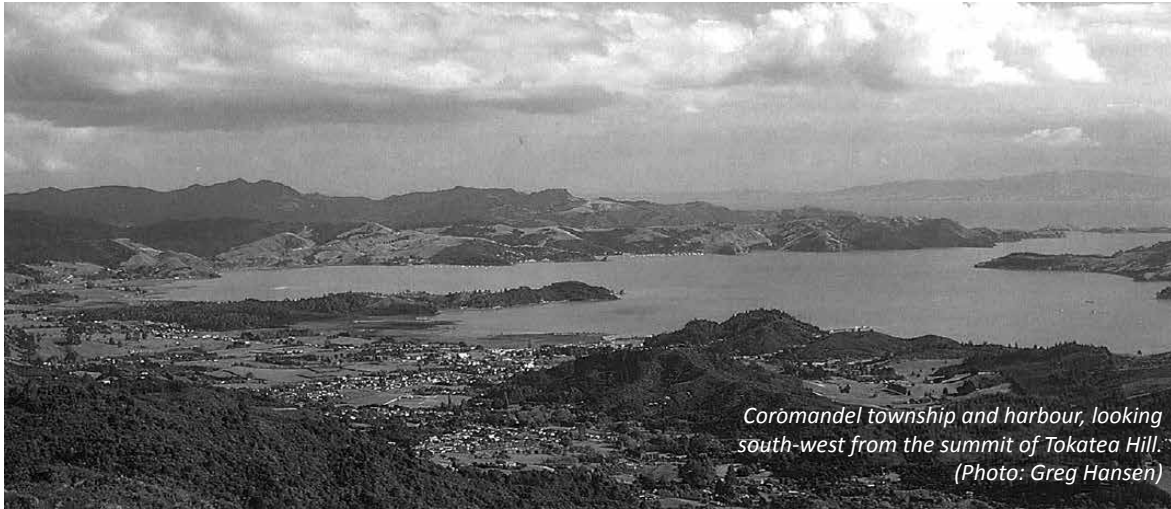
Heaphy appears again in the third cartoon, which is simply headed *Ye diggings*. He is the small figure sitting cross-legged at the top of the hill at left. The accompanying inscription reads: 'Ye Gold Commissioner speculateth on ye amount of ye licence fees.' Jones is shown at the summit of the other hill, firing at something with his rifle Bob the dog beside him. Because their pans are so heavily laden with gold, several of the Pandora's officers have toppled over, but the ship's master, Thomas Kerr, has so far acquired only a single speck. The caption above him says, 'Ye Master contemplateth his nugget.' One officer, lying on his back, seems much more intent on grog than gold. His inscription reads: 'Preparatory process moistening ye clay.' With similar facetiousness, the clay smoking pipes on the ground at lower right are labelled: 'Clay sheweth igneous action.'



- No III -
"Ye diggings."

[illegible]

- No IV -



*Coromandel township and harbour, looking south-west from the summit of Tokatea Hill.
(Photo: Greg Hansen)*

Beyond the relaxed township of Coromandel, one can stand high on the Coromandel Range and enjoy sweeping views of the Hauraki Gulf. That part of the range overlooking the township is called the Tokatea. The Tokatea's foothills merge with lowland river flats on the north-eastern side of Coromandel township, roughly where one finds the district museum. This was once the Coromandel School of Mines, the museum offers many recollections of last century's goldrush.

Prospectors who surged onto the newly opened Coromandel goldfield in 1862 soon became a bewildered lot. For a start, those with earlier mining experience led the novices to believe that gold would be easily accessible on the coastal alluvium. They were wrong. Everyone gradually realised that most of the Coromandel's gold was locked within hard quartz bands, high above the coast. These bands were surrounded by volcanic andesite. To win gold, men would have to tunnel into the quartz at various levels. Both the quartz and its enveloping andesite would prove to be about as hard as the steel of their picks!

Armed with little more than this basic and dispiriting knowledge, many prospectors climbed the range. They increasingly directed their energies to a huge quartz reef about 450 metres up Tokatea Hill. It was a prominent outcrop lying parallel with the main divide, and came to be known as the Big Reef. Rewards were few and disheartening. Prospectors accepted that more hope would be offered by innumerable quartz veins spreading haphazardly from the dominant outcrop. But these gold-bearing offshoots added to the prevailing confusion. Being extremely thin, the veins were hard to trace. "Threadlike partings" is how they were described in one official report. And there was more bad news. Most of these find offshoots had been randomly displaced, by as much as twelve metres, in major faulting of the Coromandel Range. Poor prospectors. No potential goldminers elsewhere in New Zealand – few anywhere in the world – encountered such baffling geological problems.

Significant gold was found on the coast, but it had to be won by sinking deep shafts. These mines, notably on the Kapanga Block, could support only a minority of those seeking gold. A lucky break came in 1869, seven years after the opening of the goldfield. On Tokatea Hill, a "wonderfully rich" discovery led to the range's first commercial venture. This was the Tokatea Goldmining Company, founded with a share capital of £100,000. It began production in 1870.

Throughout the 1870s, miners' picks made only a pathetic impact on the andesite. Hillside tunnelling on the Tokatea progressed on average at little more than a metre a week. Mercifully, powered were imported from California during the next decade, allowing tunnelling rates to increase sevenfold.

Meanwhile, pick and shovel mining spread over about fifty-five hectares of Tokatea Hill. An all-weather road was carved with difficulty from Coromandel to the Tokatea Saddle (366 metres). It was later extended to Kennedy Bay. High above Coromandel township, a strangely isolated new community evolved. For a while it comprised only men who lived in crude bush dwellings near the mining claims, until the two-storeyed Tokatea Hotel, a landmark at the summit of the road, attracted more settled occupation.

Local historians have long debated the size and nature of the Tokatea community, with wide-ranging estimates. Some think close to a thousand people may have lived on the hill during its heyday in the 1870s. If so, this would have been a remarkably large proportion of the 3,500 people (900 miners) estimated to be living in Coromandel County during 1873. Whatever the number of people living on the hill, Tokatea life must have imposed special difficulties, not least upon its children. They had to trudge daily to and from the Driving Creek School, far below.

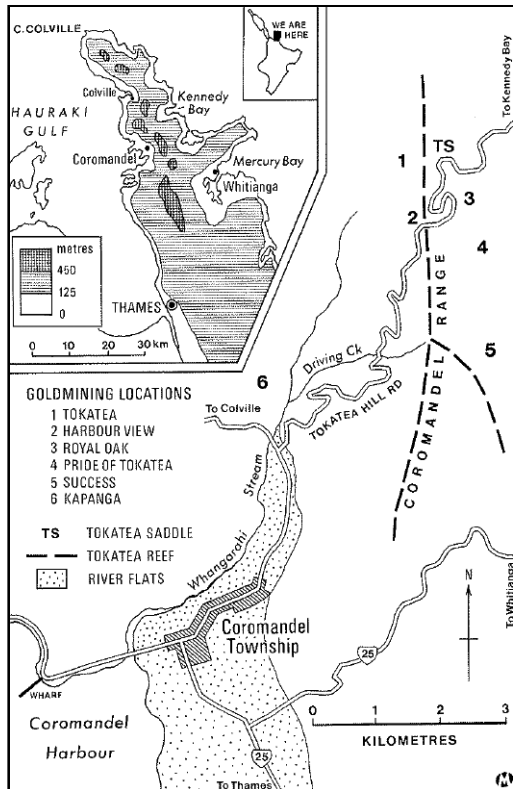
Packhorses provided Tokatea's early transportation. The animals frequently toiled close to exhaustion on narrow, unstable tracks, until inclined tramways replaced them. In 1872, the Government acknowledged the Tokatea's economic potential and funded a tramway from the summit to a crusher (stamper battery) on the western foothill. At roughly the same time, a private tramway was constructed on the Tokatea's eastern flank. That service extended for about one and a half kilometres, to supply a stamper battery above Kennedy Bay. The service wasn't adequate for long. Kennedy Bay's stampers were partly worked by horses, and couldn't cope with the increasing loads of quartz sent to them for crushing. A conveyor then had to be installed on the Tokatea's eastern slope, to lift quartz all the way to the summit. From there it was transferred to the Government tramway which operated for miners in the west.

Despite their efficiencies, tramways were notoriously expensive to maintain. They were repeatedly shut down whenever quartz outputs fell below critical operating thresholds. This put great pressure on mining companies to ensure continuous ore production. Even in the 1880s, the majority of miners still lacked geological knowledge more than capital. One can imagine the consternation when a company decided to build its own tramway, only to find quartz quality suddenly and inexplicably diminishing.

Tramways also had physical limits to their economic operation. All goldfields relied on well-formed roads for the movement of heavy mine and quartz processing equipment. The Tokatea saw some impressive haulage of large scale plant and machinery up winding, coarsely surfaced, steep gradients. Seventeen horses had to be harnessed together to haul a replacement steam boiler, weighing six and a half tonnes, from Coromandel to the Royal Oak claim.

Ingenuity often solved transit problems. The Tokatea Goldmining Company had to find an effective way to raise broken quartz from its fourth level, 245 metres underground. Water draining into the level above was a nuisance and had to be dispersed. Much of it was diverted to a large wheeled tank, specially designed for the company's endless wire tramway. When filled with water, the tank had more than enough weight to counterbalance a load of quartz at the lower level. After the ore had been lifted with an empty tank attached the routine could be carried on indefinitely, even when the drive had penetrated over 600 metres into the range.

Nature sometimes intervened to move quartz. A severe rainstorm of 1878 caused more than 80



tonnes of stockpiled gold ore to be swept from the Harbour View claim. That loss, together with destruction of its tramway, nearly bankrupted the company. As if by way of compensation, whenever one claim reeled from disaster, another would strike unexpected riches. The hopeful spirit of Tokatea was nowhere better represented than in a stamper battery which was registered by the name Nil Desperandum. Determination on the Tokatea earned it the reputation of being the most intensively developed of all blocks on the Coromandel goldfield. This attitude helped resolve many problems arising from the hill's difficult slopes and complicated geology. Mine entrances became so numerous they were once described as giving the appearance of a giant rabbit warren.

Recurring difficulties and big overheads periodically deterred mining companies unless returns were high. Generally, quartz yielding about 250 grams of gold to the tonne was considered economic, and even two-thirds of that value might be accepted in occasional

circumstances. New plant, though, usually required higher values to offset costs of purchase and installation. During the 1880s, rock drills gave new hope and impetus to Tokatea mining. They were driven by steam at first, but later by compressed air, generated by water-driven Pelton wheels. Nevertheless, exasperating fault dislocations continued to interrupt payable gold recovery. Average gold yields had to be considerably higher than those of claims on easier ground.

Regulations stipulated that every claim shall be bona fide and continuously worked from day to day". For this reason, the management of a struggling company might be forced temporarily to convert its operations to the tribute system. By this arrangement small groups of men, working without the benefits of installed equipment and technical advice, mined independently. Tokatea goldmining went through several pessimistic phases, particularly in 1886 when, for a time, all the major claims were let on tribute. This meant that important low-level mining had to cease entirely, because it relied heavily on mechanisation for drilling and ore removal.

A tributer's life was especially difficult on the Coromandel side of Tokatea Hill. He would often have to bag his hand-picked quartz on a steep hillside, sling the bag over his shoulder, and stumble perhaps 100 metres up broken slopes. Only then might he be able to transfer the load to a packhorse. Although many tributers got a lucrative return from this kind of hard labour they could work only the more accessible drives, and their quartz frequently had to yield about 750 grams of gold per tonne to cover their high costs. These included contract dues payable to mine owners, which varied from ten to twenty per cent of gross returns.

Many situations altered during the 1890s. Long established mines changed their names, and others lost theirs when forced to merge with neighbouring enterprises. Some claims, apparently exhausted, were sold to new owners who quite often managed to rework the 'tired' ground with rewarding and even spectacular results. Fortunes changed substantially. In 1893, the once proud Tokatea Goldmining Company was forced to sell most of its property and plant for only a few hundred pounds.



*Miners at the Royal Oak Mine, Tokatea Hill.
(Photo: Alexander Turnbull Library)*

In more balanced years, the Tokatea would have countered such depressing news with revelation of a morale-boosting bonanza on another claim. The appropriately named Success mine had offered this kind of cheer several times. During the mid-1880s amazingly rich patches of almost pure gold had occasionally been found on Success territory.

A decade later miners were having to rely on

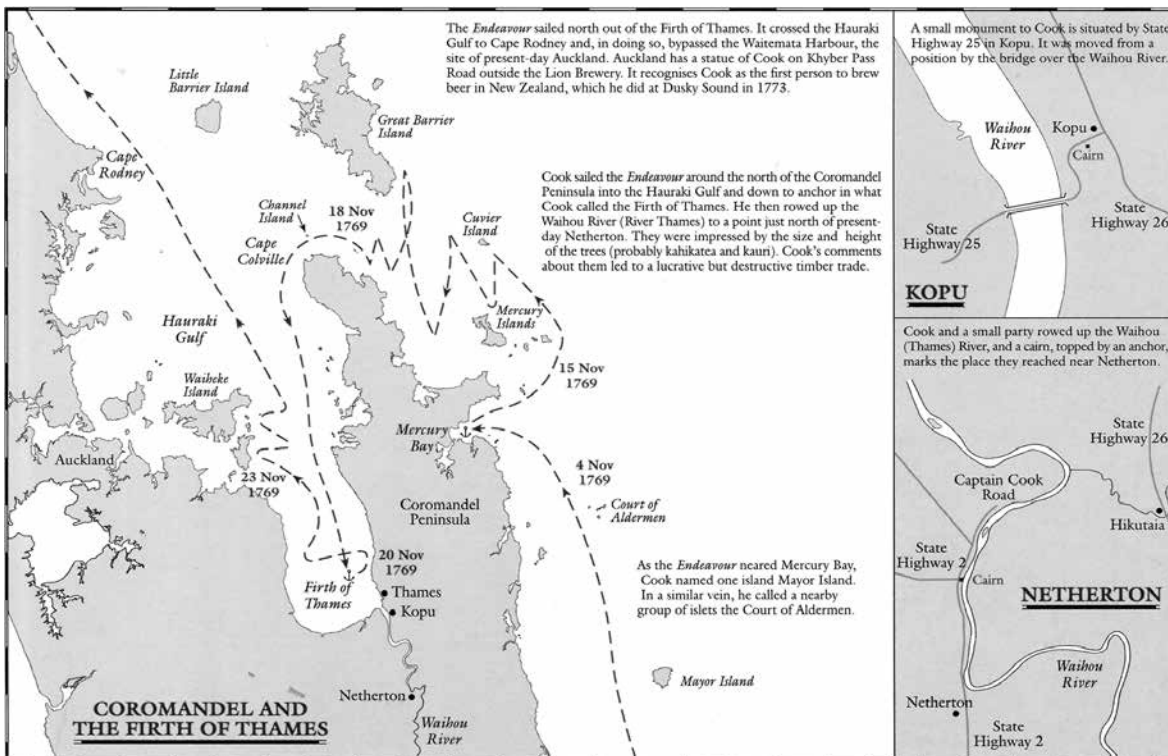
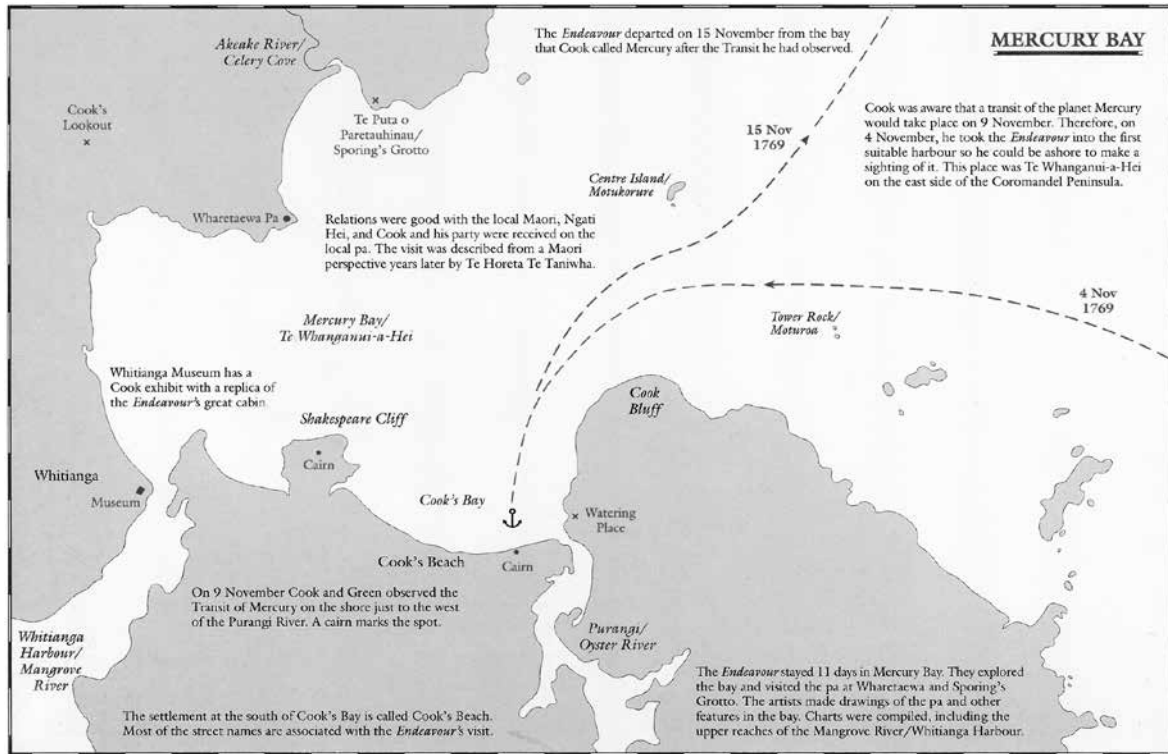
less dramatic events to revive their flagging spirits. In 1895 the Royal Oak Company induced the Governor of New Zealand, Lord Ranfurly, to open its new power plant and give his name to it. However, as the century drew to its close, few Tokatea claims were rewarding their owners. Most of the surviving operations had been completely restructured, and refinanced through a small number of London based shareholdings. By the late 1890s, most gold men conceded that the good times were finished. They were certainly finished for the Royal Oak claim in 1899: it suffered a devastating gold robbery. Little gold was recovered after 1909, although late companies, like the New Price of Tokatea, were still being registered. From about 1920 even the small residual workings were closing.

As a goldmining area the Tokatea's physical situation prevailed against it in several ways. The smaller mines faced an arduous task when moving their quartz to hillside crushers. Larger mining companies, with crushing contracts, had to transport their ores to distant batteries supplied with water from the Whangarahi Stream. This haulage called for great engineering skill and big financial outlays. Hauling supplies up the steep hill road added significantly to costs. At least one mine was listed in each official report as "not paying expenses".

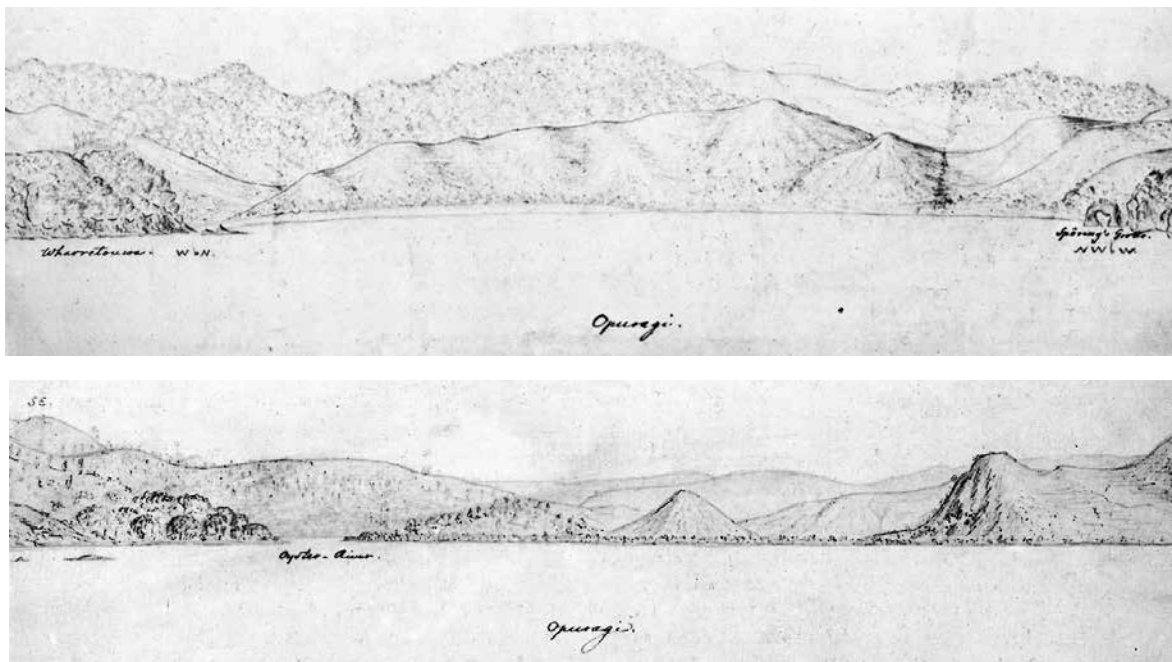
In several parts of New Zealand, abandoned goldfields were ultimately transformed into productive farmland. Not so on the Tokatea. Its steep and broken topography was unsuited to agriculture, or even extensive pastoralism. Second growth indigenous vegetation began to take hold; to soften the scarred slopes and re-colour the barren grey mounds of mine tailings. This growth is still rehabilitating the hill and camouflaging dangerous mine entrances. The tramways have gone. The batteries have gone. The second Tokatea Hotel has also gone. And, of course, the people have gone.

The Tokatea offers a magnificent view in fine weather, but its unsealed road is steep and winding. Nearby, the paved summit of Provincial State Highway 25 easier, and its view of the Hauraki Gulf is comparable. But when the sky lowers and the wind blows, Coromandel's range becomes less friendly. We are then reminded how difficult its rugged slopes must have been for nineteenth century gold seekers – when Tokatea Hill hosted one of New Zealand's most intensive and challenging periods of goldmining.

Mercury Bay



John Robson, **Captain Cook's World: Maps of the life and voyages of James Cook RN** (Auckland, Random House, 2000), maps 1.14 and 1.15.



*Rudiger Joppien and Bernard Smith, The Art of Captain Cook's Voyages:
vol. 1: The Voyage of the Endeavour 1768-1771*

(Melbourne, Oxford University Press in association with the Australian Academy of the Humanities, 1985):
1.121 and 1.122 on pp. 178-179.

*Janet Riddle, Saltspray and Sawdust:
One thousand years of history in Mercury Bay, Te Whanganui-A-Hei*
Coroglen, Gumtown Publishers, 1996. Pp 31 - 41 (footnotes omitted)

Early on Friday morning the 3rd of November, Cook and his companies' attention was attracted to a group of islands, which lay 5 Leagues from the main. Banks commented that they made an uncommon appearance from the number of perpendicular rocks and needles (as the seamen called them) which were in sight at once these we called the Court of aldermen in respect to that worthy body and entertained ourselves some time with giving names to each of them from their resemblance thick and squat or lank and tall to some or other of those respectable citizens. One wonders how the London gentlemen concerned in this play would have reacted!

It was noted that between the main land and the Court of Aldermen lay other islands, the most of them are barren rocks and of these is a very great Variety, some of them are of as small a compass as the Monument in London and spire up to a much greater height... and some of them are inhabited. At noon a Rock like a Castl caught Cook's attention. As the main land slid past it became hilly, rugged and quite barren in comparison with the area they had named the Bay of Plenty. They could see no sign of plantations, nor that the area was inhabited to any large extent.

The wind began to switch to the nor-nor-west in the afternoon, and visibility became hazy, with rain setting in. At 1 p.m. three canoes were seen putting out from the main land toward them containing twenty one warriors, darker in complexion than those further south, and after parading about for a little while they darted two pikes at us, the first was at one of our men as he was going to give them a rope thinking that they were coming on board, but the second they throw'd into the ship,

the firing of one Musquet sent them away. Each of these Canoes were made out of one large tree and were without any sort of ornament, in contrast to those he saw to the south, and the people in them were mostly quite naked. Banks noted that the canoes had been hollowed out by fire.

It was 2 p.m. that a large opening or inlet in the land was sighted, for which they made, intending to anchor there, noting a high towered rock lying near the south of the inlet. Several canoes were now accompanying the Endeavour as she sailed into the Great Bay of Hei, dropping anchor at 7.30 p.m. a little within the entrance. As soon as the anchor was dropped the canoes converged on the buoy, attempting to drag it away. A musket had to be fired to dissuade them. But no fear was displayed. The canoes did not leave the Ship until dark, and before they went away they were so generous as to tell us that they would come and attack us in the morning, but some of them paid us a Veset in the night, (at 11 p.m.) thinking no doubt but what they should find all hands asleep, but as soon as they found their mistake they went off.

Cook had a special reason for putting into the Bay. He was hoping to find a good harbour to observe the Transit of Mercury, which was due to occur on the 9th. He wrote, if we should be so fortunate as to Obtain this Observation the Longitude of this place and Country will thereby be very accurately determined.

Between five and six o'clock on the morning of the 4th, several canoes converged on the Endeavour from all parts of the Bay, containing some 130 to 140 warriors. Well-armed with their weapons, it appeared at first that their intentions were hostile, but no attempt at attack was made. For three hours they paddled around the Endeavour sometimes trading with us and at other times tricking us. Some of them came on board. Cook used every method to induce friendship, but all to no purpose. One of the warriors was so elated by his trickery that he, according to Banks, swaggered prodigiously having paddled the boat a few yards from the Ship accordingly a Musquet Ball was fired thro' the bottom of the Boat, and small shot at the offender, which struck him and another who sat next him, on which the Canoe was immediately paddled off and remained about 100 Yards from the Ship, but what was truly surprizing was that tho' the Men who were shot bled a good deal, not one of the other boats went near them, or enquired at all how much or in what manner they were hurt, they returned to the ship and renewed Trade for their arms a large quantity of which they sold, without attempting to play tricks, at last however one Gentleman paddled off with 2 different pieces of Cloth which had been given for one Weapon, he got about 10 Yards from the Ship and thought himself safe, A Musquet was fired after him which fortunately struck the boat just at the Waters Edge, and consequently made 2 holes in her, the People in her and the rest of the Canoes paddled hard, as a finishing stroke to convince them of our superiority a round shot was fired over them and not a Boat stop'd till they got ashore. Cook commented that the great gun was fired, not with any design to hurt any of them, but to shew them what sort of Weaphons we had and that we could revenge any insult they offer'd us. But Cook could not tell what effect the great gun had on them for this was not fired until they were going away.

On shore, a pair of bright young eyes had watched the strange happenings with a great deal of interest and excitement. His name was Te Horeta, a member of the Ngati Whanaunga tribe. He, and some members of his tribe were living at Whitianga at the time of Hood's arrival, on a temporary basis, to keep their claim to the land, and that our fire might be kept alight on each block, so that it might not be taken from us by some other tribe. However, in times of danger they had strongholds to which they would retire.

Word travelled just ahead of the Endeavour to the inhabitants of the Great Bay of Hei, that a very large, strange canoe with many sails had appeared on the east coast of Aotearoa, Kupe's Land of

the Long White Cloud; that the warriors on board were white-skinned, and garbed in strange dress, and carried strange weapons.

Te Horeta had possibly heard the high, clear call of a woman from a position on a high hill, announcing that the canoe was coming. Great excitement arose within him and all his friends. They quickly scuttled up to a convenient high point overlooking the sea, and gazed at the horizon with excited, gleaming dark eyes, anxious to be the first to catch sight of this strange canoe. They saw the canoes full of warriors putting out to sea, and knew that it must be very close now.

At last, there it was, its white sails billowing from its tall masts; and they could but stand in awe at the strangest sight that their young eyes had ever seen. Then the sails dropped, and the giant canoe came to anchor.

After dark the warriors from their tribe returned. Young ears listened to all that was said. The camp hummed with the strange happenings. At last tiredness took its toll, and they fell asleep, not in a haphazard manner (for they had no dwelling place, only some small temporary shelters), but in such a way to prevent a surprise in the night by an attacking tribe.

The happenings of the following morning were watched by the young warrior's keen eyes. The weather was still hazy with light rain, but began to clear about 10 a.m. Before breakfast some canoes converged on the Endeavour, but no trading was done. Banks was interested in one old Man, whose name was Toiava (Toi-awa) [who] came on board, he seemed to be the chief both to Day and Yesterday but in all the transactions of Yesterday he was observed to behave sensibly and well laying in a small Canoe always near the Ship. and at all times speaking civilly to those on board, with some persuasion he ventured down into the Cabin and presents Cloth, Iron and given him, he told us that the Indians now were very much afraid of us, we promis'd friendship if they would supply us with provisions at their own price.

Toi-awa informed they that they were often visited by raiding parties from the north and south, who stripped them of all that they could lay their hands on, and at times made captives of their wives and children, and that, being ignorant who the English were after their first arrival, the natives had been much alarmed, but were now satisfied of their good intentions. With his help successful trading was carried out...

Te Horeta and his companions saw boats put off from the Endeavour after breakfast. Cook had decided to sound the Bay and to look for a more convenient Anchoring place, the Master being in one boat and I in the other. We pull'd first over to the North shore, where some Canoes came out to meet us, but as we came near them they retired to the shore and invited us to follow them, but seeing that they were all arm'd I did not think fit to except of their invitation, but after trading with them out of the boat a few minutes, we left them and went towards the head of the Bay. I observed on a high point a fortified Village but I could only see a part of the works, and as I intend to see the whole shall say no more about it at this time. After having fix'd upon an Anchoring place not far from where the Ship lay I returned on board.

On that excursion there was found here great quantity of seller (Apium austral) which is boild every day for the Ships Compney as usual. This was to help ward off scurvy. Cook knew that it was vital for the health of all those on board that they were given as much fresh fruit and vegetables as they could find, something he had learnt from a Cornishman, Samuel Wallis.

While out in the boats those who staid by the Boats saw two Indians fight on some quarrel of their own, they began with Lances which were soon taken from them by the Old Men but they

were allowed to continue their battle which they did like Englishmen with their fists for some time after which all of them retired behind a little Hill, so that our People did not see the Event of the Combat.

At 4 p.m. young Te Horeta noticed activity aboard the Endeavour. It weighed anchor, and began to move in his direction on the south shore, the place they called Purangi, anchoring about a mile off shore in 4 and a half fathoms, which Cook was, at the end of his stay in the Bay, to call The best anchorage... here it is very convenient Wood-ing and watering.

On Sunday, the 5th, concerning the morning's happenings, Cook wrote, the Natives came off again to the Ship but their behaviour was very different to what it was yesternorning and the little traffick we had with them was carried on very fair and friendly. Two came on board the ship to each I gave a piece of English Cloth and some Spike nails.

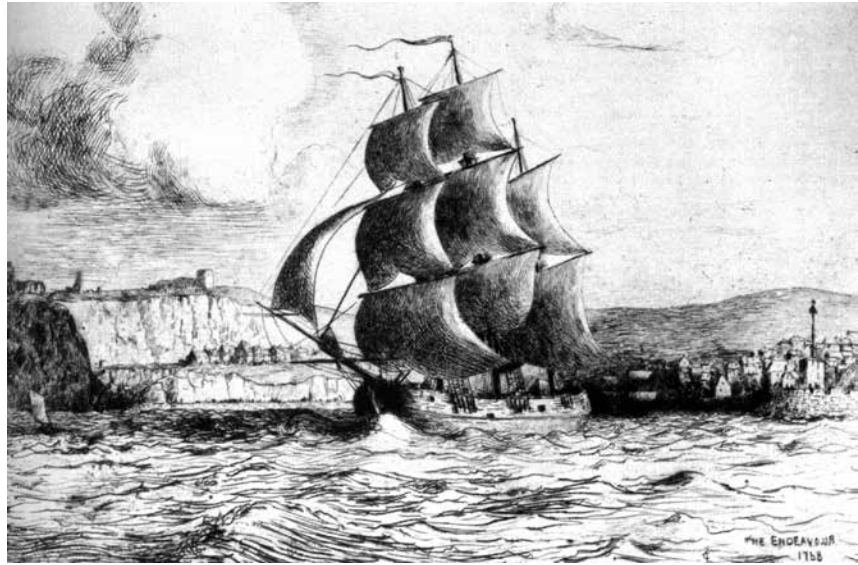
After the natives were gone I went with the Pinnace and Longboat into the River to haul the Sene and sent the Master to sound the Bay and dridge for fish in the yawl. We hauled the sene in several places in the river but caught only a few Mullet, with which we return'd on board about noon. (31) Purangi harbour did not yield a rich harvest to its visitors. Cook did note that in the River are an immense quantity of Oysters and other small shell fish, and this is the only thing it is remarkable for and hath occasioned my giving it the name of Oyster River.

It was when Te Horeta was a very old man that he recalled his experiences during the Endeavour's visit, so it is uncertain now on what day they occurred. The sight of the Longboat and Pinnace pulling towards them could have been the time when he heard the old men talk of the manner in which they came ashore, the rowers pulling with their backs to the bow of the boat, "Yes, it is so; these people are goblins; their eyes are at the back of their heads; they pull on shore with backs to the land to which they are going.". Although he did not recall them saying so, he could have heard them thoughtfully pondering over whether these strangers were creatures from another world, which was how the Maori felt when Cook first arrived on their shores, so foreign in appearance were they to them.

Monday the 6th saw Banks and some of his party ashore on scientific exploration. It could well have been this party's visit that Te Horeta recalled. When they first came on shore Te Horeta's excitement turned rapidly into one of self-preservation, a feeling which was evidently felt by all the women and children, for they, as one, took to the forest away from the goblins, leaving the warriors to face them... but, as the goblins stayed some time, and did not do any evil to our braves, we came back one by one, and gazed at them and we stroked their garments with our hands, and we were pleased with the whiteness of their skins and the blue of the eyes of some of them... They collected grasses from the cliffs, and kept knocking at the stones on the beach, and we said, "Why are these acts done by these goblins?" We and the women gathered stones and grass of all sorts and gave to these goblins. Some of the stones they liked and put them into their bags, the rest they threw away; and when we gave them the grass and branches of trees they stood and talked to us, or they uttered words of their language. Perhaps they were asking questions, and, as we did not know their language, we laughed, and these goblins also laughed, so we were pleased... We were now at quiet and peace with them, and they gave us some food they had brought on shore with them. Some of this food was very hard, but it was sweet. Some of our old people said it was "punga-punga" (pumice stones) from the land from which these goblins came.

Two handfuls of potatoes were given to a distant relative of mine, an old chief at the time. The old chief planted them for three years, and when the potatoes became plentiful, then, and not till that time, were potatoes eaten, and they were then distributed to the tribes of Hauraki.

It was reported in Sydney, Australia, in April 1795, that Captain Dell, on a trip to obtain some of the great trees said by Captain Cook to be easily reached in the River Thames area was told by the natives who proved most friendly and helpful that they already have pigs and potatoes said to have been obtained from Captain Cook over a quarter of a century ago at Mercury Bay.



Banks and company were obviously very impressed by the quantity of shellfish that were consumed by the Indians...wherever we went on hills or in Valleys, in Woods or Plans, we continually met with vast heaps of Shells, often many Waggon loads together, some appearing to be very old wherever these were it is more than probable that parties of Indians had at some time or other taken up their residence, as our Indians had made much such a Pile about them; the Countrey in general was very barren. But the tops of the hills were covered with large Ferns, the roots of which they had got together in large quantities as they said to carry away with them; we did not see any kind of Cultivation.

In the Evening I walked up the River, which at the mouth looks very fine and broad, it in 2 miles or less shoaled to nothing; the Country inland was still more barren than that near the Sea side.

Tuesday dawned wet and miserable. Not a soul stirred on the Great Bay of Hei. The only activity was a few skirling seabirds. However Wednesday the 8th turned on a bright face, smiling on all that it surveyed. Trading between the Endeavour and the tribes now became brisk. Although Cook and his crew did not have much luck with their few fishing excursions they were to find out how prolific the fish were in the waters of this Great Bay... neither the sene nor the trawl met with success, but the natives in some measure made up for this by bringing several baskets of dry'd or ready dress'd fish, altho it was none of the best I order'd it all to be bought up in order to encourage them in trade. On Wednesday The Natives brought of to the Ship and sold us for small pieces of Cloth as much Fish as served all hands, they were of the Mackarel kind and as good as ever was eat.

Among those who came out to the Endeavour was our friend Toiava while he was along side he saw 2 canoes coming from the opposite side of the Bay, on which he immediately went ashore with all the Canoes, telling us that he was afraid he however soon returned, finding I suppose that the Canoes had not in them the People that he expected... The two boats were the ones that had come to trade the fish.

Banks and company went ashore and botaniz'd with our usual good success, which could not be doubted in a Countrey so totally new; In the Evening we went to our friends the Indians that we might see the method in which they slept, it was as they had told us on the bare ground, without more shelter than a few shrubs over their heads, the Women and Children were plac'd innermost

or farthest from the Sea, the Men lay in a kind of half Circle round them, and on the Trees close by them were ranged their arms in order so no doubt they are afraid of an attack from some Enemy not far off; they do not acknowledge any superior King, which all we have before seen have done...

Meanwhile, the crew, taking advantage of the good weather, gathered wood and water, and much to the interest of the on-lookers, they heel'd and scrubbed both sides of the Ship, where she lay at anchor by the simple procedure of shifting the cargo from one side to the other so that the bottom of the boat was revealed. At noon Cook was back at the Purangi Estuary observing the Suns Meridian Zenith distance by the Astromical Quadrant.

By Thursday the Endeavour's company had a problem on their hands. Cook stated, As soon as it was light the Natives began to bring off Mackerel (one variety of which was exactly the same as those caught in England), and more then we well know'd what to do with, notwithstanding I ordered all they brought to be purchas'd in order to incourage them in this kind of traffick. Banks in turn exclaimed,... by 8 O'Clock the ship had more fish on board than all hands could Eat in 2 or 3 Days, and before night so many, that every mess who could raise salt corn'd as many as will last them this Month or more. Cockles, clams and mussels were also traded.

Te Horeta, now feeling bad, ventured out to the ship on some of the trading missions, There was one supreme man in that ship. We knew that he was the Lord of the whole by his perfect gentlemanly and noble demeanour. He seldom spoke, but some of the goblins spoke much. But this man did not utter many words: all that he did was to handle the mats and hold our mere, spears, and waha-ika (a sort of club) and touch the hair of our heads. He was a very good man, and came to us – the children – and patted our cheeks, and gently touched our heads. His language was a hissing sound, and the words he spoke were not understood by us in the least.

It was also said that Te Horeta went down into the cabin and had biscuits given to him. But what he cherished most of all was something tangible, which he kept on a string around his neck – a nail, which he afterwards used to drill holes in canoes to affix the top-sides, and to carve wood boxes to hold the huia feathers, but in years after this I went out on the sea in a canoe and our canoe capsized... and my nail was lost. I dived to recover it, but could not find it.

He remembered what was said when Cook gave him the nail: I took it in my hand and said, "Kapai (very good), and he repeated my words, and again patted our heads with his hand and went away. My companions said, "This is the leader of the ship, which is proved by his kindness to us; and also he is so very fond of children. A noble man - a rangatira – cannot be lost in the crowd."

But Cook, in the interests of the greater part of the world was intent on mapping as accurately as possible this new land. We had not been long on board of the ship before this lord of these goblins made a speech, and took some charcoal and made marks on the deck of the ship, and pointed to the shore and looked at our warriors. One of our aged men said to our people, "He is asking for an outline of this land"; and that old man stood up, took the charcoal and marked the outline of Te Ika-a Maui (the fish of Maui – the North Island of New Zealand), which, after some discussion Cook transferred onto paper.

Thursday the 9th dawned with variable light breezes and clear weather. James Cook and Mr Green left the ship at 8 a.m. for the eastern end of the beach of what they now called Cook's Bay, landing some 300 yards from the bank of Oyster (or Purangi) River, directly opposite the anchorage to Observe the Transit of Mercury which came on at 7 hours 20 min. 58 sec. Apparent time and was Observed by Mr Green only. I at this time was taking the Suns Altitude in order to ascertain the time.

There was not a cloud in the sky to obscure the viewing. Cook did view the egress some four hours later. He now knew exactly where New Zealand lay in the wide expanse of the southern Pacific, and in particular this bay which Mr Green calculated to be in the Latitude of $36^{\circ} 47'$ s and in the Longitude of $184^{\circ} 4'$ w from the Meridion of Greenwich, it lies in sw between 2 and 3 Leagues.

The type of sextant used by Cook was a triangular one set on the ground. The findings of Cook and Green have since proved to be very accurate. The corrected computation is latitude $36^{\circ} 50' 18''$ s, and longitude $175^{\circ} 45' 23''$ e. Measured east of the Greenwich meridian the navigator's longitude was $175^{\circ} 56'$, a difference of a mere eleven minutes.

Meanwhile, out at the ship, five canoes had come alongside, two large and three small ones, in one were 47 people but in the others not so many. They were wholly strangers to us and to all appearances they came with hostile intention, being completely arm'd with Pikes, Darts, Stones etc. however they made no attempt and this was very probable owing to their being inform'd by some other Canoes (who at this time were along side selling fish) what sort of people they had to deal with. At their first coming along side they begun to sell our people some of their Arms and one Man offer'd to sell an Haāhow, (kakahu or woven cloak) that is a square pice of Cloth such as they wear.

Lieut. Gore, who at this time was Commanding officer, send in to the Canoe a pice of Cloth which the man agreed to take in exchange for his, but as soon as he had got Mr Gore's Cloth in his possession he would not part with his own, but put off the Canoe from along side and then shook their paddles at the People in the Ship. Upon this Mr Gore fired a Musquet at them and from what I can learn Kill'd the man who tooke the Cloth, after this they soon went away. I hae here inserted the account of this affair just as I had it from Mr Gore but I must own that it did not meet with my approbation because I thought the punishment a little too severe for the Crime, and we had now been long enough acquainted with these People to know how to chastise trifling faults like this without taking away their lives.

On shore, about Noon, Banks and his associates were alarmed by the report of a Great Gun fired from the Ship... What occurred on board the ship was immediately brought on shore to our Indians, who were at first a little alarmed, and retreated from us in a body; in a little time however they returned on their own accords...

A council was held by the Maori after the event. It would appear that Toi-awa had a large conciliatory effect on that meeting. He greatly condemned the conduct of the deceased. The question was, Should they attempt vengeance or not? It was a Waikato who was slain by thunder when he tried to take gifts without proper giving of gifts in exchange. So they (the strange white-faced visitors) took utu (revenge), thus took recompense as was proper. That was tika (right). He was not of our tribe (Ngati-Hei). We do not need to take utu. According to Parkinson his name was possibly Otireonui. He was buried with the cloth he had taken wrapped around him.

The awed natives could only exclaim over the last few days' unusual occurrences, If we had not seen it, who would believe it? A great vessel has come, with white-faced men so strange it is said they are taniwhas. People have come from as far as the Waikato to see this marvel. A Waikato tried to steal, a taniwha made thunder and he died.

Now they look through hollow sticks at the sun. Very strange are their ceremonies for the sun god Ra. Tupia the priest from the islands of our ancestors says that they can see the wandering star Whiro passing across the face of the sun. Indeed they have priests and chiefs of great power among them. They brought Tupia to speak with us. What does this mean for the future? Will things ever again be the same?

A Little before Sunset we (Bank's party) went home with the Indians to see them eat their Supper, it consisted of Fish, Shell fish, Lobsters and Birds, these were dress'd either by broiling them upon a skewer which was stuck into the ground leaning over the fire, or in Ovens as we call'd them at Otahite (Tahiti) which were holes in the ground fill'd with Provision and hot stones, and covered over with leaves and Earth, here we saw a Woman who mourned after their fashion for a dead relation, she sat on the ground near the rest who (except one) seem'd not at all to regard her, the tears constantly trickled down her cheeks; she repeated in a low but very mournful voice words which we did not understand at all still at every sentence cutting her arms, face, or breast with a shell she held in her hand, so that she was almost covered with blood, a most effecting spectacle; the Cuts she made however were so managed as seldom to draw blood, and when they did pierce a very small way into the flesh, but this is not always the case with them, for many we have seen, and some were among these very people, who had shocking large scars on their arms, thighs, breasts, cheeks and which they told us had been done in this manner and upon this occasion, may they proportion the depth of their cuts to the regard they have for the deceased. In this he was mistaken. How deeply they cut themselves lay wholly in the skill of the mourner.

The following day, being the 10th, and despite the return of the rain and hazy conditions, two boats were lowered from the Endeavour, as Cook, Banks and the other gentlemen set out to explore the region, and in particular a large river that emptied itself into the head of the Bay. Passing through the narrow entrance, it widened out as they progressed, rowing up for four or five miles and could have gone much farther had the weather been favourable.

Feeling in need of sustenance they landed on the east side of the river where they saw A Tree in the neighbourhood, on which were many Shaggs nests and Old Shaggs setting on them confirmed out resolution, an attack was consequently made on the Shaggs and about 20 soon killed and as soon broil'd and Eat, every one declaring that they were excellent food indeed I think they were; Hunger is certainly most excellent sauce, but since our Fowls and Ducks have been gone, we find ourselves able to Eat any kind of Birds (for indeed we throw away none) without even that kind of seasoning fresh provision to a Seaman must always be most acceptable if he can get over the small prejudices which once affected several in this Ship, most of all whom are now by virtue of good example completely cured...

The landing place is fairly easily identified as Kaitoke. Shags still use the pohutukawa trees there for perching and nesting.

From this point, and probably while the meal was being prepared, Cook went up on the hills from whence I saw or at least I thought I saw the head of the River it here branched into several Channels and form'd a number of very low flat islands all cover'd with a sort of Mangrove trees and several places of the shores of both sides of the River were cover'd with the same sort of wood: the sand banks were stor'd with Cockles, and clams and in many places were Rock Oysters. Here is likewise pretty plenty of wild Foul, such as shags, ducks, Curlews and a Black Bird about as big as a Crow, with longsharp bill of a Colour between Red and yellow. (The New Zealand oystercatcher probably in its dark phase) We also saw fish in the River but of what sort I know not.

From his vantage point Cook could not see whether or not any considerable fresh water stream came out of the Country into this River but there are a number of small Rivulets which come from the Adjacent hills. If the weather had been more favourable it is highly probable that they would have found at least two of the rivers that empty into the upper reaches of the Whitianga harbour – the Whenuakite, being joined further upstream by the Parakau, and the Waiwawa, which was swollen by the Kapowai near the end of its voyage, and some miles further back by the Rangihau, as well

as other lesser ones. Flowing out on the western side are the Kaimarama and Mahakirau streams, which join to become the Whangamaroro, and the Ounuora (later also known as Mill Creek).

A substance in the mangroves caught their attention. From these trees exudes a viscous substance which resembles resin: we found it first in small bumps on the beach, and now saw it sticking to the trees, by which we knew whence it came. Cook and his botanist Banks could be forgiven for believing that this resin came from the mangrove trees. However, if they had consulted with the local Maori they would have discovered its true source, the mighty kauri tree. Later the gum from these trees was to become a valuable source of income.

The Country Especialy on the SE side of this River and Bay is very barren produceing little but Fern and such Plants as delight in a poor soil and for the most part destitute of wood or any other signs of fertility but the face of the Country on the other side looked much better and is in many places cover'd with wood.

Banks states, Our repast ended, we proceeded down the river again, at the mouth of it was a small Indian Village where we landed, and were most civilly received by the Inhabitants who treated us with hot cockles at least a small flat shell fish most delicious food Tellina. (A genus of bivalve shellfish) While there Cook noted that they saw several more (inhabitants) and smookes a long way inland, but saw not the least sign of cultivation either here or in any part about the Bay, so that the Inhabitents live wholly on shell and other Fish and Fern roots which they eat by way of bread.

Cook made particular note that the Bay's Inhabitants who altho pretty numerous are poor to the highest degree when compare'd to others we have seen... and so are their houses or huts and in general everything they have about them... They confirm the custom of eating their enemies so that this is a thing no longer to be doubted.

Speaking as a sailor Cook found the entrance of this River and for 2 or 3 Miles up it is very safe and commodious Anchoring in 3, 4, and 5 fathom water, and convenient places for laying a Vessel ashore where the Tides rise and fall about 7 feet at full and change. It is the smuggest and safest place for a Ship to lay in that wants to stay here any time.. and where there are every conveniency the place can afford. To sail up and into it keep the South shore all the way on board. As we did not learn that the Natives had any name for this River I have call'd it the River of Mangroves because of the great quantity of these trees that are found in it.

One thing that intrigued Cook was A little within the entrance of the river on the East side is a high point or peninsular jutting out into the River on which are the remains of one of their fortified towns, the situation is such that the best Engineer in Europe could not have choos'd a better for a small number of men to defend themselves against a greater, it is strong by nature and made so by Art. It is only accessible on the land side, and there have been cut a Ditch and a bank raised on the inside, from the top of the bank to the bottom of the ditch was about 22 feet and the depth of the ditch on the land side 14 feet; its breadth was in proportion to its depth and the whole seem'd to have been done with great judgement. There had been a row of Pickets on the top of the bank and another on the outside of the ditch, these last had been set deep in the ground sloping with their upper ends hanging over the ditch; the whole being burnt down, so that it is probable that this place has been taken and distroy'd by an Enemy.

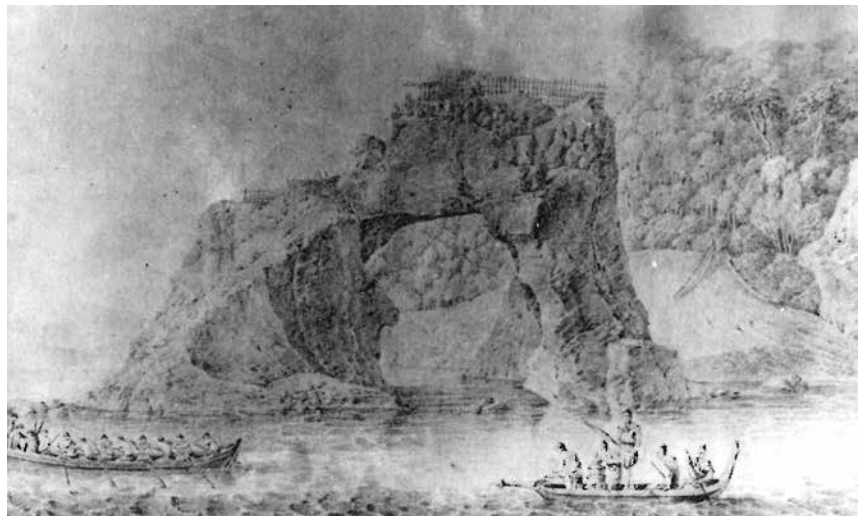
The only boat that plied the Bay the following day was the Longboat. Rain and wind continued to make the day a miserable one. Banks commented that An Oyster Bank had been found at the River by the wooding place, about ½ mile up the Starboard hand, just above a small Island which is covered at high Water; here the Longboat was sent and soon returned deep loaded, with I sincerely

believe as good Oysters as ever come from Colchester and about the same size; they were laid down under the Booms, and Employed the Ships Company very well, who I verily think did nothing but Eat from the time they came on board till Night, by which time a large part were expended but that gave us no kind of uneasiness, as we well know that not the Boat only but the Ship might be easily loaded in one Tide almost as they are dry at half Ebb.

The weather did not clear until Sunday morning the 12th. Launching the Pinnace and Yawl, and accompanied by Mr Banks and Doctor Solander, Cook set off to explore the North side of the Bay in order to take a View of the Country and the Fortified Village which stands there.

Of their first visit Banks waxed eloquent, ... we landed first near a small one, the most beautiful romantic thing I ever saw it was built on a small rock, detached from the Main and Surrounded at high Water, the top of this was fenced round with Rails after their manner, but was not large enough to contain above 5 or 6 houses; the whole appeared totally inaccessible to any animal who was not furnished with wings, indeed it was only approachable by one very narrow and steep path, but what made it most truly romantic was that much the largest part of it was hollow'd out into an arch which penetrated quite thro' it, and was in height not less than 20 Yards perpendicular above the Water which ran thro' it: the Inhabitants on our approach came down and invited us to go in, but we refused intending to visit a much larger and more perfect one about a Mile off, we spent however some little time in making presents to their Women, ... This unusual fortification was Te Puta o Paretauhinau – The Hole of Paretauhinau. The Endeavour's artists had their sketch pads out in a trice, no doubt exclaiming over their subject, which caused the sailors to name it "Spöring's Grotto,"

... In the mean time we saw the Inhabitants of the other come down from it, Men, Women and Children about a 100 in Number and march towards us, as soon as they came near enough they waved, call'd "haromai" and set down in bushes near the beach (a sure mark of their good intentions) we went to them, made a few presents, and asked leave to go up to their heppah which they with Joy invited us to do, and immediately accompanied us to it; it was call'd Wharretouwa (Wharetaewa) and was situated on the end of a hill where it jutted out into the Sea, which was washed two sides of it...



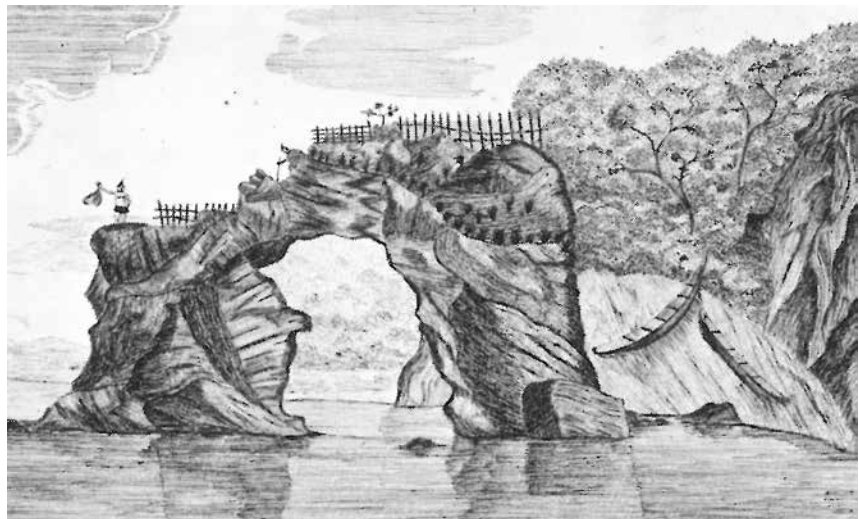
A. Charles Begg and Neil C. Begg, James Cook and New Zealand
(Wellington, Government Printer, 1969), pp. 35, 37.

Cook gave a very full description of what he saw: This village is built upon a high promontory or point on the north side and near the head of the Bay. It is in some places quite inaccessible to man and in others very difficult except on that side which face'd the narrow ridge of the hill on which it stands, here it is defended by a double ditch a bank and two rows of Picketing- the inner row upon the bank but not near the Crown but what there was good room for men to walk and handle their arms between the Picketing and the inner ditch: the outer Picketing was between the two ditches

and laid sloping with their upper ends hanging over the inner ditch, the depth of this ditch from the bottom to the Crown of the bank was 24 feet. Close within the inner picketing was erected by strong posts, a stage 30 feet high 40 in length and 6 feet broad, the use of this stage was to stand upon and throw darts at the Assailants, and a number of darts lay upon it for that purpose. At right Angles to this stage and a few paces from it was a nother of the same construction and bigness, this stood likewise within the Picketing and was intended for the same use as the other, viz. to stand upon to throw stones and darts upon the Enemy as they advanced up the side of the Hill where lay the main way into the place; it likewise might be intended to defend some little out works and huts that lay at the skirt and on this side of the hill, these out works were not intended as advanced Posts but for such of the Inhabitants to live in as had not room in the main work but had taken shelter under it.

Besides the works on the land side above described the whole Village was palisaded round with a line of pretty strong picketing run around the edge of the hill. The ground within having not been level at first but laid sloping, the had divided it into little squares and levelled each of these; these squares lay in the form of an amphitheatre and were each of them palisaded round and had a communication one with a nother by narrow lanes or little gate ways which could easily be stoped up, so that if any enemy had forc'd the outer picketing he had several others to incounter before the place could be wholly reduced, supposing them to defend every one of the places one after another.

The main way leading into this fortification was up a very steep part of the hill and thro' a narrow passage about 12 feet long, and under one of the Stages; I saw no door or gate but it might very soon have been barricaded up. Upon the whole, I looked up on it to be a very strong and well choose post and where a small number of resolute men might defend them selves a long time against a vast superior force, Arm'd in



A. Charles Begg and Neil C. Begg, **James Cook and New Zealand**
(Wellington, Government Printer, 1969), pp. 35, 37.

the manner as these people are. These seem'd to be prepared against a siege having laid up in store an immense quantity of firn roots and a good many dry'd fish, but we did not see that they had any fresh water nearer then a brook which runs close under the foot of the hill, from which I suppose they can at times get Water, tho besieged and keep it in Gourds until they use it.

Banks, who appeared to have more of an eye for the human aspect of any situation than Cook, remarked that while studying the fighting stages one of the Young Men at our desire went up to shew their method of fighting, and another went to the outside of the Ditch to act assailant, they both sung their war Song and danc'd with the same frightfull gesticulations as we have often seen them, threat'ning each other with their Weapons this I suppose they do in their attacks to work

themselves to a sufficient fury of courage, for what we call calm resolution is I believe found in few uncivilized People...

Cook also commented on another small fortification that they visited, Under the foot of the point on which this Village stands are 2 Rocks the one just broke off from the Main and other detached a little from it, they are both very small and more fit for birds to inhabit than men yet there are houses and places of defence on each of them, and that about a Mile to the Eastward of these is a nother of these small fortified Rocks which communicates with the Main by a narrow pathway where there is a small Village of the natives; many works of this kind we have seen upon small Islands and Rocks and Ridges of hills on all parts of this Coast besides a great number of fortified towns to all appearances Vastly superior to this I have described. From this it should seem that this people must have long and frequent wars, and must have been long accustom'd to it otherwise they never would have invented such strong holds as these, the erecting of which must cost them immense labour considering the tools they have to work with which are only made of wood and stone.

It is strange that with such a warlike people as these undoubtedly are no Omissive weapons are found a mong them such as Bows and Arrows, Slings etc. things in themselves so easy invented and are common in every other part of the world. The Arms they use are Long spears or lances, a Staff about 5 feet long, some of these are pointed at one end like a Serjeants Hallbard others are round and sharp, the other ends are broad something like the blade of an oar; they have another sort about 4½ feet long, these are shaped at one end like an Axe and the other is made with a sharp point; they have short Truncheons about a foot long, which they call Pattoo pattoos, (Patu) some made of wood some of bone and others of stone, those made of wood are various shaped, but those made of bone and stone are of one shape, which is with a round handle a broadish blade which is thickest in the middle and tapers to an edge all round, the use of these are to knock mens brains out and to kill them outright after they are wounded: and they are certainly well contrived things for this purpose. Besides these weapons they throw stones and darts, the darts are 10 or 12 feet long, are made of hard wood and are barb'd at one end. They handle all their arms with great Agility particularly their long Pikes or Lances, against which we have no weapon that is an equal match except a loaded Musquet.

The day after their visit to the pa sites, being the 13th, was again wet and windy. There was no temptation for Banks to go ashore to 'botanize' for we had got by much the greatest number of perhaps all the Plants that the Season afforded.

Cook was now planning to put to sea again, and had, on the 14th, the boats loaded up with Sellery, which we found in great plenty near the sea beach... the Ling-boat at the same time returned out of the River loaded as deep as she could swim with oysters. But the weather was against him, so that I could not think of sailing but thought my self very happy in being in a good port. Doctor Solander and Banks went off to get as many green plants as possible as Sea Stock for finishing sketches and so an Enormous number of all these articles came on board.

Evidently Banks and Solander split up in their quest, for Banks comments that Dr. Solander who was to Day in a Cove different from that I was in saw the Natives catch many Lobsters in a most simple manner, they walked among the Rocks at Low Water about middle deep in Water and Still felt about with their feet till they felt one, on which they div'd down and constantly brought him up...we have had them in tolerable plenty in almost every place we have been in, and they are certainly the largest and best I have ever Eat.

Cook meanwhile went in the Pinnacle and landed upon one of the islands that lies off the South head of the Bay, with a View to see if I could discover any sunken rocks or other dangers lying before

the entrance of the bay as there was a pretty large swell at this time. The Island (Poikeke) we landed upon was very small yet there were upon it a Village the Inhabitants of which received us very friendly; this little Village was laid out in small oblong squares and each pallisaded round. The Island afforded no fresh water and was only accessible on one side, from this I concluded that it was not choose for any conveniency it could afford them but for its natural strength.

Before leaving this Bay we cut out upon one of the trees near the watering place, the Ships Name, date etc. and after displaying the English Colours I took formal possession of the place in the name of His Majesty. (80)

Early the following morning a farewell assembly of several Canoes were on board, and in one of them was Toiava, who said that as soon as ever we were gone, he must go to his heppah or Fort, for the friends of the Man who was kill'd on the 9th threatened to revenge themselves upon him as being a friend to us.

At 7 a.m. Wednesday the 15th of November, 1769, the Endeavour weighed anchor with a light breeze at West and clear weather, and made sail out of the Bay steering NE for the Northeasternmost of a number of Islands lying off the North Point of the Bay, these Islands are of various extent and ly scattered to the NW in a parallel direction with the Main as far as we could see. I was at first afraid to go within them thinking that there was no safe Passage, but I afterwards thought that we might and I would have attempted it but the wind coming to the NW prevented it; so that we were obliged to Stand out to sea. So Cook sailed from the Bay which I have named Mercury Bay on account of the observation being made there.

Broken Hills

Moore and Ritchie, pp 103 - 109



Dr. Stuart Rabone, 2011. Outside Broken Hills mine.

Gold was discovered in this area in May 1893, but further prospecting revealed only a small quantity of ore and it was not until 1895 that a number of claims were pegged. The Broken Hills claim was acquired by a London syndicate in 1896 and a considerable amount of money subsequently expended on opening up a mine, laying tramways and purchasing machinery for a 20-stamp battery. However, no continuous run of payable ore could be located, and the company suspended operations at the end of 1898, before the battery had even been built.

In 1899 the claim was taken over by the Broken Hills Goldmining Company, which began extending the earlier workings and completed construction of the battery. Initial crushings proved to be very inefficient, and although a cyanide treatment plant was subsequently added, returns continued to be unpayable. Fortunately, in 1901 somewhat higher grade ore was encountered in the lower levels, and operations remained profitable for several years thereafter, but by the end of 1909 all payable ore reserves had been exhausted, and mining effectively ceased in 1910. Up to this time about 30,000 tons of quartz from the Broken Hill Mine has been processed, for a yield of over 50,000 ounces of bullion.

A limited amount of development work was undertaken in the mine during 1911 – 1912, and again in the 1930s, but no further production is recorded.

The Broken Hills Mine has the distinction of being the only one on the peninsula to have profitably worked quartz reefs found in 'young' rhyolitic rocks. It is also unusual in that a certain amount of gold and silver came from near-vertical breccia pipes, which were encountered in the upper levels. The largest of these breccia pipes widened upward like an inverted cone, and was up to 40 or 50 metres in diameter. Recent research suggests this feature represents the 'throat' of a former hot spring or geyser, and formed as a result of a hydrothermal eruption caused by the sudden release of hot water under high pressure. The temperature of the water was probably in the order of 200°C.

Most of the gold was produced from four major, northerly-trending and steeply inclined quartz reefs, which were worked mainly from the 620-metre long Battery level. Recent sampling has indicated that quartz veins in the upper levels of the mine, adjacent to the large breccia pipe, contain localised gold values of up to 14 ounces/ton and silver values as high as 425 ounces/ton.

Some extremely rare silver and gold-silver arsenic selenium sulphide minerals have also been identified in the ore, several of which had not been reported anywhere else in the world prior to 1979.

The other main mine in the area – the Golden Hills – was situated on the opposite side of the Tairua River, about a kilometre southwest of the Broken Hills workings. Following the discovery of gold at this locality in 1893, and the extraction of a few tons of ore, the claim was abandoned for several years. Interest revived, however, when higher grade ore was encountered in the Broken Hills Mine in 1901, and in 1907 the Tairua Golden Hills Goldmining Company was formed to explore the area more thoroughly. This resulted in the location of a major reef up to two metres wide, at a much lower elevation than the initial discovery, and three adits (Nos 2, 3 and 4 levels) were subsequently driven into the hillside in order to intersect it at depth. (The No. 2 level was ultimately driven as a cross-cut right through the hill). A 20-stamp battery was also erected on the eastern side of the river, requiring the ore to be transported from the mine by aerial tramway. Processing of ore began in 1910, and although recoveries were below expectation, approximately 4,000 tons of quartz

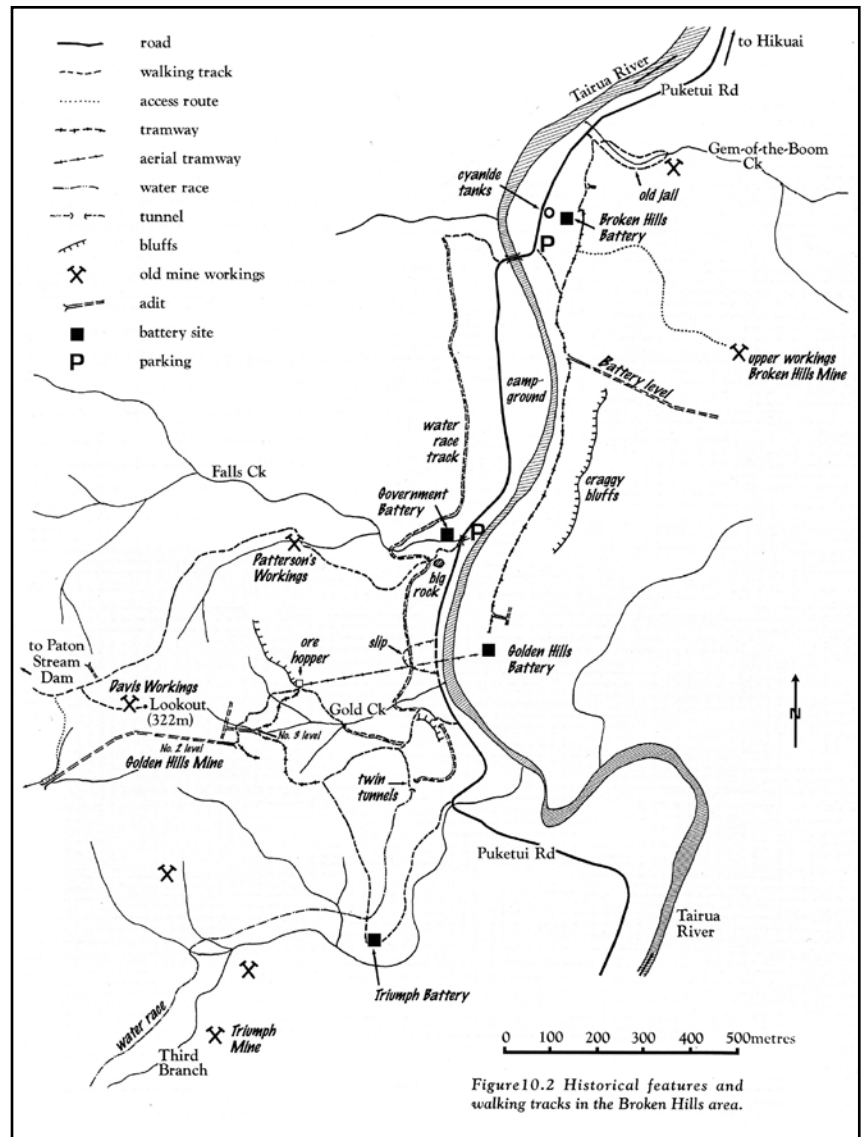


Figure 10.2 Historical features and walking tracks in the Broken Hills area.

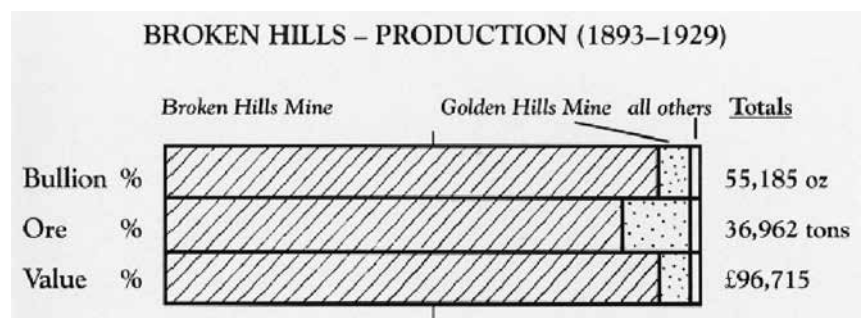
was treated, for a return of about 2,800 ounces of bullion. As such returns were uneconomic, the company ceased operations in 1913.

Mining resumed in 1920, when J.M. Agnew took over the workings on tribute and treated an additional 600 tons of quartz for a yield of 820 ounces of bullion. His efforts ended three years later. A final attempt to work the mine was made in 1929, when 30 tons of ore was taken out from the Nos. 2 and 3 levels by the Wealth of Nations Syndicate, for a return of just 13 ounces of bullion.

The only other workings of note in the area are those of the Triumph Mine, located near the Third Branch. Early prospecting activities yielded about 300 ounces of bullion, but although a considerable amount of development work was later undertaken by the Tairua Monarch Consolidated Company, no payable ore was found. The company abandoned its operations in 1911.

At least five batteries operated in the Broken Hills area between 1895 and 1911, although only two of these processed any significant quantity of ore. Work on the Broken Hills Battery commenced in 1896, and the building was finally completed in June 1900. It was initially equipped with 20 head of stamps (each weighing 850lb.) and facilities for mercury amalgamation, but because of poor gold recoveries, a cyanide plant had to be incorporated soon after. The steam engine originally used to drive all the machinery was also replaced, probably after 1901, by a pelton wheel powered by water from a 3.3 kilometre long race, which extended up to a dam on the Third Branch.

The Golden Hills Battery was completed in 1910, and continued operating until 1913. It was equipped with 20 head of stamps, three or four tube mills for fine grinding of the ore, and a complete cyanide plant. There was no provision for mercury amalgamation as the battery was designed to operate on an all-sliming process, followed by cyanide treatment. A suction gas engine, which operated on coke gas, supplied the necessary power.



Another battery – the Triumph (or Tairua Monarch), was sited on the north bank of the Third Branch. It was constructed by the Tairua Triumph (Taniwha) GMC sometime in the early 1900s, and later taken over by the Tairua Monarch Consolidated Company. The plant is believed to have consisted of two heavy stamps, two berdans and an oil engine. Around 1909 the Golden Hills Company appears to have had plans to utilise (and presumably upgrade) the Triumph Battery by constructing a ground tramway up to their mine, and diverting water from the Broken Hills GMC's race to power the plant. However, this idea was obviously abandoned in favour of building an entirely new facility further downriver. The Tairua Monarch Company was, it seems, also in the process of erecting a new mill in 1911, just before it closed down its operations.

In the 1930s the New Zealand Government erected a small treatment plant near the mouth of Falls Creek to assist with prospecting in the area. This consisted of a rock breaker, ball mill, amalgam and corduroy tables, and two berdans powered by a diesel or petrol engine, all housed in a corrugated iron shed.

Waitekauri Valley

Moore and Ritchie, pp 141 - 149



Even before the Ohinemuri area was officially opened up for gold mining in March 1875, some prospecting had been done in the Waitekauri Valley. Gold 'trails' were discovered in various streams, and several prospecting adits were put in along small quartz veins (prior to 1870), but it seems no major reefs were located at this time.

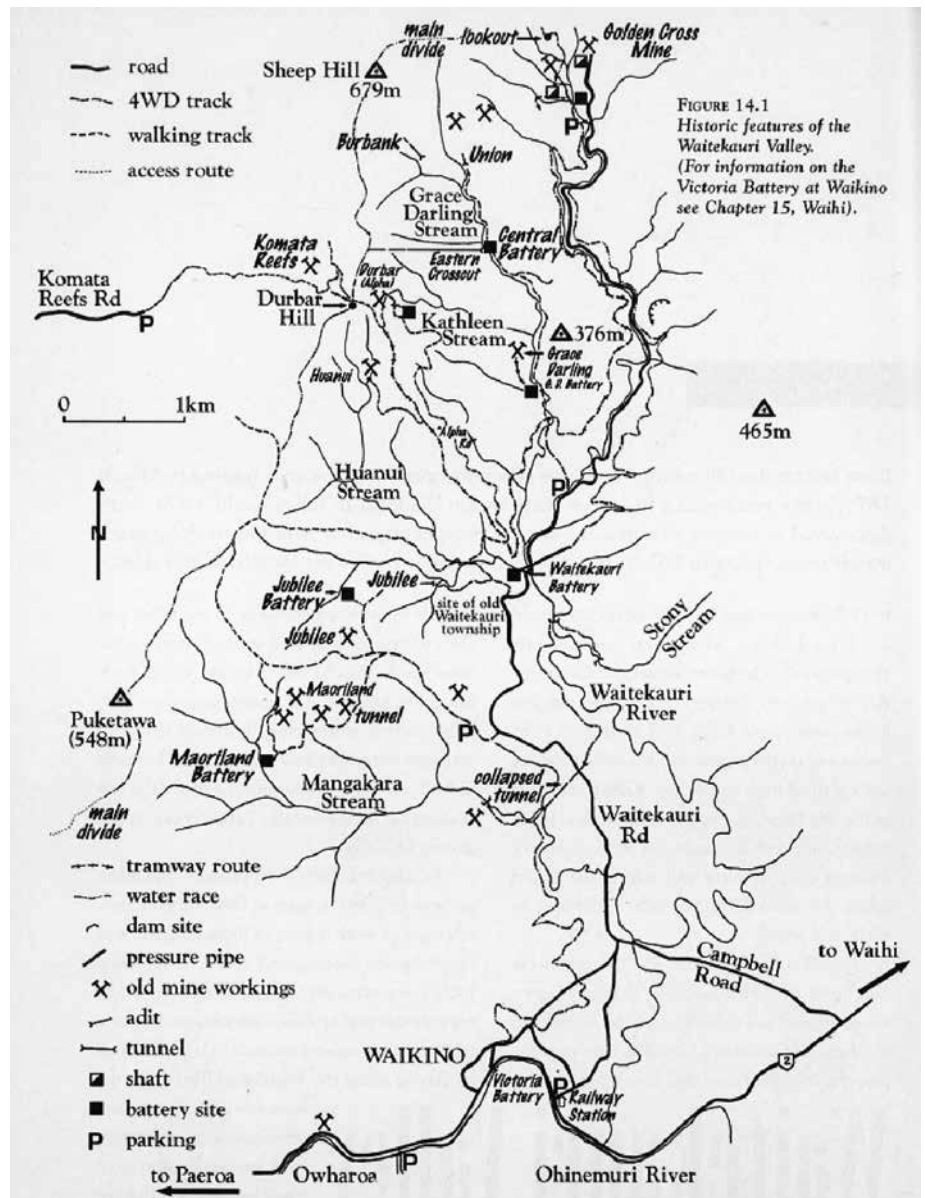
In 1875 a party of men led by Daniel Leahy pegged out several claims, which were subsequently amalgamated to form the Waitekauri Company. A 40-stamp battery was erected and the company began working a large reef that had been discovered on the property. For a while good ore was obtained from an outcrop of the reef known as the 'Big Blow', but by 1880 returns had fallen dramatically and the mine was let to tributers. Some of them did very well, two of the parties taking out about £20,000 worth of gold over an 18-month period.

The Waitekauri Mine and Battery were purchased by T.H. Russell in 1890, but operations proved unprofitable and the Waitekauri Goldmining Company of London took over the property in 1894. They carried out a considerable amount of development work in the mine, and also constructed a new 40-stamp battery on the same site as the old mill. The ore was of fairly low grade, however, and mining ceased in 1905. Tributers then worked the mine until 1912, but managed to recover only a further 1,115 ounces of bullion. Total production to this date was estimated at approximately 27,600 ounces, valued at over £50,000.

An adjacent claim – the Jubilee – was taken up by an English syndicate in 1888. Initially, the intended to work a mass of loose boulders and nearby quartz outcrop, and erected a 10-stamp battery to process the ore. But this proved totally uneconomic and activities were suspended for a while. Operations were resumed in 1891, this time by driving along the Waitekauri Reef. Over the next few years a considerable amount of exploratory work was undertaken from a new low-level adit (Jubilee adit). Very little payable ore was encountered, however, and in 1898 the mine was let on tribute.

In 1901 the company again took control and continued extending the low-level adit, which was eventually driven in for a distance of 1,370 metres, mainly along the Waitekauri Reef. Two other reefs were also intersected, and although one of them contained good sulphide ore, values were not sufficiently high for it to be mined. Nevertheless, prospecting continued for several years, before all efforts were abandoned in 1912. On total, the Jubilee Mine produced only about 1,300 ounces of bullion.

On another important mining area known as the Maoriland, located just south of the Jubilee claim, a considerable quantity of gold was obtained from surface opencuts and shallow adits between 1878 and 1889. About 1894, the Young New Zealand Goldmining Company put in a low-level adit to test the Maoriland reef system at depth. Despite encouraging results, no payable ore was encountered, and their efforts ended several years later. A Waihi syndicate then took over the property and erected a small battery, but was unable to make a profit and the mine closed down again. Operations resumed in 1908, and the workings were considerably extended, resulting in the discovery of several small blocks of ore which yielded some £7,000 worth of bullion. By 1914, however, the known ore reserves had been exhausted and the mine once more closed down. A final attempt to work the area was made by Maoriland Consolidated Ltd in 1925, but despite expending a large amount of money, no sizeable ore body could be located and the company went into liquidation in 1929. Total recorded output from the Maoriland area was about 5,400 ounces of bullion, valued at £13,450.



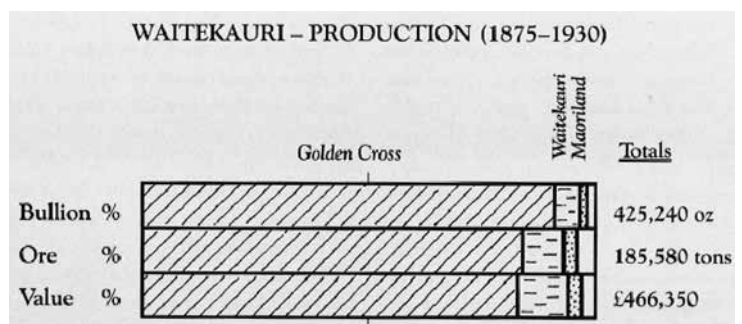
The most productive mine, for which the valley is probably best known, was the Golden Cross. A gold-bearing reef was discovered on this claim in September 1892, and shortly afterwards the claim passed into the hands of T.H. Russell, who subsequently formed the Golden Cross Goldmining Company. A battery was erected, and the first 600 tons of ore yielded 1,630 ounces of bullion. In 1895 the Waitekauri Goldmining Company gained control of the property and over the next five years they carried out a great deal of work on the Golden Cross and other reefs (Empire and Realm) in the area, opening up seven levels and sinking two main shafts. Production reached a peak in 1900, but by 1902 it had declined dramatically and two years later the company was forced to close the mine.

In 1906 the New Golden Cross Company acquired the mine and continued working it until 1920, processing a further 3,340 tons of ore for a return of about 4,900 ounces of bullion. Total production, from 1893 to 1917, is estimated to have been about 386,330 ounces from 155,000 tons of ore – an average grade of 0.5 ounces of gold and two ounces of silver/ton.

Since 1980 the Golden Cross area has been actively explored by Amoco, and subsequently by Cyprus Minerals Ltd. More than 30,000 metres of core drilling were completed between 1981 and 1990, resulting in the discovery of a new ore zone on the Empire Vein system, which had earlier been investigated during the life of the Golden Cross Mine but not worked. The new mine, which started production in December 1991, has reserves of about three million tonnes of low-grade ore (averaging three gm/tonne gold) which will be mined by opencast methods, and up to 2.7 million tonnes of higher grade mineralisation (averaging seven gm/t gold) mineable by underground methods. Present production is in the order of 100,000 ounces of gold and 350,000 ounces of silver per annum. In 1993 the mine was taken over and is now operated by Coeur Gold NZ Ltd.

There were several other mines in the Waitekauri Valley situated between the Golden Cross and Maoriland claims, including the Waitekauri Union, Burbank, Durbar (or Alpha), Huanui and Grace Darling. All of these workings were opened up between 1889 and 1901, but had mostly been abandoned by 1909, having produced less than 2,000 ounces of bullion between them. Over this period some remarkably long adits were put in with the intention of intersecting a northern extension of the Komata Reefs system to the west. The Waitekauri Union low-level was driven for about 520 metres, and the Burbank adit for 335 metres, but neither encountered any significant veins. Most impressive, though, was the Eastern Crosscut (Te-ao-Marama Tunnel) which extended for over a kilometre and almost reached the Komata workings.

The main gold-bearing reefs in the valley generally consisted of both quartz and calcite. Some of the calcite bodies were quite large (up to 25 metres wide), and several natural caves, one of them 60 metres long, were encountered on the Golden Cross Reef where the calcite had been dissolved away. The ore was largely confined to steeply inclined shoots along the main reefs or, in the case of lesser veins, to small, isolated pockets. Gold occurred mainly in the form of electrum, associated with pyrite, marcasite and argentite (silver sulphide), but there was some free gold. Overall, the gold to silver ratio ranged from about 1:3 to 1:7.



At least nine different batteries were erected in the Waitekauri Valley between 1876 and 1905, although only two of these continued operating for more than a few years. The largest, and most important was the Waitekauri Battery (also known as Brown's), situated near the confluence of the Huanui Stream and Waitekauri River. Constructed in 1876, it contained 40 head of stamps driven by water power, the water being supplied from a major race beginning some four kilometres further up the valley. In 1890 the battery was remodelled, and in about 1892 connected to the Komata workings by a three-kilometre long tramway. After 1894 a new 40-stamp battery, complete with cyanide plant, was built on the same site, and a tramway constructed to link it to the Golden Cross Mine. Ore-drying kilns appear to have been added at this time too. This mill most likely remained in operation until 1917.

The Jubilee Battery consisted of 10 stamps, five berdans and two grinding pans, all driven from a steam engine. Ore-roasting kilns were also used to break down sulphides in the quartz prior to crushing. After 1891 the battery was linked to the upper Jubilee workings by an aerial tramway, but in later years most of the ore appears to have been transported to the Waitekauri Battery for processing. A nine-stamp battery was also set up on the Maoriland claim in 1905 or 1906 and connected to the low-level adit by a combined ground and aerial tramway. All the remaining machinery was removed in 1974 and is now housed at the Tauranga Historic Village.

There were at least four batteries in the Grace Darling Valley. The first, erected by the Grace Darling Goldmining Company, commenced crushing in 1894, but soon proved unsatisfactory. Another constructed by the Alpha GMC on a steep spur below the Alpha (Durbar) mine workings, processed only 960 tons of ore before being dismantled. It may have been shifted further down the valley to the Grace Darling claim, where a new 10-stamp mill began crushing in February 1900. Finally, in 1905, a smaller five-stamp battery was erected somewhere on the Grace Darling claim.

The only other battery of any importance was that erected on the Golden Cross claim about 1893, which contained 10 head of stamps and an amalgamation plant. It became obsolete once the tramway had been laid to the Waitekauri Battery, and probably closed down by 1904.

Golden Cross mine open pit, 1997. Photo: Mark Samson



Victoria Battery

Doreen McLeod, 2012

Imagine the roar of 200 stamps pounding through hundreds of tonnes of ore. Many old time residents don't have to imagine, they remember.

In 1896 the construction of the Victoria battery at Waikino began, and it grew to be the largest quartz crushing plant for gold extraction in Australasia. The battery could crush more than 800 tonnes of ore each day to the consistency of sand, and was in use until the last gold pour in October 1953.

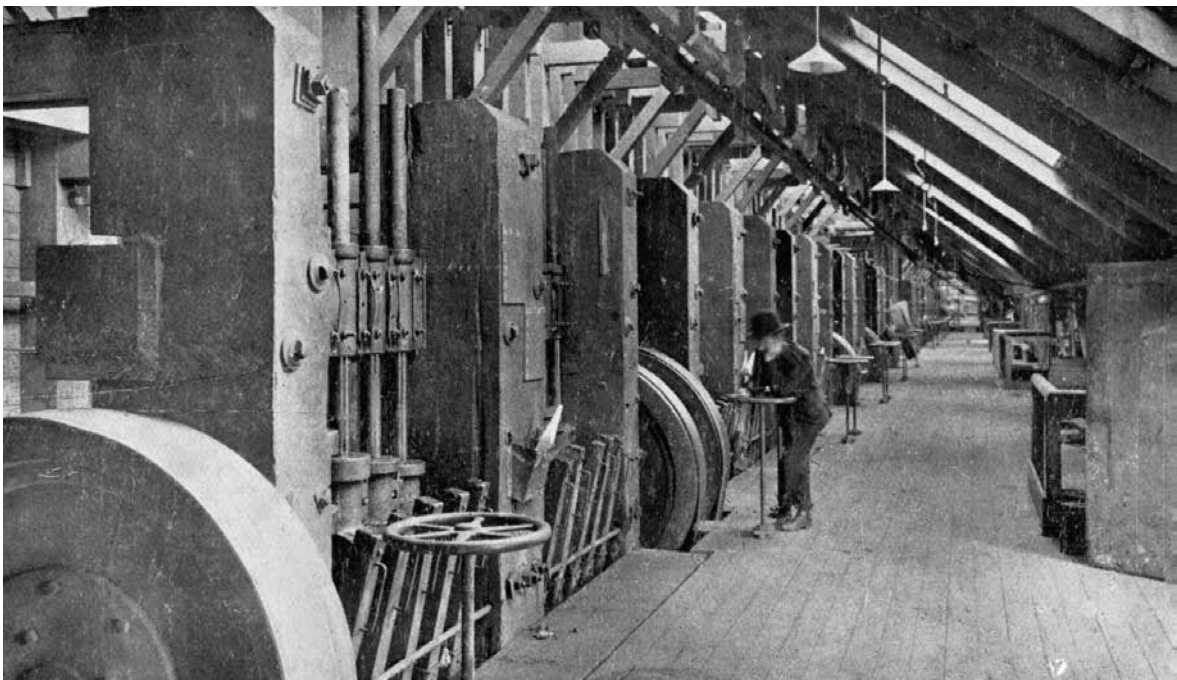
Ore had previously been treated at the Waihi Battery on Union Hill, but with the adoption of the cyanide process that dramatically increased gold extraction, as well as the swift development of Martha Mine, the old treatment plant was inadequate.

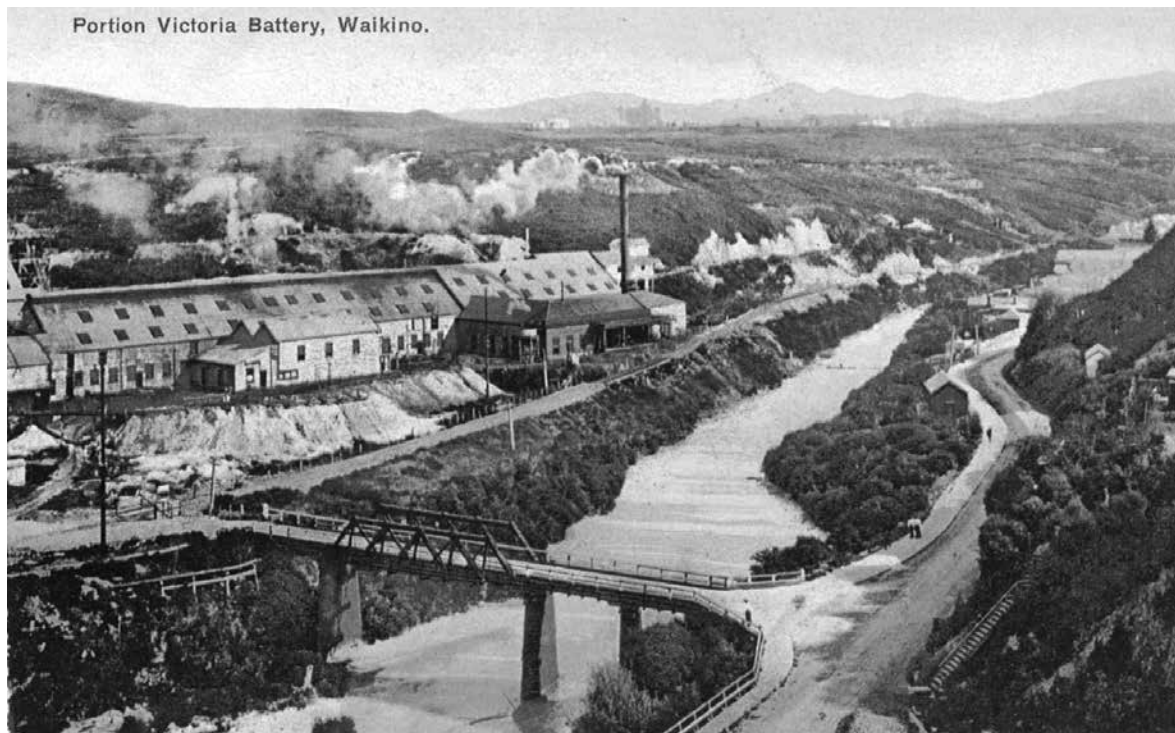
The battery was constructed on a two hectare site on the south bank of the Ohinemuri River, a prime site due to the availability of water from the Ohinemuri and Waitekauri Rivers for processing ore. The battery employed about 200 people in average throughout its life, and included a blacksmith and foundry in addition to the ore treatment plant.

An eight kilometer tramway was built to transport the quartz rock from the mine to the battery. The rattle of forty, un-sprung, rigid, four-wheeled laden trucks, pulled by a puffing locomotive going full speed through Waihi created quite a din, but nobody seemed to mind.

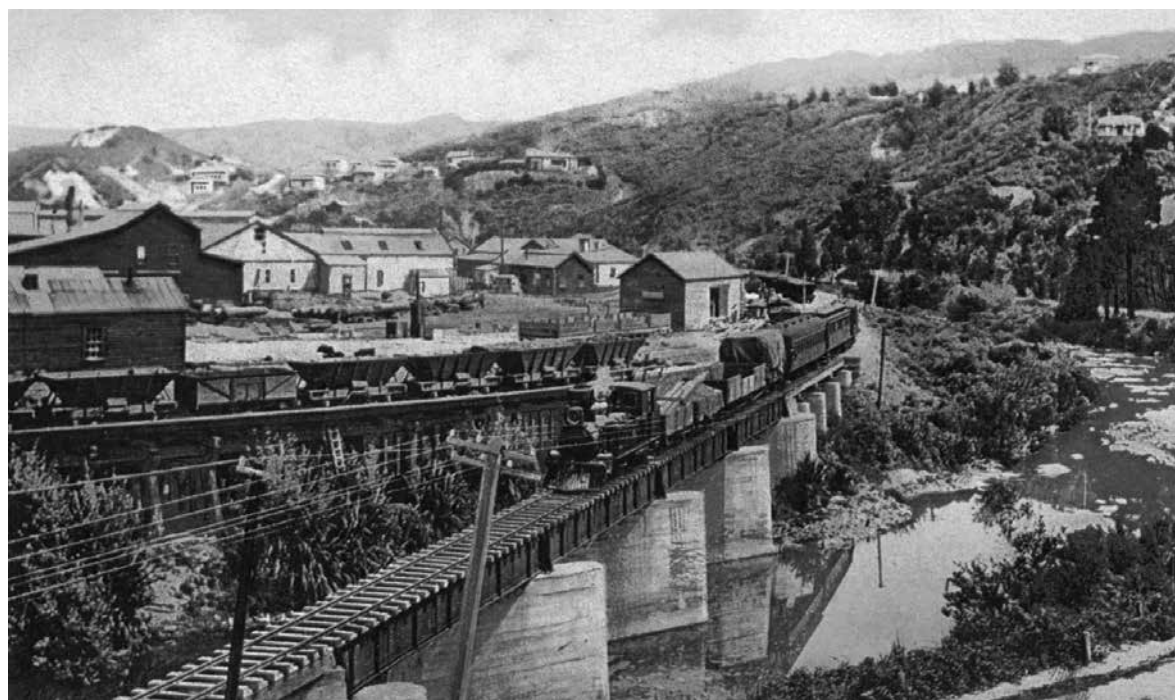
Buildings and machinery have long since been dismantled, but the remains of the interlocking hexagon concrete supports for the cyanide tank foundations are unique to the Victoria Battery. The ore roasting kilns and the ore extraction tunnels are still accessible, as is the Power Transformer House, home to an impressive display of mining relics and photographs.

Stamps in Victoria Battery, Waikino. 200 Stamp Mill, Waihi G.M.Co.



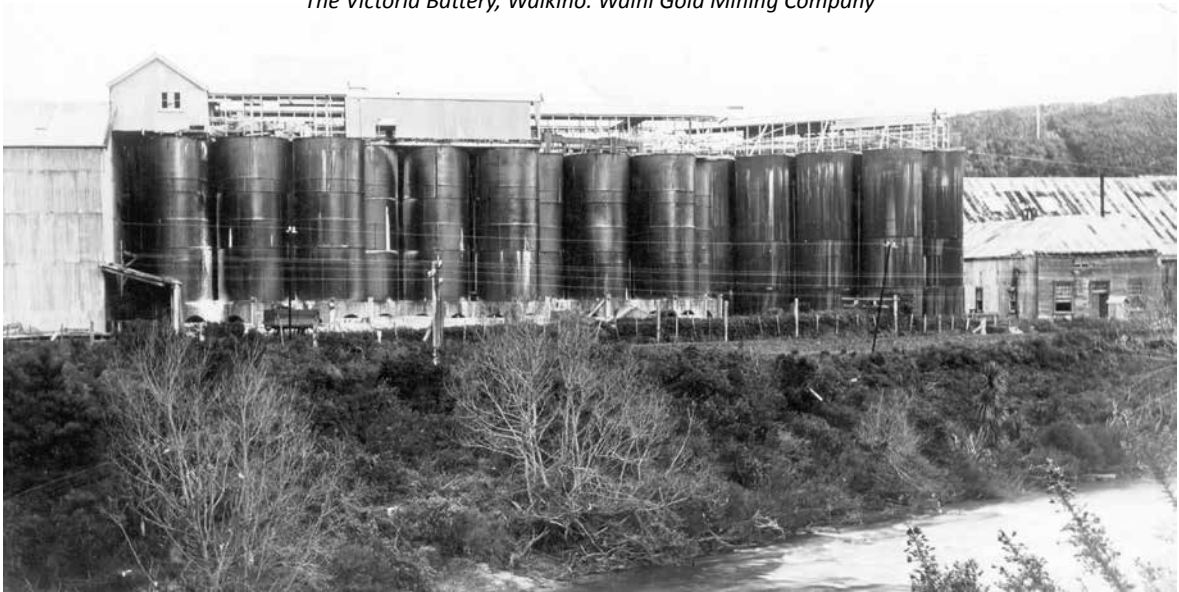


Portion Victoria Battery, Waikino. c1908





The Victoria Battery, Waikino. Waihi Gold Mining Company

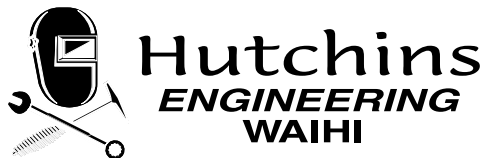


Main storage tanks, Victoria Battery, Waikino



Quartz train arriving at Victoria Battery, Waikino. c1908

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