PETER FERGUSON AND HIS NEW ERA: THE SECOND BATTERY AT WAIORONGOMAI

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Abstract: Peter Ferguson was an experienced miner who did not take kindly to criticism. After spending years mining at Thames he prospected Te Aroha mountain before it was opened to mining, but after finding that he had not discovered gold, as he had believed, he turned to prospecting nearby. He then spent most of his life as a mine manager at Waiorongomai, where he was prominent in the local community.

As Waiorongomai was handicapped by having only one treatment plant, investors, sometimes assisted by Ferguson, made several attempts to erect a second one. After these attempts failed, he formed a private New Era syndicate to erect a plant. Being under-capitalized, it struggled to meet the cost of constructing a road and a branch incline tramway to its site, far up the Waiorongomai Stream; some county councillors, led by Josiah Clifton Firth, who was suspected of trying to retain his battery monopoly, opposed providing financial assistance.

The most important member of Ferguson's small syndicate was George Fraser, an Auckland engineer whose skills were vital for providing the appropriate machinery for a plant that used a different process to the norm. Visitors were impressed with the new plant in its dramatic setting and miners and investors held high hopes for it, but were quickly disappointed.

After his plant closed after working for only a short time, Ferguson went to Glasgow, where he formed the Ferguson Syndicate Company with the inventors of the new cyanide process. After two years' absence seeking capital he returned, acquired a large area of mining ground, and erected a second plant, once again raising high expectations. The cyanide process was not, after all, used, and after his new plant quickly proved itself to be unsuccessful, the company collapsed.

After leaving Waiorongomai, Ferguson continued to experiment with new treatment processes, and also sought copper in Northland, in neither case with any success.

MINING EXPERIENCE

Peter Ferguson was born in Kirkintulloch, Dumbartonshire, Scotland, in 1839, the son of Margaret and John, who was recorded on Peter's marriage certificate as being a manager of a calico printfield and on his

death certificate as a mine manager, probably a mistake by his second wife. After being a cadet in the Customs Department of the Royal Burgh of Ayr, Ferguson came to New Zealand in 1863. In October the following year, after three years of marriage his wife Margaret died, aged 26. His first known involvement in mining began on 13 January 1868, when he took out a miner's right at Thames. For the next 12 years, he mined at Thames, Tapu, Coromandel, Ohinemuri, and Kennedy's Bay. In July 1875, when working in the Cure, a Thames mine, a rock fell on him, causing extensive bleeding requiring hospitalization. He obtained 'several payable crushings', meaning over 20z to the ton, from the Blue Bells lode at Tapu. When mining declined in early 1879, he attempted, unsuccessfully, to obtain contracts to construct part of a main road and part of the Shortland railway line. With other leading miners he tributed in the Whau in 1877, narrowly missing finding the good ore uncovered two years later, but obtaining such a good return that their tributers' rights were bought out by the company.

¹ Marriage Certificate of Peter Ferguson, 24 October 1883, 1883/2855; Death Certificate of Peter Ferguson, 18 June 1905, 1905/2437, BDM; ancestry.co.uk.

² New Zealand Herald, 21 June 1905, p.4.

³ Death Certificate of Margaret Ferguson, 20 October 1864, 1864/12125; Marriage Certificate of Peter Ferguson, 24 October 1883, 1883/2855, BDM.

⁴ Thames Warden's Court, Register of Miners' Rights 1867-1868, no. 3339, BACL 14358/1a, ANZ-A.

⁵ For examples, see Thames Warden's Court, Thames Claims Register 1868, folios 208, 375, BACL 14397/1a; Thames Claims Register 1868-1869, no. 1467, BACL 14397/3a; Thames Claims Register 1869, no. 1823, BACL 14397/4a; Coromandel Warden's Court, Instruments, Caledonian No. 2, 1823/37, AAAE 15171/2a; Thames Warden's Court, Warden's Notebook February-June 1871, Hearing of 2 March 1871, BACL 14457/2a; Register of Grahamstown Claims 1878-1880, nos. 628, 649, BACL 14397/12a, ANZ-A; New Zealand Herald, 18 November 1875, p. 2; Thames Advertiser, advertisement, 21 November 1876, p. 2, 12 October 1877, p. 2, Waitekauri Correspondent, 21 February 1879, p. 3.

⁶ Thames Star, 18 July 1875, p. 3.

⁷ Own Correspondent, 'A Visit to Tapu', *Auckland Star*, 30 January 1897, p. 5.

⁸ Thames Advertiser, 3 April 1879, p. 3, 9 April 1879, p. 2.

⁹ F.W. W[eston], 'Thames Reminiscences', New Zealand Herald, 27 March 1923, p. 9.

As was usual, he also traded in shares. In 1871 he sued Francis McCormick¹⁰ over a failed share deal and sought £400 in damages:

On the night of the 18th of May I was at the battery, when I told him there was an opportunity for him to sell his Alburnia shares. He asked me what they were selling at, and I told him the quotation was £2 7s 6d. He said he would sell 20 at £2 8s, and if I could find a customer he would give me a commission. I said if I thought I could make anything out of them I would buy them for myself. I saw him next morning, when I asked him to sell all his Alburnias – thirty-three in all. I said I had also thirty-three, and if I bought off him I should buy to sell. He said he would sell me 20 of the shares at £2 8s. I agreed to buy, and asked him if he would take a cheque as deposit, which I had received for some Alburnia shares I had sold the day before. The cheque was for £10. McCormick consented. I then asked him if he would sell the remaining 13 shares. He said he might if he got a price – what would I give for them? I said £2 12s, and run the risk. He told me I could have them. I then gave him a deposit of half-a sovereign. I went next day to McCormick with a man named Littlejohn, when I asked him if it was true that he intended to break the bargain. He said that it was so, and that I had taken him in, as the shares were rising. I told him I was there to pay the balance, £71 16s. He said he would not take the money unless I paid at the rate of £4 per share. I said I should stick to my part of the agreement and looked for him to do the same. On the Saturday Alburnia shares were rising. I could have got £9 or £10. The first offer I got on Thursday was £2 5s. I refused, but sold 25 at £2 8s 6d. The shares continued to rise on the Friday, and on Saturday I could have got £10 for them. I never told McCormick the shares were going down. I told him there was now a bit of a spurt on, but I believed that they would come down. I don't think I told him that Hannaford was buying Alburnias that afternoon at 35s. I never went into McCormick's room on Thursday morning and put a cheque of £10 into his hands, saying, "I have sold 20 shares; there is the deposit."

Under cross-examination, he was 'quite clear that on the Thursday night I told McCormick I had sold 25 shares of my own for £2 8s 6d. I was in no hurry to buy from McCormick. It was I who said I would see him in the morning. I am not a sharebroker: I buy and sell shares for myself'. Michael

¹⁰ See Marriage Notice, New Zealand Herald, 27 August 1873, p. 6; Thames Advertiser, 18 June 1888, p. 2, 15 April 1892, p. 2, 9 November 1893, p. 3, advertisement, 11 November 1896, p. 1; Thames Star, 8 November 1905, p. 2, advertisement, 17 April 1909, p. 3.

Hannaford, a mining agent,¹¹ 'deposed that on the 18th May Alburnia shares were from £2 to £3. The next day the price was £4. On next day (Saturday) they sold at £5 10s, and then went up very rapidly'.

Francis McCormick 'denied the allegations in all their particulars', and gave evidence that Ferguson 'undertook to find a purchaser for his shares, for which he was to be paid a commission of sixpence in the pound'. Ferguson had told him he knew someone who wanted to buy 21 Alburnias and wanted to sell McCormick's 13 shares along with his own eight he thought he could get £2 12s for them. McCormick agreed because he thought the market was going down. 'He said to Ferguson, "Don't let the shares go for less that £2 8s," and anything more than that he would be entitled to receive. He offered the shares at £2 8s, because Ferguson had told him they were no good'.

The only other man to give evidence recalled Ferguson telling McCormick he had sold his shares and that he could sell another 20 or 21 for £2 10s.¹² After Ferguson won his case, the jury awarded him only one shilling, but 'by director of his Honor, and in consequence of an error made by the jury in one of the issues, the jury gave damages as nil'.¹³

Being first elected a director of a mining company in 1871,¹⁴ he did not become another until February 1880, of another Thames one, the New Whau. He was appointed, along with Francis Daykin, its manager,¹⁵ to oversee contractors working the mine.¹⁶ Late in March, a mining correspondent for the *Thames Star*, James Philp, who later that year became its reporter at Te Aroha and editor of the *Te Aroha Miner*,¹⁷ doubted the value of the ore he was shown by Ferguson and another miner, William Tregoweth.¹⁸ His suspicions had been aroused because Daykin had refused access, and his editor warned that 'unless authentic information' was provided 'we shall be compelled to state some facts which may be anything

¹¹ See Daily Southern Cross, 18 May 1871, p. 2; is he identical with New Zealand Herald, 20 June 1891, p. 4?

¹² Supreme Court, Daily Southern Cross, 27 September 1871, p. 3.

¹³ Supreme Court, *Daily Southern Cross*, 28 September 1871, p. 3.

¹⁴ Advertisement, *Daily Southern Cross*, 22 December 1871, p. 1.

¹⁵ See *Thames Star*, 22 May 1880, p. 2, 9 August 1881, p. 2.

¹⁶ Thames Advertiser, 12 February 1880, p. 3; Thames Star, 18 February 1880, p. 2.

¹⁷ See Thames Advertiser, 15 January 1881, p. 3; Observer, 21 April 1906, p. 4.

¹⁸ See Cyclopedia of New Zealand, vol. 7, p. 58; Observer, 24 October 1908, p. 21.

but pleasing to many concerned'. ¹⁹ In mid-June, Daykin resigned because of illness, and was replaced by Ferguson, who had been assisting to manage it for some time. According to the *Thames Advertiser*, Ferguson, a former tributer, possessed 'a thorough knowledge of the ground', having been connected with the field, 'and especially with the locality in which the Whau is situated, since the opening days'. ²⁰

Early in July, Ferguson's horse rolled on him when he was returning from the mine late at night, breaking his arm.²¹ As a consequence, the directors decided he would not be able to continue as manager and replaced him by Charles Henry Wilson,²² who later would be a mine manager at Waiorongomai.²³ On 24 July, Philp wrote that Wilson had got the mine 'in ship-shape order, and under his control I trust that this hitherto grossly mismanaged mine will have a mead of prosperity'.²⁴ Two days later, the *Thames Star* reported that Ferguson,

offended at some remark in our column on Saturday's issue, thought fit to assault a member of our staff, Mr James Philp. Without warning this gentlemanly mine manager struck Mr Philp on the face and afterwards further molested him. If Mr Ferguson has anything to complain of in our columns the editor or publisher are the proper persons to apply to for explanations or information, but we shall not allow Mr Ferguson or such as he to assault or insult any member of our staff. As to the question whether the remark re the management of the Whau mine was called for or not is solely one of opinion, it will take a much greater authority than Mr Ferguson to cause us to alter that opinion or to prove to us that we have exceeded our duty.²⁵

The *Thames Advertiser* described this as an 'absurdly trivial assault', ²⁶ reflecting not so much the nature of the offence as the constant war of words between the rival newspapers.

¹⁹ Thames Star, 25 March 1880, p. 2.

²⁰ Thames Advertiser, 17 June 1880, p. 3.

 $^{^{21}}$ Thames Advertiser, 9 July 1880, p. 2; Thames Star, 9 July 1880, p. 2.

²² Thames Advertiser, 1 March 1881, p. 3.

 $^{^{23}}$ See $\it Thames\, Advertiser, 20$ February 1882, p. 3, 27 July 1882, p. 3.

²⁴ Thames Star, 24 July 1880, p. 2.

²⁵ Thames Star, 26 July 1880, p. 2.

²⁶ Thames Advertiser, 28 July 1880, p. 2.

The *Thames Star* report of Philp's evidence in court explained he had been standing in the back bar of the Governor Bowen Hotel on the evening of Saturday 24 July when Ferguson 'without comment struck complainant on the cheek, the blow was more severe to complainant as he was suffering from a gum-boil. But not satisfied with this he took the complainant by the coat collar and shook him'. Ferguson said nothing during this assault, but half an hour later came up and talked 'indirectly' to him, saying 'I'll do it again, but in a different way next time'. After the assault was confirmed by a witness, Ferguson 'admitted having touched the complainant, but he was so excited he could not remember all that took place. If it had been half an hour, or a longer time, before he saw Philp, he would probably have said nothing about the matter. He would not apologize to Philp because he thought he was the injured party'. The magistrate, Harry Kenrick,²⁷ noting that the act had been done in the heat of temper and regretting Ferguson 'did not think fit to apologize', fined him 5s and costs and bound him over to keep the peace.²⁸

The *Thames Advertiser*'s much longer report revealed that Philp, aged 19, had been a mining reporter for nearly five years despite not being 'a practical miner'. Although he had not visited the mine after Wilson took it over, he had been told by an unnamed source that the management had improved since Ferguson was replaced. 'He was quite satisfied that the information was reliable', but admitted that his comment 'might have a damaging effect on the late manager'. The assault took place half an hour after the newspaper was published, and according to a witness, 'Ferguson's lawyer claimed that 'the assault had been nothing more than a gentle tap on the cheek. The report in question was a gross attack on a maimed man', referring to Ferguson's broken arm. 'Defendant was so annoyed at such a gross insult on him that he laid hands on him, but in a gentle manner, his object in doing so being to call Philp's attention to the matter'.

Ferguson stated that he had

caught hold of Philp and dragged him over to the table, and asked him what he meant by writing it. Philp said he would write what he liked; it was purely a matter of business. He was so excited that he really did not know whether he had struck Philp, but he

²⁷ See paper on his life.

²⁸ Magistrate's Court, *Thames Star*, 29 July 1880, p. 2.

intended at the time to do so. He refused to apologise when asked to do so, as he considered that he was the injured party.

According to this report, Kenrick fined him 5s and costs but 'did not think it was necessary to bind over defendant to keep the peace towards the complainant', a version confirmed by court records.²⁹

A BELLICOSE PERSONALITY

Ferguson also provoked some dramas at Te Aroha and Waiorongomai. The first occurred in August 1883 when the county council discussed constructing a road to Waiorongomai from the landing. Because of difficulties raised by landowners, the matter was deferred, one councillor, Henry Ernest Whitaker, 30 being 'asked to confer' with the engineer and report to the next meeting.³¹ Ferguson claimed Whitaker wanted to divert it through a particular section for his own personal benefit. When Whitaker, who had not been present, at the subsequent meeting objected to the 'serious reflections' upon his honour, Ferguson admitted his claim was based on what he had been told by an unnamed person. Whitaker produced evidence to support his denial that he had colluded with one miner and landowner, Denis Murphy, 32 for personal gain, and stated the matter had 'been got together for a purpose' and that Ferguson 'was a leader in it'. Ferguson at first denied but then admitted that he had arranged the circulation at Waiorongomai of reports of his charge, which Whitaker condemned as a 'malicious act' by one who 'was not over truthful in making representations' to the council. After all the councillors supported Whitaker, Ferguson admitted that 'he had been led astray. He would admit he had been deceived'. Whitaker immediately quoted one of those whom Ferguson claimed had deceived him as stating that he had never made the statements Ferguson attributed to him, prompting Ferguson to declare, 'I will have to withdraw what I have said, as I have been misled'. He then laid an apology on the table:

²⁹ Police Court, *Thames Advertiser*, 30 July 1880, p. 3; Thames Magistrate's Court, Criminal Record Book 1879-1881, Hearing of 29 July 1880, BACL 13736/39a, ANZ-A.

³⁰ See paper on Harry and Charles: Henry Ernest Whitaker and Charles Stanislaus Stafford.

³¹ Piako County Council, Waikato Times, 16 August 1883, p. 2.

³² See paper on his life.

I, Peter Ferguson, having been led astray regarding the steps taken to fix the road to Murphy's landing, reflecting on Mr Whitaker's action in the matter, beg to withdraw any statements I have made, and express my regret that I have been so misled, and request the publication of this letter.

His apology was accepted, and published in the Hamilton and Te Aroha newspapers.³³ Ferguson then wrote to the *Waikato Times* about its 'somewhat detailed account', claiming that his motives had been misinterpreted because he had only wanted to discover what agreements had been made with landowners:

This, then, is a true, ungarbled statement of the matter as it stands. I have no interest, and if I had I have no desire to conceal or gloss over anything. I will always act in accordance with my convictions, and if at any time they should lead me astray, or cause me to hurt the feelings of any sensitive and guileless person, I shall be the first to express my regret, and tender him such apology as will fully compensate him for his outraged feelings.

He had been endeavouring to see that justice was done to a man who had purchased land from him; 'to heap abuse and detraction upon the name of Mr Whitaker could never have been my intention'. A copy of this letter was sent to the *Te Aroha News*, which Whitaker, its proprietor, promised to publish when space permitted, but after it was published in the *Waikato Times* he decided there was no point in reprinting it. Ferguson then sent it plus Whitaker's explanation to the *Thames Advertiser*, requesting their publication to 'meet the inconvenience I have suffered through the caprice of our vacillating newspaper proprietor'. As

Whitaker did not respond to this jibe, and Ferguson continued to see conspiracies. In December 1884, the *Te Aroha News*, no longer owned by Whitaker, reported his contribution to a meeting at Waiorongomai called to discuss forming a borough:

³³ Waikato Times, Piako County Council, 13 September 1883, p. 2, 18 September 1883, p. 2;
Te Aroha News, 15 September 1883, pp. 2-3, 22 September 1883, p. 3.

³⁴ Letter from Peter Ferguson, Waikato Times, 25 September 1883, p. 2.

³⁵ Letter from Peter Ferguson, *Thames Advertiser*, 5 October 1883, p. 3.

Mr P. Ferguson then addressed the meeting at considerable length, airing a list of grievances with regard to the action of Te Aroha towards Waiorongomai in the past, and which were the outcome of a fertile imagination, and tending to stir up a party and hostile feeling between the two places, which, to say the least, displayed anything but good taste on the part of the gentleman referred to. Even those most opposed to the adoption of a form of self-government to include both townships, afterwards expressed their strong disapproval of said speech. Amongst the absurd statements he made were the following, "That the steamer landing place at Te Aroha had been changed from Rolleston Street to its present position, to the great inconvenience of residents in Waiorongomai simply to please certain people at Te Aroha." Everybody knows that this change was one of necessity. the steamers being unable to proceed past the bridge now under construction whilst work is in progress there. Another absurd statement was - "That when it was proposed to form the combined borough some eighteen months ago certain people thought to give Te Aroha seven members, but Waiorongomai only two." Another statement made by Mr Ferguson was "That the certain people did all in their power to prevent Mr T[homas] Lawless³⁶ ... getting a [publican's] license and that a petition was got up for that purpose" (With regard to this last statement we have made diligent inquiry amongst Te Aroha residents, but can find no-one who has ever seen or heard of such a petition as that referred to). We cannot help expressing our regret that Mr Ferguson should take such an apparent delight on every possible occasion of referring to grievances (be they real or imaginary) that are long since past, and which can result in but one direction, viz, that of fostering a spirit of hostility betwixt two townships whose interests are so identical.³⁷

Another example of his personality was revealed in October 1886, when he was sued by two timber cutters for breach of contract over cutting 500 tons of firewood at 2s 6d per ton. The evidence proved that the plaintiffs had done a bad job, but the magistrate considered they had not been 'fairly dealt with' by Ferguson.

From his own statements, having since agreed to pay men 5s 6d and 6s 6d per ton for cutting wood, the plaintiffs could only have obtained a mere "scraping" at the work, paid at the rate of 2s 6d per ton. If dissatisfied with the manner in which the work was

³⁶ See paper on his life.

³⁷ Te Aroha News, 6 December 1884, p. 2.

being done, he should have paid them for what they had done and discharged them, instead of keeping them hanging about.³⁸

Even the circumstances of his remarriage on 24 October 1883, at the age of 44, to Jean Miller, a Scottish woman 15 years younger than himself, reflected his personality. Was it just coincidence that he delayed it until 20 years almost to the day after his first wife's death?³⁹ That the wedding had been long-delayed was indicated by an item of 'Thames Tittle Tattle' in the *Observer*: 'Peter Ferguson, a well-known Te Arohaite, and Miss M., of the Thames, are going to run their heads into the matrimonial noose. You have been very long-winded over it, Peter, but better late than never'.⁴⁰ This implies that their relationship commenced before he left Thames for Te Aroha. As no children were born to either wife, their humanizing influence was lacking in his life.

THE TE AROHA GOLDFIELD

On 5 October 1880, immediately after unsuccessfully requesting a prospecting subsidy from the government,⁴¹ Ferguson left Thames to prospect 'the supposed goldfield at Te Aroha'.⁴² He went with a mate, David Martin McIntyre,⁴³ with 'a fixed object in view', being 'cognisant of a spot at which auriferous indications have been met with'.⁴⁴ As it did not contain what he imagined, for it was next reported that they had found loose gold in

³⁸ Magistrate's Court, *Te Aroha News*, 23 October 1886, p. 2.

³⁹ Notices of Intentions to Marry, folio 223, entry dated 23 October 1883, Births Deaths and Marriages, BDM 20/28, ANZ-W; Marriage Certificate of Peter Ferguson, 24 October 1883, 1883/2855, BDM; *Thames Star*, 27 October 1883, p. 2; *Auckland Star*, 7 July 1945, p. 9.

⁴⁰ 'Thames Tittle Tattle', Observer, 27 October 1883, p. 8.

⁴¹ Peter Ferguson to Minister of Mines, 4 October 1880, Register of Inwards Correspondence, Mines Department, MD 3/1, 80/918, ANZ-W [the original letter and any reply was destroyed by an over zealous civil servant; there is no evidence of a subsidy being granted].

⁴² Thames Star, 4 October 1880, p. 2.

⁴³ See *Thames Advertiser*, 7 January 1875, p. 2, 11 January 1876, p. 3, 12 June 1878, p. 3; *Thames Star*, 26 May 1881, p. 2; *Waikato Times*, 21 November 1885, p. 2; *Ohinemuri Gazette*, 18 October 1902, p. 4.

⁴⁴ Thames Star, 7 October 1880, p. 2.

several creeks and, with others, had pegged out various claims, mainly close to the Prospectors' Claim, which they were 'vigorously prospecting'.⁴⁵ On 18 October, he wrote to Kenrick:

I beg to put on record the following statement re the Te Aroha gold find. It is now over a year since I had a prospecting tour in the Te Aroha district. I went up the south East side of Te Aroha range Crossing the ranges towards Wairakau. I got sufficient encouragement by the prospects to make me believe that the ranges were auriferous - and determined to prospect the district -I made application in writing to the Waste Land Board for a site for a Landing store opposite Morgan's [Mokena Hou's] house⁴⁶ the Board refused the application, had the site been granted I would have had a store built, and as the steamers would only require my presence two days in the week I would have had four days for prospecting - I returned to the Thames and was engaged there until I wrote the letter asking whether the government intended to extend the boundaries. I had told several that I had got good quartz and a party was formed to systematically prospect the ranges. I procured a map of the district and found from it that part of the Land I wished to prospect was Native Reserve. About the middle of last month I found out who were the Native owners, and made an agreement with them that Mr D.M. McIntyre and myself would search for gold and the Native Owners agreed to give what Leases we pegged off - we traced the gold from near the Hot springs to about a mile back in the ranges when it did not show so freely - we came back to where the wash gave the best prospect near a reef - here we met Hone Werahiko; 47 I asked him if he had got any gold he said no - he couldn't get anything in the stone - Either my mate or myself told him we could get prospects in the creeks and there must be gold about, for we could break out from the reef stone containing all the minerals and indications that accompany gold - Hone then told us he had got surface stone, showing gold, and we picked up several pieces shewing gold - we found a Leader about seven 7 inches thick shewing gold - a Large Reef that I am sure will have runs of gold in it at a depth.

He assured Kenrick he could arrange for the smooth opening of the field if the arrangements he claimed to have made with the owners (which he did not attach) were recognized by the government. He added a

 $^{^{45}}$ Thames Star, 19 October 1880, p. 2, plan, 25 October 1880, p. 2.

⁴⁶ See paper on his life.

⁴⁷ See paper on his life.

postscript: 'We have marked off the Ground the Native Owners promised'.⁴⁸ His claims to have prospected in 1879 cannot be verified; being illegal, any prospecting was not reported either to officials or the press. His offer to assist with opening the field was ignored.

Observers considered that he and his 'old friends' McIntyre and Charles Featherstone Mitchell⁴⁹ included Hone Werahiko as a member of their party to benefit from the latter's discoveries.⁵⁰ In fact, there had been mutual assistance; Werahiko stated that, if granted a Prospectors' Claim of 15 men's ground, he would give shares to both Ferguson and McIntyre 'as they had been prospecting near him, and assisted him, to some extent, in his endeavours to discover a payable reef'.⁵¹

Not having the good gold he claimed to have found, on 21 December he applied for permission to prospect between the new field 'and Twenty miles beyond Mata Mata'.⁵² With McIntyre and the two Allom brothers, he set off to explore the range near Matamata for what was intended to be several weeks.⁵³ Albert George Allom,⁵⁴ the older brother, explained that 'for some months' they 'had contemplated a prospecting expedition in this direction, partly with the view of testing the accuracy of Col. Chesney's report' of finding gold a few miles above Waiharakeke,⁵⁵ 'and partly to see the country', but being 'unable to resist the temptation of taking part in the excitement and fun attending the opening of a new goldfield', they delayed their trip. 'We 'formed a portion of the crowd that pegged out the Bonanza mine, and having made our pile there, we determined to move to the southward in quest of pastures new'.⁵⁶ Their 'pile' had been gained, not by finding gold, but by selling their interests; Ferguson did not sell all his immediately, for on 24 December he held 261 shares in the Bonanza

⁴⁸ Peter Ferguson to Harry Kenrick (Warden), 18 October 1880, Thames Warden's Court, Letters and Telegrams 1879-1896, BACL 13388/1a, ANZ-A.

⁴⁹ See papers on the prelude to the opening of the Te Aroha goldfield.

⁵⁰ Thames Star, 27 October 1880, p. 2.

⁵¹ Thames Advertiser, 1 November 1880, p. 3.

⁵² Peter Ferguson to Harry Kenrick, 21 December 1880, Te Aroha Warden's Court, General Correspondence 1880, BBAV 11584/1a, ANZ-A.

⁵³ Thames Advertiser, 28 December 1880, p. 3.

⁵⁴ See New Zealand Herald, 5 June 1900, p. 3, advertisement, 15 December 1908, p. 8; Auckland Star, 14 June 1909, p. 6.

⁵⁵ See paper on rumours of gold at Te Aroha.

⁵⁶ A.G. Allom, 'Prospecting in the Upper Thames', *Thames Star*, 19 January 1881, p. 2.

Company.⁵⁷ The four men soon returned 'very weather beaten' and silent about their expedition.⁵⁸

Allom described their departing at eight o'clock on the evening of 22 December in a light rowing boat, camping at about two in the morning, a mile or two above the Wairakau stream, for a few hours' rest'. Despite the strong current, they 'considered that as we had to take a good supply of provisions with us, the boat would be far the handiest way of travelling' to their 'first permanent camping ground' at the Wairere Falls, a distance by river they estimated at about 35 miles. We pulled hard for two long days, stopping now and again to rest and make some tea, or to rush up to the top of some high terrace close by to obtain a view of the surrounding country'. After pitching camp beside the Wairere Stream, 'getting something to eat was the work of an hour or two, after which we separated and started off in different directions to see what sort of a country we had arrived in. From the top of a small fern hill close by we could get a very fair view of the country to the westward for miles'. They 'returned to camp that evening as, one would suppose, quite ready for our night's rest, but the mosquitoes were determined that we should not sleep, and I think they carried the day, or rather the night, for twelve o'clock that night found us huddled together round a smoking fire looking the very picture of misery'. Presuming that Chesney had referred to alluvial gold, under the direction of McIntyre, 'an experienced alluvial gold-digger', they soon 'had some pretty deep holes sunk near one of two of the creeks'. In exploring the range 'we discovered indications of coal, and in other places we saw lignite. After spending a week near the falls, we struck camp' and started to row upriver. 'That day's work was the hardest we had. In places the river was so swift that we were forced to get out of the boat and pull it up the rapids with a long rope. In this manner we managed to progress about nine miles, until the river became so dangerous with rapids and snags that we were forced to land and pitch another camp'. Leaving the boat there with his brother in charge of the camp, on 5 January the other three 'walked further up country about 15 miles, visiting the natives as we went along. They were very friendly to us, and invited us to partake of boiled potatoes and sow thistle without salt, which did now look very tempting. They have all caught the gold fever, and wanted to fain as much information as possible from the Pakehas regarding the precious metal'. After following a Maori path on the eastern bank

⁵⁷ New Zealand Gazette, 20 January 1881, p. 111.

⁵⁸ Thames Advertiser, 12 January 1881, p. 3.

midway between the river and the foot of the range 'we arrived after a tiring walk at the end of the great range of mountains extending from Coromandel'. After climbing a thousand-foot spur to view the countryside they returned to their camp 'shortly after dark, ready and willing to make short work of the meal which my brother had prepared for us'. At eight o'clock on the morning of 6 January, they commenced their return, spending some days prospecting the range near Firth's Stanley Landing, and arriving in Te Aroha on the afternoon of 10 January. 'As my mates and I have decided that the results of our prospecting for gold must not yet be made public, I reserve that subject for a future occasion'.⁵⁹

Their results were never made public, for they had prospected in an area devoid of gold. By the end of January, Ferguson and McIntyre were prospecting in the vicinity of Castle Rock, overlooking the new Tiki find near Coromandel township.⁶⁰

MINING AT WAIORONGOMAI

After the discovery of the Waiorongomai goldfield, Ferguson returned, and from January 1882 onwards was part owner of several claims. On 31 January, he was registered as an owner of the Queen, with one of its 15 shares, which he sold in June for £30, though in August he bought another for £10.61 Also on 31 January, he was registered as having ten and a half of the 15 shares in the Victoria; no other shareholder had more than one. He sold six and a half for £85 and bought one for £20 before transferring all his interests to the Victoria Company in September.62 In May, he was the sole owner of the Gem; of its 30 shares, he sold 22 1/2 for £55 before transferring the remainder to the Coquette Company.63 In 1882, he had shares in two

⁵⁹ A.G. Allom, 'Prospecting in the Upper Thames', *Thames Star*, 19 January 1881, p. 2.

⁶⁰ Thames Advertiser, 31 January 1881, p. 2.

⁶¹ Te Aroha Warden's Court, Register of Licensed Holdings 1881-1887, folio 39, BBAV 11500/9a; Transfers and Assignments 1882, no. 216, BBAV 11581/1a; nos. 427-429, BBAV 11581/2a, ANZ-A.

⁶² Te Aroha Warden's Court, Register of Licensed Holdings 1881-1887, folio 45, BBAV 11500/9a; Transfers and Assignments 1882, nos. 433-435, 614, 615, BBAV 11581/2a, ANZ-A.

⁶³ Te Aroha Warden's Court, Register of Licensed Holdings 1881-1887, folio 75, BBAV 11500/9a; Transfers and Assignment 1882, nos. 477, 705, BBAV 11581/2a, ANZ-A.

companies and the following year in five,⁶⁴ having been a shareholder in two of the claims, Emily and Inverness, previously.⁶⁵ In August 1883, 'from a Mining point of view' he recommended merging the Queen and Lucky Hit, but when this did not occur he was instructed to commence work for the newly-formed Lucky Hit Company.⁶⁶ He had the largest shareholding, 3,500, selling all but 250 over the next two years, when these were liable for forfeiture for non-payment of calls.⁶⁷ In November 1883, he was sole owner of the New Era.⁶⁸ When the Waitoki Company forfeited its ground in 1885 for non-working, Ferguson purchased it for £1 1s,⁶⁹ and at an auction later that year bought the Vulcan for £20.⁷⁰ Renamed the New Era, within two months he started mining.⁷¹

Ferguson managed at least three mines in the early 1880s, none of importance. In May 1882 he was managing the Queen,⁷² in April 1883 the Lucky Hit,⁷³ and in August 1883, as resident director of the Hero Company, was instructed to re-start and supervise work.⁷⁴ He had not been one of the original shareholders when this company was registered in May 1882.⁷⁵ In

 ⁶⁴ New Zealand Gazette, 27 April 1882, p. 646, 14 December 1882, p. 1884, 23 August 1883,
 p. 1214, 6 September 1883, p. 1266, 20 September 1883, p. 1345, 11 October 1883, p. 1487.

⁶⁵ Te Aroha Warden's Court, Register of Licensed Holdings 1881-1887, folios 52, 135, 138, BBAV 11500/9a; Certified Instruments 1883, nos. 257, 501, BBAV 11581/4a, ANZ-A.

⁶⁶ R.McD. Scott to George Wilson, 27 August 1883, Te Aroha Warden's Court, General Correspondence 1883, BBAV 11584/2a; R,McD. Scott to George Wilson, 7 September 1883, 8 September 1883 (telegrams), Te Aroha Warden's Court, General Correspondence 1884, BBAV 11584/2b, ANZ-A.

⁶⁷ New Zealand Gazette, 23 August 1883, p. 1214; advertisement, Te Aroha News, 15 August 1885, p. 7.

⁶⁸ Te Aroha Warden's Court, Register of Licensed Holdings 1882-1881, folio 176, BBAV 11500/9a, ANZ-A.

⁶⁹ Te Aroha Warden's Court, Plaint Book 1880-1898, Plaint of 28 April 1885, BBAV 11547/1a, ANZ-A; Warden's Court, *Te Aroha News*, 2 May 1885, p. 7.

⁷⁰ Waikato Times, 17 September 1885, p. 2.

⁷¹ *Te Aroha News*, 31 October 1885, p. 2.

⁷² Thames Advertiser, 26 May 1882, p. 2.

⁷³ Waikato Times, 17 April 1883, p. 2.

⁷⁴ Auckland Weekly News, 4 August 1883, p. 13, 11 August 1883, p. 9.

⁷⁵ New Zealand Gazette, 1 June 1882, pp. 799-800.

addition to this directorship, he was a director of the Inverness⁷⁶ and the Lucky Hit. Being the largest shareholder, he chaired the inaugural meeting of the latter in Auckland; only two others were present, one being the legal manager, the other shareholders being 'represented by proxies in favour of Mr Ferguson'. 77 In April 1883 'the most important news from Te Aroha since the opening of the field' was reported in Auckland when Ferguson arrived with 60 or 70lb of stone 'showing gold freely throughout' from the Lucky Hit. 'The gold is distributed in "dabs" the size of a threepenny piece, and is not in the slightest degree leafy or coarse. The quartz is the most "kindly" we have yet seen in the upper country', closely resembling that in some of the leading Thames mines. Ferguson reported that the leader, 'from 12 to 18 inches through, has been winzed on 60 feet, and drives opened out 10 feet each way from the bottom of the winze. Gold has been carried down all the way. There is about 4 tons of general dirt to grass, all of which looks payable'. The samples Ferguson took to Auckland contained silver, and were to be assayed to obtain accurate percentages. 78 As the outcome of the assays were not reported, the outcome cannot have been satisfactory; the Lucky Hit never became an important mine.

A LEADING FIGURE IN THE COMMUNITY

In 1882, the *Thames Advertiser* reported that Ferguson, 'so well-known at the Thames as a practical mine manager', had become a sharebroker, land and commission agent at Te Aroha.⁷⁹ He continued as a sharebroker for some years,⁸⁰ but when the goldfield faded he abandoned this part-time occupation. In 1884 he also became the local agent of Adam Laybourn and Company of Auckland, a firm of merchants supplying 'all settlers' requisites'.⁸¹ He made a profit on a business site, selling it for £200.⁸²

Ferguson was a leading figure in the community. At Thames he was on the committee of management of the Presbyterian Church for several years

⁷⁶ Thames Directory for 1885 (Thames, 1885), p. 127.

⁷⁷ Company Files, BBAE 10286/13a, ANZ-A.

⁷⁸ *Auckland Star*, 16 April 1883, p. 3.

⁷⁹ Thames Advertiser, 22 April 1882, p. 2.

⁸⁰ See, for example, advertisement in the first issue of *Te Aroha News*, 9 June 1883, p. 1.

⁸¹ Te Aroha News, 15 March 1884, p. 2.

⁸² Te Aroha Warden's Court, Transfers and Assignments 1882, no. 763, BBAV 11581/2a, ANZ-A.

and sang Scottish songs at its soirees.83 At Te Aroha he continued to assist this denomination.⁸⁴ When the Waiorongomai schoolroom was opened in August 1883, he spoke for about 30 minutes, 'leaving everyone in ignorance as to whether it was the Town Board or the County he was talking of.85 Perhaps this performance explained why he was not elected to the Te Aroha School Committee early the following year. 86 However, he was elected to the first Waiorongomai School Committee in January 1885.87 When he stood as its chairman, his refusal to vote for himself caused 'great astonishment', for 'whilst admiring the fine feeling thus displayed, his friends appear to think it was out of place'. Once this mistake was pointed out, he was expected to appeal the result and request a new election, which 'would have been avoided' had he 'been a little more canny'. 88 When he won the re-election, Samuel Tozer Smardon, 89 the previous chairman, refused to resign. 90 'From the facts placed before them', the Auckland Board of Education decided that Ferguson 'was the legally elected chairman' and the committee 'should recognize him as such'. 91 It did not.

In August 1885 he was elected to the committee of the Te Aroha Social Club and Debating Society, 92 in October 1885 he was made a life member of the Te Aroha Public Library because of financial assistance, 93 and in January 1886 he convened a meeting at Waiorongomai to select a representative on the Hot Springs Domain Board. Although his name was proposed, he 'decidedly expressed a wish that some one else should be chosen'. He was appointed one of four people to confer with the Te Aroha Improvement Committee about obtaining funds for improvements at

⁸³ Thames Advertiser, 18 January 1878, p. 2, 18 January 1879, p. 3, 1 February 1879, p. 3,

³ October 1879, p. 3, 31 January 1880, p. 3; Thames Star, 6 November 1878, p. 2.

⁸⁴ Te Aroha News, 3 July 1889, p. 2.

^{85 &#}x27;Waiorongomai', Observer, 18 August 1883, p. 12.

⁸⁶ Te Aroha News, 2 February 1884, p. 7.

⁸⁷ Waikato Times, 29 January 1885, p. 2.

⁸⁸ Te Aroha News, 7 February 1885, p. 2.

⁸⁹ See Observer, 16 December 1905, p. 3; Cyclopedia of New Zealand, vol. 2, p. 831.

⁹⁰ Waiorongomai Correspondent, Waikato Times, 4 March 1885, p. 3.

⁹¹ Te Aroha News, 18 April 1885, p. 7.

⁹² Te Aroha News, 15 August 1885, p. 2.

⁹³ *Te Aroha News*, 24 October 1885, p. 2.

Waiorongomai.⁹⁴ In July that year he chaired the Waiorongomai meeting that formed a Progress Committee, of which he became secretary.⁹⁵ He was a leader of those opposing forming a borough.⁹⁶ On Kenrick's suggestion, he was appointed the district's representative on the provisional committee of the Thames School of Mines.⁹⁷ He constantly urged the needs of the goldfield upon both warden and government, as in February 1885, when he was elected to a committee seeking an enquiry into the running of the tramway and to a delegation that wanted Kenrick to refuse protection to the Colonist and to invite the Minister of Mines to inspect the tramway.⁹⁸

FIRST ATTEMPTS TO ERECT A SECOND BATTERY

From the commencement of the goldfield it was hoped that rival batteries would break the Battery Company's monopoly and introduce new processes. At the beginning of May 1882, it was announced that John Cook of Tararu had made arrangements to erect a 20-stamp battery on a site chosen to suit the New Find and Premier mines. He had inspected the site, at the foot of May Queen Spur and about half a mile below the foot of the tramway incline, 99 and, once he had worked out how to get machinery brought there would erect the plant within ten weeks. 100 Cook, an 'old Thames identity and battery proprietor', 101 had been a prospector and battery owner at Tararu for some years. 102 He had first applied for a water

⁹⁴ Te Aroha News, 9 January 1886, p. 7; see also 7 March 1885, p. 2, 29 May 1886, p. 2; Thames Advertiser, 3 March 1885, p. 3.

 $^{^{95}}$ Te Aroha News, 5 June 1886, p. 2.

⁹⁶ For example, Te Aroha News, 25 October 1884, p. 2; Waikato Times, 6 December 1884, p. 2.

⁹⁷ Te Aroha News, 12 December 1885, p. 2.

⁹⁸ Te Aroha News, 28 February 1885, pp. 2, 7.

⁹⁹ G.H.A. Purchas, 'Plan of John Cook's Machine Site and Water Race', 6 May 1882, Te Aroha Museum; *Thames Advertiser*, 27 May 1882, p. 3; Te Aroha Warden's Court, Register of Applications 1883-1900, 36/1884, BBAV 11505/1a, ANZ-A.

¹⁰⁰ Waikato Times, 2 March 1882, p. 2.

¹⁰¹ Waikato Times, 23 May 1882, p.2.

¹⁰² Thames Advertiser, 2 December 1875, p. 2, 17 February 1876, p. 3, 5 July 1879, p. 3, 5 July 1879, p. 3, 14 July 1879, p. 3, 22 August 1879, p. 3, 28 November 1879, p. 3, 17 February 1880, p. 3, 5 December 1881, p. 3, 28 December 1881, p. 3; Thames Star, 21 March 1883, p. 3.

race further down the Waiorongomai Stream in February, ¹⁰³ and would soon have shares in two claims. ¹⁰⁴ By late May he had surveyed a 40-chain water race and work on the foundations had begun. ¹⁰⁵ In July, the fact that he bought John Bullock's water race, which went from his machine site downstream to the base of Butler's Spur, ¹⁰⁶ suggested that he was having second thoughts about the appropriate site.

Nothing further was heard of Cook's initiative until February 1883, when the Waiorongomai Gold Mining and Quartz Crushing Company reached an agreement with him to build a 20-stamp battery. In return for Cook erecting this battery and a water race within four months, he would receive £3,000 plus 8,000 of its 50,000 shares. When it applied for registration in April, these 8,000 shares, the largest holding, were held in trust for him; his occupation was stated to be 'agent'. In June there was a rumour that he had reached an agreement with the old Thames Company to re-erect its battery, a venture involving 'many of the wealthiest people in Auckland'. On 29 June, he obtained machine site and water race licenses.

 $^{^{103}}$ Te Aroha Warden's Court, Register of Applications 1880-1882, folio 93, BBAV 11505/3a, ANZ-A.

¹⁰⁴ Te Aroha Warden's Court, Licensed Holdings Grant Book 1882-1886, folio 29, BBAV 11549/1b; Register of Te Aroha Claims 1880-1888, folio 29, BBAV 11567/1a, ANZ-A.

¹⁰⁵ Te Aroha Warden's Court, Register of Licenses 1880-1882, folio 55, BBAV 11537/2a, ANZ-A; Waikato Times, 23 May 1882, p. 2, 30 May 1882, p. 2, 3 June 1882, p. 2; Thames Advertiser, 27 May 1882, p. 2.

¹⁰⁶ Te Aroha Warden's Court, Register of Applications 1880-1882, folio 192, BBAV 11505/3a; Transfers and Assignments 1882, 10 July 1882, BBAV 11581/2a, ANZ-A; H.G. Graeme, 'Plan of John Cook's Water Right, Waiorongomai', July 1882, Te Aroha Museum.

¹⁰⁷ Company Files, BBAE 10286/12e; Agreement between John Cook and Waiorongomai Gold Mining and Quartz Crushing Company, 21 February 1883, Te Aroha Warden's Court, Certified Instruments 1883, BBAV 11581/3a, ANZ-A.

¹⁰⁸ New Zealand Gazette, 31 May 1883, p. 722.

¹⁰⁹ Te Aroha News, 9 June 1883, p. 2.

¹¹⁰ Te Aroha Warden's Court, Machine Site Licenses Butt Book 1882, no. 203, BBAV 11548/1b; Transfers and Assignments 1882, 269/442, BBAV 11581/2a; Rent Ledger 1881-1900, folio 211, BBAV 11505/1a, ANZ-A.

That Cook lacked any capital was revealed four days later, when he was sued for an overdue promissory note for £29 14s 6d.111 After failing to pay once judgment was given against him, the plaintiff took out a warrant of distress, and two days later he was again ordered to pay. The bailiff could not find any assets that could be sold to meet the debt. 112 A week later, he sold his machine site to a Thames sharebroker, Michael Hennelly, 113 and in September his water race was purchased for 10s by Patrick Comiskey on behalf of capitalists who planned to erect a battery. 114 The Te Aroha News was 'informed on unquestionable authority' that Bullock had 'arranged with a well-known capitalist' to construct a water race and 'put up an efficient battery'. 115 In late August, he inspected the mines and 'took away a number of specimens of the lodes for treatment in Auckland'. 116 Richard Spratt, a prominent mining broker, 117 accompanied him; they were reportedly 'acknowledged of vast mining experience', and after inspecting 'various mines' they 'expressed their entire approval and conviction of the permanency and payable nature of the field generally'. 118 At the end of November, he applied for a machine site at the foot of Butler's Spur. 119 As construction of the water race was delayed, in November and December he was warned his license would be forfeited unless work started. 120

¹¹¹ Te Aroha Magistrate's Court, Civil Record Book 1881-1884, 95/1883, BCDG 11221/1a, ANZ-A.

 $^{^{112}}$ Te Aroha Magistrate's Court, Home Warrant Book 1883-1928, 9/1883, BBAV 11498/1a, ANZ-A.

¹¹³ Te Aroha Warden's Court, Rent Ledger 1881-1900, folio 211, BBAV 11505/1a, ANZ-A.

¹¹⁴ Transfer from John Bullock to Patrick Comiskey, 4 September 1883, Te Aroha Warden's Court, Certified Instruments 1883, BBAV 11581/4a, ANZ-A; *Te Aroha News*, 28 September 1883, p. 2.

¹¹⁵ Te Aroha News, 18 August 1883, p. 2.

¹¹⁶ Te Aroha Mail, n.d., cited in Freeman's Journal, 1 September 1882, p. 10.

¹¹⁷ See *Thames Star*, 18 September 1895, p. 2, 19 September 1895, p. 2, 20 September 1895, p. 2.

¹¹⁸ Te Aroha News, 8 September 1883, p. 2.

¹¹⁹ Observer, 6 October 1883, p. 14; Te Aroha Warden's Court, Register of Applications 1883-1900, 218/1883, BBAV 11505/1a, ANZ-A; *Te Aroha News*, 17 November 1883, p. 2, 15 December 1883, p. 7.

¹²⁰ George Wilson to Patrick Comiskey, 6 November 1883, 4 December 1883, 18 December 1883, Te Aroha Warden's Court, Letterbook 1883-1900, pp. 8, 14, 16, BBAV 11534/1a, ANZ-A.

PATRICK COMISKEY

When in London in 1895 attempting to float New Zealand mines, Comiskey was referred to as being 'well-known in the early days of the West Coast, and afterwards in Auckland, as a plucky and lucky speculator'. He remarked 'at a jollification over the flotation of an Auckland mine' that once he 'could have bought the Waihi mine for £900, and now it is worth a million'. When he went to London in 1887 to float mines, the *Te Aroha News* wrote that 'few men' were 'better fitted to speak of New Zealand mining'. He invested in West Coast mines from the 1860s to the 1880s, 123 and in Hauraki mining in the 1880s, 124 always being interested in new discoveries, for instance the one at Tiki in 1881. 125 He was a director of several mining and non-mining companies. With others, he purchased considerable areas of land. 127 In 1882, his freehold properties on the west coast of the South Island, the east coast of the North Island, and in or near Auckland had a total value of £14,300. 128 His purchases were based on credit, and sometimes he was unable to pay interest on his properties; 129

¹²¹ Observer, 29 June 1895, p. 5.

¹²² Te Aroha News, 12 November 1887, p. 2.

<sup>New Zealand Government Gazette, Province of Canterbury, 14 June 1866, p. 212; New Zealand Gazette, 27 April 1869, p. 208, 26 June 1869, p. 307, 2 November 1876, p. 754, 11
September 1879, p. 1268, 17 February 1881, p. 240, 28 April 1881, p. 476, 19 May 1881, p. 653, 29 December 1881, p. 1696, 9 February 1882, p. 245, 27 July 1882, p. 1028, 10
November 1882, p. 1665, 15 March 1883, p. 329, 9 August 1883, p. 1148.</sup>

¹²⁴ For example, New Zealand Gazette, 7 September 1882, p. 1236, 6 May 1886, p. 584, 17 June 1886, p. 748.

¹²⁵ New Zealand Gazette, 24 February 1881, p. 258, 17 March 1881, p. 342.

^{See Company Files, BBAE 10286/14d, 10286/15l, 10286/16a, 10286/16b, 10286/16g, ANZ-A; New Zealand Gazette, 24 February 1881, p. 351; Auckland Weekly News, 6 August 1881, p. 7, 6 January 1883, p. 5, 10 March 1883, p. 9, 7 June 1884, p. 19, 13 December 1884, p. 19.}

¹²⁷ See Coromandel Mail, 10 September 1881, p. 6; Waikato Times, 15 July 1890, p. 2.

¹²⁸ A Return of the Freeholders of New Zealand ... October 1882 (Wellington, 1884), p. C 57.

¹²⁹ See John Logan Campbell to Patrick Comiskey, 26 June 1886, 25 April 1888, John Logan Campbell to C.S. Stafford, 28 April 1888, John Logan Campbell (Business) Letterbook 1885-1891, pp. 27, 106, interleafed with 106, Brown Campbell and Co Papers, 131, MS 51, Library of the Auckland Institute and War Memorial Museum.

occasionally he was threatened with legal action that could result in his bankruptcy. ¹³⁰ In November 1889 a director of the Bank of New Zealand anticipated that it would lose £10,000 on his account. ¹³¹ It is not known if his prophecy was correct. When Comiskey died in England, in 1907, he was recalled as 'one of the largest investors in mining and business enterprises' in Auckland during the 1880s. After creating 'the foundations of his fortune in mining and commercial enterprises' when a merchant on the West Coast, once he moved to Auckland 'there were not many speculative schemes of importance with which he was not in one way or another associated'. Although he had 'extensive and successful speculations' in Thames mines in the early 1880s, he lost money in the slump of the 1890s. It was understood 'that he subsequently prospered in South African mining speculations, and that he died in affluent circumstances'. ¹³²

Comiskey had a share in one Waiorongomai claim and five companies, having the largest holdings in two of the latter.¹³³ He was first recorded as taking an active role in September 1882, when he shared a meeting of shareholders of the three Navy claims, and became director in the subsequent company.¹³⁴ A year later he chaired meetings of shareholders in the Wellington, Leo, and Welcome claims that led to the formation of the Wellington and Welcome companies.¹³⁵ He was also a director of the Premier and Vulcan companies.¹³⁶

JOSEPH STACEY

¹³⁰ Jackson and Russell to Patrick Comiskey, 7 January 1881, Jackson and Russell Letterbook no. 21, p. 327; J. Jackson to Patrick Comiskey, 18 July 1887, Jackson and Russell Letterbook no. 34, p. 672, Jackson and Russell Papers, MS 360, Library of the Auckland Institute and War Memorial Museum.

¹³¹ Auckland Weekly News, 2 November 1889, p. 11.

¹³² *Observer*, 9 February 1907, p. 5.

¹³³ Te Aroha Warden's Court, Register of Licensed Holdings 1881-1887, folio 65, BBAV 11500/9a, ANZ-A; New Zealand Gazette, 23 March 1882, p. 490, 17 August 1882, p. 1131, 19 October 1882, p. 1522, 20 September 1883, p. 1345, 27 September 1883, p. 1369.

¹³⁴ Auckland Weekly News, 30 September 1882, p. 20.

¹³⁵ Te Aroha News, 8 September 1883, p. 2.

¹³⁶ Company Files, BBAE 10286/9e, 10286/11d, ANZ-A.

Another man associated with Comiskey was Joseph Stacey, a manufacturing confectioner in Auckland. ¹³⁷ He had been investing in Hauraki mines for some time, an especially large number of investments being made in 1882 and 1883. ¹³⁸ After having interests in one Waiorongomai claim, in 1882 and 1883 he acquired shares in seven companies. ¹³⁹ Stacey was not wealthy, and although successful in business and mining investments until 1886, these along with other unproductive investments would lead to his bankruptcy in 1891, when his liabilities were £645 7s 9d while his assets realised a mere £69 5s 8d. ¹⁴⁰ He paid a dividend of 10 1/8d in the £. ¹⁴¹

THE EXCELSIOR BATTERY

In late 1883, Stacey purchased the abandoned Te Aroha battery, planning to re-erect it at the foot of Butler's Spur about four and a half chains below the tramway and add 30 head of stampers; a water race was laid off. ¹⁴² Early the following January, Comiskey and Stacey informed the council that they would build a battery and asked whether 'it would construct a siding continuing the first level grade of the present tramway for a distance of about three quarters-of-a-mile', ¹⁴³ for an unexplained purpose but presumably to a site below the May Queen incline. Tenders

¹³⁷ See Observer, 9 December 1882, p. 198; Auckland Weekly News, 9 May 1891, p. 20.

<sup>See New Zealand Gazette, 24 October 1878, p. 1458, 24 November 1881, p. 159, 1
December 1881, p. 160, 12 January 1882, p. 66, 20 July 1882, p. 988, 28 September 1882,
p. 1363, 19 October 1882, pp. 1522, 1523, 2 November 1882, p. 1617, 14 December 1882,
p. 1886, 21 December 1882, pp. 1915, 1916, 31 May 1883, p. 722, 23 August 1883, p. 1214,
29 November 1883, p. 1705, 27 December 1883, p. 1815.</sup>

¹³⁹ Te Aroha Warden's Court, Register of Te Aroha Claims 1880-1888, folio 276, BBAV 11567/1a, ANZ-A; New Zealand Gazette, 14 September 1882, p. 1264, 19 October 1882, p. 1522, 6 September 1883, p. 1266, 20 September 1883, p. 1345, 4 October 1883, p. 1437, 29 November 1883, p. 1705.

¹⁴⁰ Supreme Court, Bankruptcy Files, 91/23, BBAE 5628/4, ANZ-A; Auckland Weekly News, 9 May 1891, p. 1601.

¹⁴¹ Mercantile and Bankruptcy Gazette, 5 November 1891, p. 333.

¹⁴² Te Aroha News, 15 September 1883, p. 2, 15 December 1883, p. 3, 1 March 1884, p. 2.

¹⁴³ Te Aroha News, 12 January 1884, p. 2.

were called to construct a water race for the Excelsior Battery, and men were clearing the site for it. 144

In late February, at a meeting 'it was stated at the meeting that the shares would be speedily taken up'. 145 The prospectus explained the company's plans:

It is proposed to form a Company consisting of Five Thousand Shares of 20s Each, for the purpose of Erecting a Battery of 20 Head Stampers and 10 Berdans (to be enlarged if circumstances demand). The position of Battery will be at foot of Butler's Spur, upon the site lately held by Mr Bullock, which is only about 4 1/2 chains from bottom of Butler's Spur. The Water Race site has already been secured, and the Engineer estimates its force ample for driving 40 stampers (there being 466 feet fall), and the Battery site is cleared, and it only remains now to accept tenders for the work (as specifications are already prepared), and so complete the work at the earliest possible moment.

The capital (£5000) is considered sufficient to erect 40 head, but it is deemed advisable to only erect 20 head for the present. The shares to be paid as follow:- 2s 6d on application, 2s 6d on allotment, and 2s 6d on 1st May, and 2s 6d 1st June.

The claims in the immediate vicinity to be benefitted most materially are Phoenix, Lucky Hit, Waiorongomai, Inverness, &c, and it is confidently anticipated that the field will be materially advanced by the erection of above Battery.

The cost of the 20 Stampers and 10 Berdans is estimated at £2500, which will include the erection of battery house, machinery in position, and the completion of water race. 146

The provisional directors included Stacey and Ferguson but not Comiskey; the others were Joseph Newman, Franz Otto Scherff, John Richard Randerson, and Richard Knibb Davis. Newman, a mining agent and sharebroker, ¹⁴⁷ had many shares in Hauraki mining companies, no doubt principally for resale. ¹⁴⁸ In 1882 and 1883, he acquired interests in 11

¹⁴⁴ Thames Advertiser, 11 January 1884, p. 2; Te Aroha News, 12 January 1884, p. 7.

¹⁴⁵ Thames Advertiser, 28 February 1884, p. 3; Auckland Weekly News, 1 March 1884, p. 19.

¹⁴⁶ Advertisement, Te Aroha News, 4 March 1884, p. 7.

¹⁴⁷ See New Zealand Herald, 5 January 1892, p. 5.

 ¹⁴⁸ For example, see Auckland Provincial Government Gazette, 30 August 1869, p. 860, 27
 May 1871, p. 117; New Zealand Gazette, 18 November 1875, p. 736, 18 May 1877, p. 570, 18 October 1877, p. 1035.

Waiorongomai claims and eight companies.¹⁴⁹ Scherff in the same years became an owner of eight Waiorongomai claims and had interests in 13 companies.¹⁵⁰ A merchant, river trader, and coal mining company secretary,¹⁵¹ he had mining investments in Waiorongomai and elsewhere in Hauraki.¹⁵² Randerson, a mining and land agent and sharebroker,¹⁵³ invested in mining companies throughout Hauraki.¹⁵⁴ At Waiorongomai, in 1883 he acquired interests in two claims and four companies.¹⁵⁵ Davis was an accountant with shares in several Hauraki mining districts;¹⁵⁶ his investment in the LaMonte furnace at Karangahake in 1886 would bankrupt him.¹⁵⁷ At Waiorongomai, he had shares in four claims in 1883.¹⁵⁸

¹⁴⁹ Te Aroha Warden's Court, Register of Licensed Holdings 1881-1887, folios 4, 6, 16, 19, 32, 46, 55, 79, 101, 102, 108, BBAV 11500/9a, ANZ-A; New Zealand Gazette, 23 March 1882, pp. 489, 490, 22 June 1882, p. 895, 17 August 1882, p. 1131, 14 September 1882, p. 1264, 2 November 1882, p. 1616, 31 May 1883, p. 722, 6 September 1883, p. 1266.

¹⁵⁰ Te Aroha Warden's Court, Register of Licensed Holdings 1881-1887, folios 3, 16, 20, 21, 46, 75, 80, 88, BBAV 11500/9a, ANZ-A; New Zealand Gazette, 22 June 1882, p. 895, 10 August 1882, p. 1101, 17 August 1882, p. 1131, 14 September 1882, p. 1264, 19 October 1882, p. 1522, 2 November 1882, p. 1616, 14 December 1882, p. 1885, 31 May 1883, p. 721, 6 September 1883, p. 1366, 11 August 1883, p. 1487, 22 November 1883, p. 1675, 29 November 1883, p. 1705.

¹⁵¹ See New Zealand Herald, 13 September 1909, p. 2.

¹⁵² For example, Auckland Provincial Government Gazette, 7 July 1869, p. 547, 21 July 1869, p. 595, 11 August 1869, p. 689, 16 August 1869, pp. 692-694, 23 August 1869, p. 772, 27 August 1869, p. 833, 3 September 1869, p. 920, 28 September 1869, p. 1200, 26 October 1869, p. 1404.

¹⁵³ See Thames Advertiser, 17 May 1878, p. 2; Observer, 4 August 1883, p. 15; New Zealand Herald, 2 November 1883, p. 4; Waikato Times, 9 February 1884, p. 2.

¹⁵⁴ For example, New Zealand Gazette, 23 May 1878, p. 653, 15 August 1878, p. 1149, 26 February 1880, p. 242, 20 May 1880, p. 789, 8 July 1880, p. 986, 26 August 1880, p. 1253.

 ¹⁵⁵ Te Aroha Warden's Court, Register of Licensed Holdings 1881-1887, folios 165, 166,
 BBAV 11500/9a, ANZ-A; New Zealand Gazette, 6 July 1883, p. 1214, 6 September 1883,
 p. 1266, 29 November 1883, pp. 1703, 1705.

¹⁵⁶ For example, New Zealand Gazette, 10 February 1876, p. 122, 7 December 1882, p. 1852, 11 January 1883, p. 45, 8 March 1883, p. 312.

See Thames Advertiser, 4 June 1885, p. 2, 9 June 1886, p. 2; Te Aroha News, 3 July
 1886, p. 2; Observer, 17 September 1904, p. 17, 16 February 1907, p. 5.

¹⁵⁸ Te Aroha Warden's Court, Register of Licensed Holdings 1881-1887, folios 133, 144, 147, 148, BBAV 11567/1a, ANZ-A.

The company did not intend to begin work until all its shares had been sold. 159 By early March, 'over two-thirds of the shares have already been applied for, and the remainder will no doubt be very quickly taken up', and there was 'every reason to believe' the undertaking would succeed. 160 Ferguson, the main agent accepting applications, convened meetings at Waiorongomai and Te Aroha to explain the proposal and elicit support. 161 He told the Te Aroha meeting that reports 'industriously circulated' claiming there was 'no water power higher up the creek' were false. 162 To ensure supply he had applied for an extra water right and purchased interests in 'Bullock's race'. 163 As a further encouragement to investment, it was reported that the Battery Company had resigned its right to this water race and had 'decided to give their moral support to the new undertaking'. 164 As well, the Waiorongomai Company decided, in mid-March, to make a call of 1d per share and sell 800 reserved shares and invest the proceeds in the new company. 165 In March the Waiorongomai Company forfeited the machine site 'known as Cook's Battery site' for failure to occupy. 166 George Wilson regretted that its plans had fallen through, because there was 'a good opening for another battery, the present crushing plant being inadequate to crush for all mines'. Although 'several

¹⁵⁹ Te Aroha News, 8 March 1884, p. 2.

¹⁶⁰ Te Aroha Correspondent, Waikato Times, 8 March 1884, p. 2.

¹⁶¹ Te Aroha News, 1 March 1884, p. 7, 29 March 1884, p. 7, 5 April 1884, p. 2.

¹⁶² Te Aroha News, 29 March 1884, p. 7, 5 April 1884, p. 2; Thames Advertiser, 2 April 1884, p. 3.

Water Right Waiorongomai applied for by Peter Ferguson', 14 July 1882, granted on 12 September 1882, after Kenrick noted prior right of John Bullock and John Cook, Water Race License no. 101, Te Aroha Warden's Court, Transfers and Assignments 1882, BBAV 11581/2a, ANZ-A; *Te Aroha News*, 8 September 1883, p. 2; Plan of water race, 22 January 1884, Te Aroha Museum; Te Aroha Warden's Court, Certified Instruments, Joseph Stacey to Peter Ferguson, 29 May 1884, Peter Ferguson to Warden, 3 June 1884, BBAV 11581/5a, Register of Applications 1883-1890, 210/1883, 52/1884, BBAV 11505/1a, ANZ-A.

¹⁶⁴ *Waikato Times*, 8 March 1884, p. 3.

¹⁶⁵ Waikato Times, 15 March 1884, p. 3.

¹⁶⁶ Te Aroha Warden's Court, Certified Instruments 1884, 35/1884, BBAV 11581/5a, ANZ-A.

offers' had been made to erect another battery, 'no definite action' had been taken. 167

By April only 2,600 shares had been subscribed. 168 The Te Aroha News, which wanted it erected, complained that, if local residents had given 'a little more practical interest, the work might have been already commenced'. 169 A meeting of miners and others held at Waiorongomai on 29 March 'was not as successful as could have been wished' because 'very few shares were taken up'. 170 Over 200 were sold; two days later there was only a 'very fair attendance' at the Te Aroha one. 171 Ferguson told that meeting that, if Te Aroha would take 1,500, more would be sold in Auckland; a committee of three was appointed to canvass the district. 172 The apathy was explained by the generally 'dull' feeling in mining, the new battery being looked upon by many as a doubtful undertaking, and there were misgivings as to its going on at all'. 173 By mid-April, a correspondent wrote that as the Excelsior Battery Company had 'not made any progress during the last fortnight', there was 'every probability of its falling through'. 174 As the proposal was 'not meeting with the success it deserves', the Waiorongomai Company was again considering erecting its own battery. 175 At the beginning of May, the Te Aroha News believed 'all hope of seeing the Excelsior Battery gone on with may now be abandoned'. 176 Comiskey abandoned his site, which was forfeited in November. 177

THE NEW ERA BATTERY

In early May, the *Te Aroha News* was 'pleased to learn' of efforts 'to procure additional crushing power' and that there was 'a strong probability'

¹⁶⁷ George Wilson to Warden, 8 April 1884, AJHR, 1884, H-9, p. 21.

¹⁶⁸ Thames Advertiser, 2 April 1884, p. 3.

¹⁶⁹ Te Aroha News, 29 March 1884, p. 2.

¹⁷⁰ Te Aroha Correspondent, Waikato Times, 1 April 1884, p. 2.

¹⁷¹ Te Aroha News, 5 April 1884, p. 2.

¹⁷² Thames Advertiser, 2 April 1884, p. 3.

¹⁷³ *Waikato Times*, 5 April 1884, p. 3.

¹⁷⁴ Te Aroha Correspondent, *Thames Advertiser*, 17 April 1884, p. 2.

¹⁷⁵ Waikato Times, 10 April 1884, p. 2.

¹⁷⁶ Te Aroha News, 3 May 1884, p. 2.

¹⁷⁷ George Wilson to Patrick Comiskey, 24 November 1884, Te Aroha Warden's Court, Letterbook 1883-1900, p. 59, BBAV 11534/1a, ANZ-A.

of success. A meeting of those 'interested in an important mine' considered a proposal to erect a ten-stamper battery, which, if terms were agreed, might be completed 'before the worst of the winter sets in'. The owners of this mine would have first right to a number of the stampers. 'We are not aware whether a site has been fixed upon, but believe it will be somewhere in the neighbourhood of the Inverness, Phoenix, Waiorongomai, and other claims'. As the proposed battery would charge 'considerably less' for treating both quartz and tailings than the Battery Company, the newspaper hoped for 'a successful issue'.¹⁷⁸

The Thames Advertiser was informed that 'Southern capital' was available to erect as much 'additional battery power' as was required, provided mineowners gave them 'the same terms in regard to the paid-up shares and the like' that Firth and Clark obtained for erecting their battery. 179 In June, it was reported that the unnamed promoters had offered the Vermont, Chance, Phoenix, and Arizona companies more liberal terms than those made by others with the Battery Company. 180 Owing to Ferguson's 'untiring efforts', a private company had been formed 'to erect all necessary machinery, etc', by the end of December. 181 The Te Aroha News expected this new battery would give 'fresh life and energy' to the field, for 'healthy competition' was 'the soul of business'. 182 Later, when there were doubts about whether it would be erected, it insisted the battery 'must not be shelved under any circumstances; to do so were to commit a great public wrong'. 183 As James Mills, a carpenter who was a leading figure in local politics, 184 told the Minister of Mines three months later, even if the new battery failed to save a larger percentage of gold, it would still have broken down the monopoly. 185

Immediately after this company, the New Era, was formed, Ferguson acquired Cook's battery site, 186 and began erecting several 'one-room

¹⁷⁸ Te Aroha News, 3 May 1884, p. 2.

¹⁷⁹ Thames Advertiser, 12 May 1884, p. 2.

¹⁸⁰ Te Aroha Correspondent, Waikato Times, 5 June 1884, p. 2.

¹⁸¹ Te Aroha Correspondent, New Zealand Herald, 5 June 1884, p. 6.

¹⁸² Te Aroha News, 31 May 1884, p. 2.

¹⁸³ Editorial, *Te Aroha News*, 28 February 1885, p. 2.

¹⁸⁴ See paper on his life.

¹⁸⁵ Te Aroha News, 30 May 1885, p. 7.

¹⁸⁶ Te Aroha Warden's Court, Register of Applications 1883-1900, 36/1884, BBAV 11505/1a, ANZ-A; AJHR, 1885, C-2, p. 30.

shanties' at Waiorongomai for his employees, he himself having a fiveroomed house; another house of the same dimensions was presumably for another senior employee. The Te Aroha News congratulated Ferguson for the 'zeal' he had 'all along displayed in forwarding the new undertaking'. 187 Being a private company, the press rarely provided information on its finances. For example, in September it was reported that some Otago capitalists had invested £4,000 into the goldfield, which confirmed references to 'Southern' people backing Ferguson, but it is uncertain whether all this money went to his battery. 188 Also in that month, 'some doubts' were expressed about whether it would be erected, 189 which may have reflected rumours of financial difficulties. The Te Aroha News was no doubt relieved to announce in late October that the rumour that Ferguson's syndicate had sold 'their machine site and crushing plant to the Battery Company' was 'totally without foundation. No such a proposal has been entertained, and it is the intention of the new Company to proceed with the erection of this mill as rapidly as circumstances will allow'. 190

That the syndicate required more capital was indicated by a report in November that it had offered precedence in using the battery to the May Queen Company in return for 3,000 of its paid-up shares. 'After careful consideration' this offer was declined. 191 'Southern capital' was still reportedly backing the project, 192 and in February 1885 the *Te Aroha News* denied the rumour that 'Southern shareholders had backed out'. 193 Yet capital continued to be lacking; for example, the Minister was appealed to for assistance in December 1886 because the commercial depression meant that the syndicate could not raise more. 194

In May 1886 the proprietors were given as 'Messrs G. Fraser and Sons and a Dunedin firm'. 195 By later that month, reportedly the syndicate had

¹⁸⁷ Te Aroha News, 7 June 1884, p. 2, 5 July 1884, p. 2.

¹⁸⁸ *Thames Star*, 20 September 1884, p. 2.

¹⁸⁹ Te Aroha News, 27 September 1884, p. 2.

¹⁹⁰ Te Aroha News, 25 October 1884, p. 2.

¹⁹¹ Te Aroha News, 8 November 1884, p. 2.

¹⁹² Thames Directory for 1885 (Thames, 1885), p. 114.

¹⁹³ Editorial, *Te Aroha News*, 28 February 1885, p. 2; see evidence of Peter Ferguson, Inquest into death of Thomas Robinson, Justice Department, J 1, 1886/1050, ANZ-W.

¹⁹⁴ George Fraser to Minister of Mines, 18 December 1886, Mines Department, MD 1, 87/1442, ANZ-W.

¹⁹⁵ Te Aroha News, 8 May 1886, p. 4.

spent £20,000, 'a very large sum for a party of two or three individuals', two being named as Ferguson and Frederick Stoughton Margetts. ¹⁹⁶ In February 1887, the warden recorded that there were only four shareholders. ¹⁹⁷ Ferguson had little capital to invest; his contribution would have mainly been his skills as a mine manager. Margetts, a former Anglican clergyman who had changed his occupation to that of a 'gentleman', ¹⁹⁸ was aged 52 in 1884; ¹⁹⁹ it is not known when or why he had abandoned his vocation as a clergyman. The first record of his assisting Ferguson with finance was in July 1884, when he sold him a Waiorongomai business site for £4, a purely nominal sum as shown by his purchasing another one for £20 on the previous day. ²⁰⁰ In December, he bought it back from Ferguson for an unknown sum, thereby becoming responsible for paying the rent. ²⁰¹ On 18 September, Ferguson sold half of his interest in all his water rights, tail races, and machine sites to him for the extremely nominal sum of 10s. ²⁰² In November, Margetts advanced Ferguson £500. ²⁰³

At the beginning of November, Fraser was building machinery for the battery 'to the order of Mr Margetts, of Dunedin, and others',²⁰⁴ meaning his was the 'Southern capital' mentioned earlier. Although commonly referred to as being 'from Dunedin',²⁰⁵ Margetts was no longer living there. He had been at Blue Spur, an Otago mining district, from 1871 to 1875, and then

¹⁹⁶ Te Aroha Correspondent, Waikato Times, 27 May 1886, p. 4.

Warden to Minister of Mines, 2 February 1887, Thames Warden's Court, Letterbook 1886-1893, p. 22, BACL 14458/2b; see also Memorandum attached to Peter Ferguson to Warden, 2 February 1887, Te Aroha Warden's Court, Applications 1887, BBAV 11289/11a, ANZ-A.

¹⁹⁸ For example, Te Aroha Warden's Court, Certified Instruments 1885, Assignment dated 18 September 1885, BBAV 11581/6a, ANZ-A; New Zealand Gazette, 29 April 1897, p. 954.

¹⁹⁹ Death Certificate of Frederick Stoughton Margetts, 16 January 1907, 1907/42, BDM.

²⁰⁰ Te Aroha Warden's Court, Certified Instruments 1884, Assignment of Allotment 4, Waiorongomai, 28 July 1884; Assignment of Allotment 122, Waiorongomai, 29 July 1884, BBAV 11581/5a, ANZ-A.

 $^{^{201}}$ Te Aroha Warden's Court, Rent Ledger 1881-1900, folio 158, BBAV 11501/1a, ANZ-A.

²⁰² Te Aroha Warden's Court, Certified Instruments 1885, Assignment dated 18 September 1885; BBAV 11581/6a, ANZ-A.

²⁰³ Peter Ferguson to Minister of Mines, 24 November 1885, Mines Department, MD 1, 00/1182, ANZ-W.

²⁰⁴ Auckland Weekly News, 1 November 1884, Supplement, p. 3.

²⁰⁵ Thames Star, 19 June 1886, p. 2.

was a sheepfarmer at nearby Tuapeka West, well inland from Dunedin, until the beginning of the 1880s.²⁰⁶ By 1885 his address was Eden View Road, Auckland,²⁰⁷ and from the mid-1890s if not earlier he was a farmer at Mangere.²⁰⁸ After investing in the New Era, he also invested in a mine at Addison's Flat near Westport, another at Coromandel, and in five in Ohinemuri.²⁰⁹ His only investment in non-mining companies in the Auckland region was in the Galbraith Iron and Steel Company in 1904.²¹⁰

Margett's financial resources are unknown, apart from owning 3,232 acres at Tuapeka in 1882 valued at £5,674.²¹¹ On his death in 1907, he left an estate valued at £1,687 13s.²¹² In February 1886, he told the Minister of Mines that, having advanced £500 to Ferguson, he was 'quite unable to help him further'.²¹³ In September 1886, Ferguson sold one two-hundreths of his interest in all his mining properties to him for £40.²¹⁴ Margetts was referred to as being the proprietor in that month, as one of the principal shareholders in the next, and as the principal shareholder in November.²¹⁵ He continued to be financially involved with Ferguson until his death, when his estate included 88 shares in Ferguson's Mining Syndicate Company.²¹⁶

²⁰⁶ Tuapeka Electoral Rolls, 1871, p. 12; 1872, p. 12; 1873, p. 11; 1875, p. 10; 1877, p. 9; 1878, p. 11; 1879, p. 11; 1880, p. 12.

²⁰⁷ Peter Ferguson to Minister of Mines, 24 November 1885, Mines Department, MD 1, 00/1182, ANZ-W.

²⁰⁸ New Zealand Gazette, 24 October 1895, p. 1703, 24 September 1896, p. 1620, 29 April 1897, p. 954; Observer, 22 April 1905, p. 18; for Emma Margett's holdings, see Index of Crown Grants no. 14, folio 403, Land Information New Zealand, Auckland.

²⁰⁹ New Zealand Gazette, 24 October 1895, p. 1703, 31 October 1895, p. 1732, 24 September 1896, p. 1620, 29 April 1897, p. 954; Thames Warden's Court, Register of Applications for Licensed Holdings and Special Claims 1896-1897, 1896, nos. 218, 219, BACL 14376/2a, ANZ-A.

²¹⁰ Company Files, BADZ 5181, box 187 no. 1138, ANZ-A.

²¹¹ A Return of the Freeholders of New Zealand, p. M 10.

 $^{^{212}}$ Testamentary Register 1906-1908, folio 64, BBCB 4208/6, ANZ-A.

²¹³ F.S. Margetts to Minister of Mines, 25 February 1886, Mines Department, MD 1, 00/1182, ANZ-W.

²¹⁴ Te Aroha Warden's Court, Certified Instruments 1886, Assignment dated 22 September 1886, BBAV 11581/7a, ANZ-A.

²¹⁵ Te Aroha News, 4 September 1886, p. 2, 23 October 1886, p. 2, 6 November 1886, p. 2.

 $^{^{216}}$ Probate of Frederick Stoughton Margetts, BBAE 1569/6078, ANZ-A.

His son, Frederick Ernest Margetts, was the amalgamator for Ferguson's battery. ²¹⁷ His appointment was not made through nepotism but because of his competence: in May 1886, he was presumably the Margetts who with Ferguson showed a reporter over the battery and explained the process that 'they' had adopted. ²¹⁸ He later held important posts in batteries at Tairua, Thames, and Kuaotunu, and was still involved with mining in 1919. ²¹⁹ Possibly his father had some knowledge of mining, for periodically he inspected the progress being made, on one visit 'superintending the breaking out of about twenty tons of ore' to be sent to Britain for testing. ²²⁰

GEORGE FRASER

George Fraser was described as 'one of the principal proprietors'.²²¹ His firm, variously Fraser and Tinne, the Phoenix Foundry, and George Fraser and Sons, had been a leading engineering firm in Auckland since 1864,²²² erected the first battery at Thames in 1869 and another in 1873.²²³ Through increased competition for labour and contracts in the 1870s, its profitability decreased considerably and its works were 'literally almost completely at a standstill' in mid-1880.²²⁴ In January 1881 Fraser visited Te Aroha hoping

²¹⁷ Te Aroha Electoral Roll, 1891, p. 22.

²¹⁸ Waikato Times, 27 May 1886, p. 4.

²¹⁹ New Zealand Gazette, 8 August 1895, p. 1239; R.A. Simpson, This is Kuaotunu, rev. ed., (Kuaotunu, 1979), pp. 10, 44; Auckland Star, 30 August 1897, p. 3, 10 September 1919, p. 5; Thames Advertiser, 10 April 1899, p. 4; Thames Star, 5 June 1905, p. 2; Bank of New Zealand, Thames Branch, Gold Dealer's Book, 1913, Bank of New Zealand Archives, Wellington.

²²⁰ Te Aroha News, 23 October 1886, p. 2, 6 November 1886, p. 2, 7 January 1888, p. 2, 21 January 1888, p. 2.

²²¹ H.A. Gordon to Minister of Mines, 5 May 1887, AJHR, 1887, C-5, p. 30.

²²² See Auckland Weekly News, 3 October 1868, p. 13, 11 April 1874, p. 11, 29 August 1874, p. 15, 1 November 1884, p. 26, Supplement, p. 3; Cyclopedia of New Zealand, vol. 2, pp. 370-371; Thames Star, 29 July 1901, p. 2; W.A. Laxon, 'George Fraser 1832-1905', Dictionary of New Zealand Biography, Te Ara – The Encyclopedia of New Zealand (updated 30 October 2012).

²²³ Auckland Weekly News, 21 September 1867, p. 7, 21 October 1871, p. 4, 20 December 1890, p. 46; Thames Advertiser, 11 June 1873, p. 3.

²²⁴ Submission by Fraser and Tinne, 27 May 1880, Royal Commission on Local Industries, Internal Affairs Department, IA 100/1, ANZ-W.

to erect a battery there,²²⁵ and would provide all the machinery for Ferguson's battery.²²⁶ Some of this had been partly invented by him. An American engineer, Alexander F. McKay, who supervised the erection of the battery and was its first manager,²²⁷ provided it with his patented pans.²²⁸ In 1888, Fraser applied for a patent for 'Fraser's Improved Grinding- and Amalgamating-pan', an improvement to McKay's roller pan that converted it 'into a continuous grinder', and another for 'Fraser's improved overflow grinding and amalgamating mill for treating gold, silver, copper, tin, lead, and other mineral ores'.²²⁹ In July that year, a report on his success with Whangamata ore stated that his firm had, 'by a long and exhaustive series of experiments, at last hit upon a process that can obtain high yields at a moderate cost'.²³⁰ In 1890, he sought a patent for a combination of the earlier inventions:

For the more effectually saving gold and silver from the raw ore or tailings in a machine formerly known as "McKay's Roller-pan," in converting it into a continuous grinder, with a continuous silent overflow from the centre of the mill; the invention to be known as "Fraser's Improved Grinding and Amalgamating Mill."²³¹

This reportedly saved 94 per cent of the same ore treated by the Cassel, or cyanide, process, 'and at less cost'. His new pan, operating at Thames, saved 'everything'.²³² Fraser considered 'he had hit on the right thing at last', as proved by 'several satisfactory tests', and took out patents in Australia and Canada.²³³

²²⁵ Thames Star, 15 January 1881, p. 2.

²²⁶ Te Aroha News, 16 April 1887, p. 3.

²²⁷ Inquest on Thomas Robinson, Justice Department, J 1, 1886/1050, ANZ-W.

 $^{^{228}}$ For details of the workings of these pans, with illustration, see AJHR, 1887, C-5, pp. 72, 74.

²²⁹ New Zealand Gazette, 19 April 1888, p. 463, 20 September 1888, p. 997.

²³⁰ Auckland Weekly News, 7 July 1888, p. 10.

²³¹ New Zealand Gazette, 16 October 1890, p. 1116.

²³² 'Obadiah', 'Shares and Mining', Observer, 14 March 1891, p. 15.

²³³ Minutes of Meetings of the Supervisors of George Fraser and Sons, 14 October 1890, 14 April 1891, 15 December 1891, Minute Book 1889-1893, MS 89/188, Library of the Auckland Institute and War Memorial Museum.

Fraser also invented 'an Improvement in the Consumption of Fuel and the Gases therefore, and for the Prevention of Smoke, and in the Apparatus or Mechanism employed therefore', as well as 'the Fraser Patent Flax-drum Dresser'. ²³⁴ The quality of his firm's machinery was reportedly unsurpassed, and he had invented 'some of the best appliances' used in the flax industry. He had

a great interest in mining and gold-saving machinery of all classes, watching every development and improvement closely, and experimenting at no small cost at his own laboratory and works, and his grinding and amalgamating pans are said to be now the most perfect mechanical appliances for gold-saving which exist. Mr Fraser has on his premises a splendid testing plant, with laboratory and all other appliances, which is almost in constant requisition for testing large or small samples of the ore.... In fact, this class of machinery is not only a specialty with Mr Fraser, it is his hobby, and he has achieved most satisfactory results.²³⁵

Fraser had a reputation for being a good employer and for his personal and commercial probity.²³⁶ He was a director of nine Hauraki companies between 1873 and 1895, the last being the All Nations, at Te Aroha.²³⁷ He had purchased 50 shares in the Aroha Company in 1880.²³⁸ He invested heavily in mines in other districts; for example, in 1882 having shares in four companies at Thames and in five the following year.²³⁹ It is not known how much capital he invested in the New Era Company: possibly, like Ferguson, his contribution was his expertise.

²³⁴ New Zealand Gazette, 9 June 1881, p. 745, 2 January 1890, p. 10.

²³⁵ Auckland Weekly News, 20 December 1890, p. 46.

²³⁶ For example, Auckland Weekly News, 1 November 1884, p. 26, Supplement, p. 3; Observer, 10 August 1901, p. 5; New Zealand Herald, 16 August 1901, Monthly Summary, p. 2.

²³⁷ Thames Advertiser, 14 July 1873, p. 2, 4 April 1877, p. 3, 12 November 1877, p. 2;
Coromandel Mail, 11 June 1881, p. 5; Company Files, BBAE 10286/10f, 10286/12g, ANZ-A;
A; Thames Star, 30 May 1883, p. 2; Company Files, BADZ 5181, box 72 no. 496, ANZ-A;
Te Aroha News, 3 July 1895, p. 2.

²³⁸ New Zealand Gazette, 30 December 1880, p. 1796.

^{New Zealand Gazette, 1 June 1882, p. 799, 8 June 1882, p. 837, 7 September 1882, p. 1236, 19 October 1882, p. 1523, 11 January 1883, p. 45, 22 February 1883, p. 268, 31 May 1883, p. 722, 14 June 1883, p. 799, 23 August 1883, p. 1213.}

OBTAINING ROAD ACCESS

To erect the battery, a road to transport machinery and supplies to the site was required. In January 1882, Ferguson had led the agitation for a proper track to sledge trial crushings out.²⁴⁰ In June 1884 he attended a council meeting on behalf of owners of mines below the tramway to ask for repairs to the lower road.²⁴¹ 'The debris from the tramway formation had not been removed, and the lower track was blocked up with roots of trees, etc'. An exchange with Firth was recorded:

Cr Firth said it was simply a question of means. The Council fully recognized the importance of the work, would the new Battery Company meet the Council half-way and provide half the cost?

Mr Ferguson said it was very unlikely. The Council had constructed the tramway to the present battery and why not construct a road for the benefit of the other leases?

Cr Firth informed Mr Ferguson that the leaseholders which he represented were not debarred the advantages of the present tramway. They could erect any number of batteries near the site of the present battery. The Council were at present in debt and had not got the money to undertake the work.

Mr Ferguson suggested that the best way for the Council to reduce its overdraft would be to construct this road and the increased revenue from the ground which would keep going up and up would soon reduce their overdraft. If the work was not carried out, the ground would be thrown up.... The men who had taken up the ground had been seriously handicapped from the beginning.

Cr Firth thought that at the present time they could not afford the money required. The only way out of the difficulty he could see was for the Company to construct the road, the Council to recompense them out of the rentals from the leases.

Firth's motion that Ferguson be reimbursed by up to £360 from goldfield revenue when that was received for clearing and widening the road was passed unanimously.²⁴² At a subsequent meeting at Waiorongomai, Ferguson argued that this revenue should be spent providing roads and tramways for mines situated below the tramway.

²⁴⁰ Thames Advertiser, 13 January 1882, p. 3.

²⁴¹ Piako County Council, Waikato Times, 28 June 1884, p. 2.

²⁴² Piako County Council, *Te Aroha News*, 5 July 1884, p. 2.

Referring to the council meeting, he 'complained bitterly of the opposition he had to contend with directly and indirectly, while seeking to have other batteries erected and the goldfield more generally opened up'. Being 'determined not to let the matter rest until there was more fair play', he would attend the next meeting. His proposal to spend revenue in this way was approved, and he was elected to a committee to obtain its acceptance. He did not in fact attend the next council meeting, which considered his letter requesting the widening of the road. Firth said that, as he would be visiting the field shortly, he 'might be able to arrange with the promoters of the new battery to assist them by carrying the battery material up the first grade of the tramway and then along the upper road to the battery site'. (This quite inappropriate route would have taken the machinery to a great height above the battery site.) Worried about undermining the tramway near the foot of Butler's Incline, Firth wanted consideration of forming the road deferred.

A slip of over 1000 tons of earth had previously occurred on the same spur requiring an extra expenditure of £2000 on the part of the council. It was at the bottom of this very spur that it was intended to carry out extensive earth works.- On the motion of Cr [Every] Maclean it was agreed that before anything be done in the way of widening the lower horse track as suggested by Mr Ferguson, the engineer, Mr [George Henry Arthur] Purchas,²⁴⁴ and the tramway manager, Mr [Henry Hopper] Adams,²⁴⁵ be instructed to report upon the matter.²⁴⁶

Purchas was the county engineer until the end of the month,²⁴⁷ and in mid-September Francis Pavitt²⁴⁸ replaced him as engineer for the Te Aroha Riding.²⁴⁹ Firth's statements caused one of his opponents, James Munro, a Waiorongomai blacksmith,²⁵⁰ to reject his claim that widening the lower road 'by two feet', the average required, would endanger the tramway. 'Any unprejudiced person can tell Mr Firth that there is as much, or as little,

²⁴³ Te Aroha News, 12 July 1884, p. 2.

²⁴⁴ See Cyclopedia of New Zealand, vol. 7, p. 58.

²⁴⁵ See paper on his life.

 $^{^{246}}$ Piako County Council, $\it Waikato\ Times, 2$ August 1884, p. 3.

²⁴⁷ Waikato Times, Piako County Council, 4 May 1882, p. 2, 30 August 1884, p. 2.

²⁴⁸ See Cyclopedia of New Zealand, vol. 2, p. 825.

²⁴⁹ Te Aroha News, 6 September 1884, p. 7.

 $^{^{250}}$ See $\it Te\, Aroha\, News,\, 31$ January 1885, p. 2.

likelihood of its endangering the tramway as there is of its endangering the stability of the Te Aroha "trig" station'. ²⁵¹

At a meeting held just after the council meeting, several people opposed Ferguson's request that the council build a private road to his battery, a motion opposing being carried unanimously. Ferguson denied the road was solely for his benefit: 'it would not be difficult for him to prove that no one in the district had done more' to make it a public road. 'He had used every argument he could think of' to induce the council to make it 'fit for traffic as far as the new machine site'. As it would cost 'at least £400 to make', it was 'only fair that his company should be refunded'.

As the County Council would do nothing, there was no other course for him to take than make application to the Warden, whom he knew will see fair play. There were men in the district, and perhaps in the room, who did not wish for a second battery, and who would throw every obstacle in the way to prevent its erection, but all their petty power would soon cease.²⁵²

When Ferguson applied for the right to widen and improve the road, an 'objection put by the County Council was fatal' and his application was declined. Kenrick urged him to ask the council to obtain a subsidy. ²⁵³ A correspondent reported that Ferguson made arrangements immediately to construct the road as speedily as possible. ²⁵⁴ Widening it continued as rapidly as the weather allowed. ²⁵⁵ The council meeting of 27 August was informed by Purchas that only the northern end of the tramway tunnel, being 'built on made ground', might be affected by widening the road beneath it. To avoid slips, he recommended a small bridge be erected, which would also remove an awkward bend in the road. Council approved this suggestion, Firth reminding his colleagues that he had been right to object. A letter from Ferguson asked for £400 to enable him to widen the road to eight feet and make it fit for traffic immediately:

²⁵¹ Letter from James Munro, *Te Aroha News*, 16 August 1884, p. 2.

²⁵² Te Aroha News, 2 August 1884, p. 2.

²⁵³ Te Aroha Correspondent, *Waikato Times*, 8 August 1884, p. 3; *Te Aroha News*, 9 August 1884, p. 2.

²⁵⁴ Te Aroha Correspondent, Waikato Times, 8 August 1884, p. 3.

²⁵⁵ Te Aroha Correspondent, Waikato Times, 28 August 1884, p. 2.

If the County Council would apply for a subsidy at once, there was, he thought, a great probability of some grant being made for the purpose of widening the road, and as he was now engaged in the work, and had incurred a large liability for the necessary expenditure, he thought he certainly had a right to expect that every assistance would be given to recoup him in a substantial manner. He had no desire to acquire sole right to the road, and would certainly expect to have the cost of improving it refunded him. He would point out that any application for a grant must be made without delay.

Council resolved to request £1,000 for improving goldfield roads and ${\rm tracks.}^{256}$

By late October, the road had been 'greatly improved.'257 Ferguson asked Pavitt to inspect it and to prohibit the running of sleighs, which cut it up.²⁵⁸ He decided that only sleighs fitted with wheels could cart firewood.²⁵⁹ At the December council meeting, although one councillor, William Philip Chepmell,²⁶⁰ complained about how the work had been done and doubted the road was fit to take up machinery, it was agreed that Ferguson be refunded the £423 he had spent. Purchas recommended another £100 be spent on culverts and small bridges, and Ferguson made the culverts.²⁶¹ His request that a surfaceman be appointed to keep the road in repair was first declined but then authorized in March, when machinery was being carted.²⁶²

The April council meeting was informed that heavy machinery had broken away and caused a slip, stopping all traffic. 'Some discussion ensued as to whether the council or Ferguson's company should do the work'. The chairman, Firth's brother-in-law, William Louis Campbell Williams, ²⁶³ 'was averse to the council bearing the expense of the work', for had the work been done 'properly this slip would not have taken place'. Other councillors agreed 'the council should not interfere'. Two farmers, Chepmell and

²⁵⁶ Piako County Council, Waikato Times, 30 August 1884, p. 3.

²⁵⁷ Waikato Times, 25 October 1884, p. 2.

²⁵⁸ Piako County Council, Waikato Times, 25 October 1884, p. 2.

 $^{^{259}}$ Piako County Council, Waikato Times, 27 November 1884, p. 2.

²⁶⁰ See New Zealand Herald, 18 October 1930, p. 14.

²⁶¹ Piako County Council, Waikato Times, 18 December 1884, p. 2, 12 February 1885, p. 3.

²⁶² Piako County Council, Waikato Times, 12 February 1885, p. 2, 12 March 1885, p. 2.

²⁶³ See paper on the Battery Company.

Charles Gould,²⁶⁴ 'did not think that the new company was responsible for the repair of the road. The road was entirely out of the company's hands. The work of widening the track had been completed, and the council's engineer had passed the work'. On the motion of another farmer, Every Maclean, 'it was agreed to inform the engineer that the council had no funds for the work'. ²⁶⁵

The July council meeting received a letter from the local Member of Parliament, John Blair Whyte, informing them that the Minister had promised two-thirds of the cost of making the road to the site upon receipt from the council of the remaining third. He recommended that they remit this money as soon as possible, and told them Ferguson had consented to accept £500 of the total cost despite it costing 'considerably' more. A letter was also received from Ferguson asking it to clear several slips along with an account for widening the road as per agreement, £360, making 11 large culverts, £33, and constructing a bridge over Diamond Gully, £30, a total of £423. When Gould considered there was an understanding making the council liable for a third of the cost, Firth 'said there was no such understanding. The council had no liability. They did not authorise it. The money was now forthcoming and they could help him to get it'. It was agreed to obtain the subsidy and give it to Ferguson.²⁶⁶ Pavitt reported that Ferguson had spent £520 5s and recommended the council supervise such work in the future, 'as considerable saving might be effected'. 267

In August, it was reported that Ferguson had 'greatly improved the lower hill track by inserting a substantial box culvert' at a place often affected by floods. ²⁶⁸ Ferguson later complained that between June and October the council refused to clear slips caused by heavy rain: 'I therefore had to borrow money and do the work'. ²⁶⁹ In November, he asked the Mines Department whether the subsidy had been paid to the council, 'if not kindly forward amount to them as I require the same urgently'. ²⁷⁰ On the same date, the council asked for the £331 18s owing so that it could pay Ferguson,

²⁶⁴ See paper on his life.

²⁶⁵ Piako County Council, Waikato Times, 2 April 1885, p. 2.

²⁶⁶ Piako County Council, Waikato Times, 25 July 1885, p. 3.

²⁶⁷ Piako County Council, *Te Aroha News*, 25 July 1885, p. 2.

²⁶⁸ Te Aroha News, 8 August 1885, p. 2.

²⁶⁹ Piako County Council, *Te Aroha News*, 13 February 1886, p. 7.

²⁷⁰ Peter Ferguson to Under-Secretary, Mines Department, 13 November 1885 (telegram), Mines Department, MD 1, 85/1443, ANZ-W.

'the work having been long since completed and certified by the County Engineer'. The council had paid him a total of £497 17s.271 It was authorized as the final payment for 'Ferguson's Battery Road'.272 The total subsidy received by the council was slightly higher, £333 6s 8d.273 The following February, Ferguson asked the council to refund the sum of £75 8s that he had spent clearing the road during the previous winter, and wanted another £1 4s for clearing fallen trees and slips caused by a bush fire. A decision was postponed until the county clerk made enquiries.²⁷⁴ A correspondent later wrote that Ferguson had 'made several much needed repairs', but the council, 'in their stiff-neckedness, refused to recoup him the outlay he had incurred, on the pretence that he had done the work without authority. That was very poor recognition of genuine public spirit on the part of men whose large expenditure of money will confer immense benefits on the district, the council included'. 275 However, in April 1889 when to enable him to cart machinery Ferguson needed slips removed and the rotten decking on the Diamond Gully bridge replaced, the council granted him £20.276

THE NEW ERA TRAMWAY

Ferguson's difficulties in obtaining financial assistance for the lower road were as nothing compared with those experienced when he needed to construct the branch tramway required to convey quartz to his plant. He informed the council in December 1884 that he was surveying a route and wanted to obtain the government's £2 for £1 subsidy. 'He thought the extension would enable the Council to run the tramway at a profit instead of a loss, as hitherto'. The council adjourned consideration to its next meeting while Pavitt finished surveyed the line.²⁷⁷

²⁷¹ Secretary, Piako County Council, to Minister of Mines, 13 November 1885, Mines Department, MD 1, 85/1443, ANZ-W.

²⁷² JT. Marshall to Under-Secretary, Mines Department, 13 November 1885, Mines Department, MD 1, 85/1443, ANZ-W.

²⁷³ H.A. Gordon to Minister of Mines, 5 May 1887, *AJHR*, 1887, C-5, p. 72.

²⁷⁴ Piako County Council, *Te Aroha News*, 13 February 1886, p. 7.

²⁷⁵ Te Aroha Correspondent, Waikato Times, 27 May 1886, p. 4.

²⁷⁶ Te Aroha News, 6 April 1889, p. 2, Piako County Council, 17 April 1889, p. 2.

²⁷⁷ Waikato Times, Piako County Council, 18 December 1884, p. 2, 13 January 1885, p. 2.

Before the January council meeting, the Te Aroha News urged its speedy construction and claimed it was 'difficult to imagine' any councillor would 'in any way oppose' it. 278 At this meeting, Ferguson submitted Pavitt's plans; 'there were no special engineering difficulties and good grades were obtained'. With two brakes in addition to the rails, sleepers, and wire rope, the cost of the 22-chain line was estimated at around £1,700. Gould was willing to see the work done at once if funds could be obtained from the government, but both he and another councillor, Robert Henry Fergusson, feared that, in Gould's words, 'they had already exhausted the liberality of the Government. They had been very sturdy beggars in the past and it now seemed as if they were at the end of their tether'. Williams thought the final cost would be twice that estimated. Denis Murphy, usually an advocate for goldfields interests, 279 who earlier had opposed the council extending the road to Ferguson's battery, 280 believed the tramway could be constructed more cheaply, but wanted it made during the summer. 'It was very important and they should lose no time when the funds were available. It was in the interests of the whole county that the resources of the field be developed', and without this connection the 'badly needed' battery 'would be useless'. 281 During 'very lengthy discussion' it was emphasized that the council's 'very impecunious position' prevented it 'directly granting any funds'.282 On Chepmell's motion, it was agreed to ask the government for £1,700 and to request Kenrick to explain the line's 'necessity'. On Gould's motion, they agreed to start the work immediately funds were available. On Murphy's motion it was agreed that the tramway hands should construct it when not sending down quartz.²⁸³ But while the council had a meal it was 'discovered that it was unlikely that the grant applied for would be secured', for they had asked for the entire cost, not a contribution.²⁸⁴ Ferguson again asked for assistance, stating that 'rather than have unnecessary delay he would undertake to raise the needful funds himself, provided the council

²⁷⁸ Editorial, *Te Aroha News*, 10 January 1885, p. 2.

 ²⁷⁹ For example, *Te Aroha News*, 16 August 1884, p. 2, 23 August 1884, p. 2, 7 March 1885,
 p. 2, Piako County Council, 14 November 1885, p. 2.

²⁸⁰ Te Aroha News, 2 August 1884, p. 2.

²⁸¹ Piako County Council, Waikato Times, 17 January 1885, p. 2.

²⁸² Piako County Council, *Te Aroha News*, 17 January 1885, p. 2.

²⁸³ Piako County Council, Waikato Times, 17 January 1885, p. 2.

²⁸⁴ Piako County Council, *Te Aroha News*, 17 January 1885, p. 2; Piako County Council, *Waikato Times*, 17 January 1885, p. 2.

would guarantee him the amount with ordinary interest at some future date'. ²⁸⁵ He offered to construct the tramway for £1,700, the council to pay interest at ten per cent until it could pay the principal. This suggestion was declined because the council 'would virtually be borrowing money from Mr Ferguson and they could not legally do this without a poll of the ratepayers'. When Ferguson then offered to spend £600 of his syndicate's money while the council applied for a subsidy of £1,200, it was pointed out that 'the Government would not be likely to subsidise a private speculation'. The council was required to call for tenders, and it was 'very likely' Ferguson 'would not be the lowest tender. After the matter had been gone into at some length, it was allowed to stand over' for another month. ²⁸⁶

The immediate response was a unanimous request by a Waiorongomai meeting that the council construct it. Bernard Montague, a contractor, ²⁸⁷ stated that more systematic work was needed than was being done by tramway workers in their spare time. ²⁸⁸ The February council meeting was advised by Edmund Cookson, the tramway manager, ²⁸⁹ that his men were working on the line when they had no quartz to send down; he recommended that they cut timber along its route to shape into sleepers. Kenrick promised that he would, if requested, 'report favourably upon the council's application'. ²⁹⁰ Whyte also promised to support an application for £1,200, and hoped that the new Minister of Mines, William Larnach, 'would not prove as obdurate as his predecessor, when previous application had been made', ²⁹¹ a reference to Rolleston's refusal to continue subsidizing the county tramway.

At the January council meeting, Firth 'as a friend strongly urged upon Mr Ferguson, the advisability of erecting his battery at the foot of Butler's Spur' because the connection with the county tramway 'would be far less expensive'. Ferguson could not have changed the site, for the plant was partly constructed, but it was indeed a more expensive one. The *Te Aroha*

²⁸⁵ Piako County Council, *Te Aroha News*, 17 January 1885, p. 2.

²⁸⁶ Piako County Council, Waikato Times, 17 January 1885, p. 2.

²⁸⁷ See paper on his life.

 $^{^{288}}$ Waikato Times, 3 February 1885, p. 2; Te Aroha News, 7 February 1885, p. 7.

²⁸⁹ See paper on the Piako County tramway at Waiorongomai.

²⁹⁰ Piako County Council, Waikato Times, 12 February 1885, p. 2; Piako County Council, Te Aroha News, 14 February 1885, p. 2.

²⁹¹ Piako County Council, Waikato Times, 12 February 1885, p. 2.

²⁹² Piako County Council, *Te Aroha News*, 17 January 1885, p. 2.

News wanted the council to assist, fearing the battery would be completed long before the linking tramway.²⁹³ George Wilson, the mining inspector,²⁹⁴ told Kenrick that as the distance was 'not great' it would be cheaper to connect the plant with the county tramway 'than to erect wire tramways to the mines', and recommended assistance be provided.²⁹⁵

Preliminary work started during March, Cookson anticipating that the formation of the six chains of the upper grade would be finished by the end of that month.²⁹⁶ Late in May, when Larnach met the councillors after inspecting the battery site, Firth told him the tramway was needed and asked for assistance.²⁹⁷ £100 had already been spent, and if the government provided £1,000, the council would provide £500.²⁹⁸ Larnach declared the work 'had his hearty sympathy, and he would see what could be done; government might partly assist by supplying rails'.²⁹⁹ He told a deputation of miners and townspeople that, if funds were available, he would provide a £2 for £1 subsidy. James Mills warned that residents 'were afraid if it got into the hands of the County Council, it might be a very long time ere the connection was made', and suggested that Ferguson receive the money 'and hold the tramway when completed' until the council was 'in a position to take it over'.³⁰⁰

At its subsequent meeting, the council did not act as Firth had promised. Firth did not suggest taking up Larnach's offer of £1,000, and instead of supporting a special rate to meet the council's debts preferred obtaining a special loan, which other councillors considered was illegal. Williams 'felt sure that the new battery would be wiped out in about two years' time, judging from its situation. In the course of two years when its roots and stumps would rot, the overhanging ground would come down in an avalanche and bury everything beneath it', as had occurred near Butler's Spur two years previously. Making the line 'would tend to distort and loosen

²⁹³ Editorial, *Te Aroha News*, 28 February 1885, p. 2.

²⁹⁴ See paper on his life.

²⁹⁵ George Wilson to Harry Kenrick, 7 February 1885, Te Aroha Warden's Court, Letterbook 1883-1900, p. 61, BBAV 11534/1a, ANZ-A.

²⁹⁶ Piako County Council, *Waikato Times*, 12 March 1885, p. 2; *Te Aroha News*, 14 March 1885, p. 2.

²⁹⁷ Te Aroha News, 30 May 1885, p. 2.

²⁹⁸ Waikato Times, 28 May 1885, p. 2.

²⁹⁹ Te Aroha News, 30 May 1885, p. 2.

 $^{^{300}}$ Te Aroha News, 30 May 1888, p. 7.

the earth, and the slip would just be a matter of time'.³⁰¹ A Te Aroha correspondent, 'informed on good authority that there is not the slightest foundation' for this statement, 'regretted that private enterprise should receive so little encouragement from the powers that be, and that such statements should be circulated which can only have the effect of driving capital from the place'.³⁰² A Waiorongomai correspondent described 'great indignation' being expressed there 'at the continued obstructive policy of the Firth element':

We have had a great many prophecies during the last twelve months from the same source, all of which have been false, and the latest - that "the new battery is to be swept away by an avalanche, so that it would be money wasted to construct a tramway to it" - will not be an exception, for the site on which the new battery is built is hewn out of the solid rock, and there is no overhanging ground above it. Something must be done to put a stop to the mean and selfish treatment dealt out by the Piako County Council to the spirited owners of the new battery. They have had to fight against those in power, who have used their positions to promote selfish ends. 303

The Waikato Times correspondent tried sarcasm:

The mantle of the prophet seems to have fallen upon the shoulders of the chairman of the Piako County Council, who foretells coming events with a confidence worthy of the seers of old. Whether the shoulders are worthy of the mantle remains yet to be seen. It is a trite saying that such personages are never honoured in their own country, the inference being that they must seek elsewhere for believers in their utterances. The role of a prophet of evil is however, not that one is calculated to bring the prophesier much honour anywhere and whatever may be thought of the chairman's prediction in his own part of the county his somewhat astonishing assertion regarding the impending destruction of the battery ... has certainly not raised him in popular estimation here. Prophets must, of course, see things differently from ordinary mortals, and therefore it is not surprising that the coming catastrophe should never have been dreamt of by the benighted individuals who are at work on the doomed property, and who have lived for months in the locality where the dire event is to take place. But what is the use of

³⁰¹ Piako County Council, Waikato Times, 30 May 1885, p. 3.

³⁰² Te Aroha Correspondent, *Thames Advertiser*, 5 June 1885, p. 2.

³⁰³ Waiorongomai Correspondent, Thames Advertiser, 9 June 1885, p. 3.

prophesying to a perverse and stiff necked generation? These people have ideas of their own regarding the source from which the worthy prophet drew his inspiration, and merely laugh at him and his utterances. Briefly stated, the alarmist views of the chairman as to the destruction of the battery are looked upon by most persons here as having been promulgated for a purpose. which purpose was that another handle might be given to certain members of the council who, for selfish motives, as is alleged, persistently opposed the construction of a branch tramway to connect the battery in question with the mines. But whatever the opinions of Councillor Williams may be as to the safety of that property or his motive in giving expression to them, the erection will still be proceeded with, and let us hope that it may long exist to falsify his predictions, and to bring profit to the spirited owners who have carried on the work in the face of the bitterest opposition.³⁰⁴

A 'well attended' meeting held in Te Aroha in mid-June protested at the council not accepting the proffered £1,000. Mills, the convener, moved that, in the light of their discussions with Larnach, the meeting 'express its indignation' at the councillors not accepting his 'generous offer'. This was passed unanimously after Mills drew attention to how Williams, 'in conjunction with his brother-in-law', Firth, had 'opposed any action' to construct the line because of the 'selfish desire' of the Battery Company to retain its monopoly.³⁰⁵ A more complete report of Mills' speech was published:

There was no occasion for him to say much in order to show they had good grounds for feeling indignant with the County Council. The Thames County had received promises of assistance from the Hon. the Minister of Mines [at the] same time as the Piako County had and had taken the necessary steps to avail of it. But what had the Piako County done? They had got a prophet in the council, his latest prophesy being that ere long the new battery would be buried by a slip; but this gentleman had prophesied before, and his prophecies proved false. A year or so ago he prophesied that the receipts from the tramway would in a short time be doubled. They might dismiss his prophecies as of no account. But what of the great Ohia [Josiah] who comes out of his way and interviews Mr Larnach, who promises to assist the work of making a connection to the new battery, and then is bare faced enough to go and oppose the striking of a rate, thereby effectually

³⁰⁴ Te Aroha Correspondent, Waikato Times, 6 June 1885, p. 2.

³⁰⁵ Te Aroha Correspondent, *Thames Advertiser*, 20 June 1885, p. 3.

preventing that very connection from being gone on with. Surely they could not believe such a course as this was pursued without a motive, viz., the determination to still have a monopoly. This same gentleman, although acting in such a way as to effectually prevent the connection to the new battery being gone on with, nevertheless had no compunction to try and get the council to sanction the making of a track round by the Buck reef, where the family owned another mine.... Was such unblushing effrontery to be quietly submitted to? Was the track he was personally interested in to be made, and the connection to the new battery to be knocked in the head?... He considered it was disgraceful on the part of the Council to absolutely take no steps, and make no effort whatever to have the connection to the second battery made, especially when such liberal assistance had been promised them by Government.³⁰⁶

One local correspondent considered that, 'when the personnel of the Council is considered, it is not difficult to arrive at a conclusion', and agreed the Battery Company wanted to retain its monopoly.³⁰⁷ At the subsequent meeting, his explanation was confirmed. Every Maclean objected to being asked to construct the line because it was 'a work of purely private character'. Williams, ignoring the assistance given to the tramway that enabled his brother-in-law's battery to operate, agreed: 'I would not raise a shilling of rates for such a purpose'.³⁰⁸ The *Te Aroha News* protested that, whereas £18,000 had been spent on the tramway to Firth and Clark's battery, the council would not even guarantee £500 to enable one to be built to the new plant.³⁰⁹

The meeting of 18 June had unanimously supported a petition asking the government, in the light of the council's failure to take up the offer of £1,000, 'thereby delaying the progress of this district', to 'make some fair provision' to enable the residents to 'receive the benefit of the Minister's generous offer' by allowing the syndicate to construct the line upon the terms offered to the council, the line to become county property once it recouped the money spent on it. It was argued that the district would 'suffer a great loss unless the work be proceeded with immediately, as the plant, now on the point of completion, cannot be utilized, and must remain idle until the tramway is constructed'. The petitioners were certain the council

³⁰⁶ Te Aroha News, 20 June 1885, p. 2.

³⁰⁷ Te Aroha Correspondent, *Thames Advertiser*, 19 June 1885, p. 3.

³⁰⁸ Piako County Council, Waikato Times, 27 June 1885, p. 3.

³⁰⁹ Editorial, Te Aroha News, 20 June 1885, p. 2.

had 'at present no intention of proceeding with this important work'. ³¹⁰ Late that month Ferguson went to Wellington to support the petition, signed by 173 residents, and on 1 July, when the Goldfields and Mines Committee discussed it, he was supported by Whyte. On the motion of William Fraser, the former warden, ³¹¹ who had some investments at Waiorongomai, ³¹² because of 'the great importance to the District of the works referred to' the committee 'strongly' urged the government to support the request on the terms suggested. ³¹³

Immediately news was received that the committee had recommended the grant, the Te Aroha News congratulated Ferguson. He 'had much to contend with, and the amount of opposition thrown in his way, and the many adverse influences brought to bear, would have completely disheartened many men, and caused them to have left the district in disgust'. 314 A local correspondent wrote that 'the persistency with which he has followed up his object, in the fact of the strong opposition he has met with from certain members of the Piako County Council, fully entitles him to this reward of his labours'. 315 The Thames Advertiser congratulated 'our Waiorongomai neighbours on the success which has attended their efforts to break through the monopoly that has nearly strangled the life out of their district'. 316 When Ferguson returned, he 'was met by a large number of friends, and received their congratulations on the success of his mission to Wellington'. Steps were being taken to give him 'a complimentary reception at an early date'. 317 The Te Aroha News wrote that his 'persistence and energy' had 'gained him many new friends, who, although differing from his views on many important subjects, nevertheless could not but admire the

 $^{^{310}\,\}mathrm{Te}$ Aroha Correspondent, Thames Advertiser, 20 June 1885, p. 3.

³¹¹ See paper on Harry Kenrick.

Te Aroha Warden's Court, Register of Te Aroha Claims 1880-1888, folios 176, 192, 202,
 BBAV 11567/1a; Register of Licensed Holdings 1881-1887, folios 69-71, BBAV 11500/9a,
 ANZ-A; New Zealand Gazette, 30 December 1880, p. 1797, 20 January 1881, p. 111.

Wellington Correspondent, Thames Star, 29 June 1885, p. 2; Gold Fields and Mines Committee, Petition 102, considered at meeting held on 1 July 1885, Legislative Department, LE 1, 1885/3, ANZ-W; 'Reports of the Goldfields and Mines Committee', AJHR, 1885, I-3, p. 1.

³¹⁴ Editorial, *Te Aroha News*, 4 July 1885, p. 2.

³¹⁵ Te Aroha Correspondent, Waikato Times, 9 July 1885, p. 3.

³¹⁶ Thames Advertiser, 4 July 1885, p. 3.

³¹⁷ Te Aroha Correspondent, *Thames Advertiser*, 21 July 1885, p. 3.

spirited manner in which he has refused to be turned aside from his purpose, although having had so much bitter opposition to contend against'. When it was decided to have a banquet in his honour, 'the public generally evinced a warm sympathy ... and subscriptions readily flowed in'. ³¹⁸

Held in the Waiorongomai Hotel, the banquet was attended by from 50 to 70 people. 319 'Most of the principal residents of both townships' were there, and 'the proceedings altogether were of a very pleasing character'. Mills, the chairman, 'referred in eulogistic terms' to Ferguson's 'pluck and perseverance in successfully carrying out, in the face of the strongest opposition', the erection of his battery and tramway.³²⁰ The opposition had 'been enough to daunt a hero', and he 'hoped many more' will follow his example 'in the interests of this place'. The toast was 'drunk amidst great and prolonged applause, and cheers for Mrs Ferguson'. 321 In reply, Ferguson said he was 'much gratified to know that his efforts were so highly appreciated by his fellow townsmen'. 322 It was 'a difficult matter to express his heartfelt feelings at the honour and great pleasure they had done to him by according him such a warm and hearty reception'. 323 He 'assured his hearers that the House was in full sympathy with the miners of Waiorongomai, and that there was every desire to redress the wrongs under which they had laboured for so long'. 324

On 7 July, Ferguson informed Larnach that the Railways Department would provide him with 20 tons of rails plus fastenings; the cost, £143 2s 6d, should be deducted from the £1,000. This was agreed to, on the understanding that the tramway would be handed over to the county when it recouped Ferguson's third of the total cost.³²⁵ On 27 July, Ferguson completed the specifications and sent them to Wellington with

³¹⁸ Te Aroha News, 25 July 1885, p. 2.

Te Aroha Correspondent, Thames Advertiser, 25 July 1885, p. 3; Te Aroha Correspondent, Waikato Times, 25 July 1885, p. 2.

³²⁰ Te Aroha Correspondent, Waikato Times, 25 July 1885, p. 2.

³²¹ Te Aroha News, 25 July 1885, p. 2.

³²² Te Aroha Correspondent, Waikato Times, 25 July 1885, p. 2.

³²³ Te Aroha News, 25 July 1885, p. 2.

 $^{^{324}\,\}mathrm{Te}$ Aroha Correspondent, Thames Advertiser, 25 July 1885, p. 3.

³²⁵ Peter Ferguson to Minister of Mines, 7 July 1885, plus memorandum of 30 July 1885, Mines Department, MD 1, 00/1182, ANZ-W.

accompanying plans.³²⁶ The completion date was 1 November, the total cost being estimated as £1,584 12s 3d.³²⁷ The *Te Aroha News* described its main features:

The first section, connecting with the county tram [near the foot of the May Queen incline, will be a horse grade 4 chains long to first break, which will be a horizontal one; then a self-acting grade of 5 chains, next 1 1/2 chains of level, at [the] end of which a vertical break will be erected, and 11 chains of self-acting grade to the bottom. At the bottom there will be one chain of level line terminating at the turn-table, which will be erected on trestle work. We may here remark that a great many people have been predicting all sorts of evil in the event of the wire rope giving way or trucks breaking loose, as it was asserted they would certainly tumble right over the cliff and crash right into the battery. The engineer (Mr Pavitt), however, did not overlook the possibility of breakages when preparing the plans, and has taken every precaution to prevent an accident such as that referred to occurring, by arranging for the bottom of the tramway and turntable to be considerably on one side of a direct line with the battery, and a branch line of some 30 to 40 feet at right angles will carry trucks to the hopper, which will convey the quartz to the stone breaker in the battery. The steepest part of the line will be of a grade equal to one in two. The rails are all steel, 28lb to the yard. The wire rope used will be of 3/4-inch diameter. County trucks will be used to convey quartz. 328

Pavitt drew up the plans, called for tenders, and supervised the contractors. Early in August, the first two contracts for the formation were let, to be completed by 1 September, otherwise a penalty of £3 per contractor per week would be imposed.³²⁹ In mid-August, tenders were invited for the third and final stage.³³⁰ One correspondent expected the line

³²⁶ As with the county tramway, the plans were not retained in the Mines Department files, and must be assumed to have been destroyed in the Hope Gibbons fire in Wellington of 1959.

³²⁷ Peter Ferguson, Tramway to New Battery Waiorongomai: Formation and Permanent Way Contract: Specification and Schedule, 27 July 1885; Peter Ferguson to Under-Secretary, Mines Department, 25 August 1885, Mines Department, MD 1, 00/1182, ANZ-W

³²⁸ Te Aroha News, 12 September 1885, p. 2.

³²⁹ Te Aroha News, 8 August 1885, p. 7, 17 October 1885, p. 2.

³³⁰ *Te Aroha News*, 15 August 1885, p. 7.

to be completed in two months at the most.³³¹ After Ferguson requested a progress payment of £500 in late August, Henry Andrew Gordon, the Inspecting Engineer for the Mines Department, reported that it was going ahead rapidly, though he considered 'a much more economical and better Brake could be substituted'.³³² His recommendation that the brakes should be more like those on the county tramway was adopted,³³³ and payment was made on 27 October.³³⁴

At the end of August, it was estimated that up to 8,000 cubic yards of 'stuff' would have to be shifted when forming embankments and cuttings. The contractors were making good progress, 'although the weather for several days of late was against them'. Most of the rails had been delivered, and the contractors were ready to deliver some of the sleepers. 335 Better weather early in the following month meant that on 12 September 'excellent progress' was reported, the tramway being 'well advanced'. 336 At the beginning of October it was reported that heavy rain had carried away a large quantity of earth from the northern side of one incline, which had been almost completed.337 This report prompted Ferguson to deny there had been any slips. He claimed that the contractors, Edward Gallagher, a coach proprietor, ³³⁸ and Thomas Lawless, 'were trying to form an embankment by building up the sides with stones and timber, instead of giving a sufficient slope as required by their specifications'. Their 'faulty work' meant that when it rained the mullock sank and the embankment gave way. The newspaper was glad to hear the damage was not as serious as it had been informed by one of the contractors.³³⁹ One week later, it reported that heavy rain had caused the 'made' portion of Gallagher and Lawless' section to 'very considerably subside', and on McCabe and party's section 'large

³³¹ Te Aroha Correspondent, Waikato Times, 13 August 1885, p. 4.

³³² Peter Ferguson to Under-Secretary, Mines Department, 25 August 1885; H.A. Gordon to Under-Secretary, Mines Department, 1 September 1885, Mines Department, MD 1, 00/1182, ANZ-W.

³³³ Te Aroha News, 29 August 1885, p. 2.

³³⁴ Memorandum of 27 October 1885, Mines Department, MD 1, 00/1182, ANZ-W.

³³⁵ Te Aroha News, 29 August 1885, p. 2.

³³⁶ Te Aroha News, 12 September 1885, p. 2.

³³⁷ Te Aroha News, 3 October 1885, p. 2.

³³⁸ See paper on his life.

³³⁹ Letter from Peter Ferguson, with editorial comment, *Te Aroha News*, 10 October 1885, p. 2.

quantities of earth have filled up the cutting in various places'.³⁴⁰ Owen McCabe, the contractor, later became a farmer.³⁴¹ Both parties of contractors suspended work and requested extra payments, which Ferguson refused until their contracts were completed. He then took over all three contracts, intending to complete the line using day labour once their work was inspected.³⁴² A local correspondent gave a different account: rather than Ferguson taking over from incompetent contractors, the latter had thrown up their contracts because the tramway was 'not being made in the right place, and consequently cannot stand'. They believed it 'should have been made down the middle of the spur instead of the side', and that money was 'being thrown away'.³⁴³

By late October, Ferguson employed over 20 men to complete the line as soon as possible.³⁴⁴ It would take him until the following March to complete the formation and platelaying.³⁴⁵ Once finished, the tramway was reported to be 'complete in every particular' and would not require repairing 'for years to come'. At its terminus, a wooden shoot had been constructed to deliver the quartz to the stonebreaker.³⁴⁶ Six trucks would be used on the branch line and the same number on the main line; it was estimated to cost £2 per day in wages and require one horse to operate.³⁴⁷

Its completion led to renewed conflict with the council, which in August 1885 refused to give him its spare turntable because it might need it. 348 An exchange of correspondence between the council and the Mines Department in November began with a telegram from Williams to the under-secretary: 'Govt having dealt direct with Mr Ferguson & he not

³⁴⁰ *Te Aroha News*, 17 October 1885, p. 2.

³⁴¹ See Waikato Electoral Roll, 1887, p. 14; Te Aroha Electoral Roll, 1890, p. 20; Te Aroha News, 13 February 1886, p. 6, 5 March 1887, p. 2, 21 August 1889, p. 2; Waikato Times, 16 October 1906, p. 2.

³⁴² Te Aroha News, 17 October 1885, p. 2.

³⁴³ Te Aroha Correspondent, Waikato Times, 15 October 1885, p. 2.

³⁴⁴ *Te Aroha News*, 24 October 1885, p. 2.

 ³⁴⁵ Te Aroha News, 7 November 1885, p. 2, 21 November 1885, p. 2, 9 January 1886, p. 2,
 ¹³ February 1886, p. 2, 27 February 1886, p. 2, Piako County Council, 13 March 1886, p. 2.

³⁴⁶ Thames Advertiser, 13 May 1886, p. 2.

³⁴⁷ Piako County Council, Waikato Times, 19 December 1885, p. 3; Te Aroha News, 19 December 1885, p. 2.

³⁴⁸ Piako County Council, Waikato Times, 22 August 1885, p. 2.

having reported to Council as to receipt of Subsidy or progress of work Council completely ignorant of the present Condition of the tramway extension'.³⁴⁹ Instead of leaving his officials to reply, Larnach sent a personal telegram:

You should be more ingenuous in referring to arrangement between Government and Mr Ferguson. Government in dealing direct with the latter were carrying out the recommendations of the Goldfields Committee based upon the fact that your County did not seem disposed to treat Ferguson fairly. If even justice is done there should be no difficulties between your County and Mr Ferguson.³⁵⁰

Five days later, the county clerk informed Larnach that, as the council had never been told the terms of the agreement, it could not certify if the work was done in accordance with these.³⁵¹ The under-secretary pointed out to Williams that the council was only required to inspect and approve the work done before final payment was made, and sent a copy of the terms whereby the council would take over the tramway after it had paid the battery owners all the money they had spent. He reminded Williams that £3,000 had been granted to the council's tramway 'on the understanding that the County would deal fairly with Mr Ferguson'.³⁵²

On the same date, Ferguson informed Larnach that the tramway had cost four times the amount estimated by Pavitt. He had arranged with Margetts to advance him £500, the balance of the subsidy, and asked that this be refunded directly to Margetts.³⁵³ In January 1886, Ferguson informed that department that, owing to what he called Pavitt's 'mistakes and unauthorized alterations', the work had 'cost far more than his

³⁴⁹ W.L.C. Williams to Under-Secretary, Mines Department, 5 November 1885 (telegram), Mines Department, MD 1, 00/1182, ANZ-W.

³⁵⁰ W.J.M. Larnach to W.L.C. Williams, 6 November 1885 (telegram), Mines Department, MD 1, 00/1182, ANZ-W.

³⁵¹ Charles Tuck (County Clerk) to Minister of Mines, 13 November 1885, Mines Department, MD 1, 00/1182, ANZ-W.

³⁵² Under-Secretary, Mines Department, to Chairman, Piako County Council, 24 November 1885, Mines Department, MD 1, 00/1182, ANZ-W.

³⁵³ Peter Ferguson to Minister of Mines, 24 November 1885, Mines Department, MD 1, 00/1182, ANZ-W.

estimate'.³⁵⁴ The following month, when prompting Larnach to send him the £500, Margetts wrote that Ferguson's bank overdraft for the tramway was due early in March. 'He is not in a position to meet it and I am <u>quite</u> unable to help him further unless balance of subsidy be paid me as soon as possible. The tramway is just on the point of completion and our funds are exhausted'. He also considered that a great amount of additional work and money had been caused by mistakes.³⁵⁵

Despite Ferguson informing Larnach that the final cost was four times the estimate, George Wilson's report late in January gave a total that, while higher than that originally intended, was far lower than Ferguson claimed. £1,477 6s 2d had been spent, unpaid accounts were £259, and from £120 to £160 would have to be spent over the next three to four weeks to complete it, giving a total of approximately £1,896. Wilson considered it be 'as well constructed as the nature of the country' permitted and that no slips were likely. As for Ferguson's complaints about Pavitt, he agreed that 'a considerable amount of labour might have been saved if the tramway had been more carefully laid off in the first place'. 356 Gordon agreed, for the original estimate of £1,500 would have sufficed 'if the tramway had been properly laid out, but they, like many more companies with limited means, did not pay the attention to survey and plans that they deserved'. 357 Which was an unfair comment: it was surely reasonable for them to rely on the guidance of the county engineer. Once completed, the department paid the balance of the subsidy on 18 March 1886, just after being informed by Wilson that the council refused to take it over. 358

The report of the December council meeting had summarized the letter from the under-secretary, including his reminder that £3,000 had been provided for their tramway on the understanding that it would deal fairly with Ferguson; the earlier joust with Larnach was not reported. As work

³⁵⁴ Peter Ferguson to Under-Secretary, Mines Department, 2 January 1886, Mines Department, MD 1, 00/1182, ANZ-W.

³⁵⁵ F.S. Margetts to Minister of Mines, 25 February 1886, Mines Department, MD 1, 00/1182, ANZ-W.

³⁵⁶ George Wilson to Under-Secretary, Mines Department, 26 January 1886, Mines Department, MD 1, 00/1182, ANZ-W.

³⁵⁷ H.A. Gordon to Minister of Mines, 5 May 1887, AJHR, 1887, C-5, p. 72.

³⁵⁸ George Wilson to Under-Secretary, Mines Department, 13 March 1886 (telegram); Memorandum of 18 March 1886, Mines Department, MD 1, 00/1182, ANZ-W.

had not completed, the matter stood over.³⁵⁹ At its March meeting, a letter was received from Ferguson stating it was almost completed and asking the council to purchase it at cost price. Firth 'said the Council had nothing to do with it, both the Government and the Goldfields Committee had gone past them in the matter'.³⁶⁰ Councillor Maclean 'said they wanted to see no more tramways and thought the council should have nothing to do with it'. His motion that the offer be declined was seconded by Gould, and carried.³⁶¹ The next issue of the *Te Aroha News* contained a letter from Ferguson correcting Firth's 'misleading statement':

If Mr Firth, in making that statement, is trying to show that the Government and Gold Fields Committee were not justified in their action, just turn over your file of last year's papers, and you'll see for over a year previous to the Hon. Mr Larnach's visit to this district, repeated applications have been made by me to the Piako County Council to have the said tramway made, to all of which the answer was "no funds," so many thousands had been spent in making a tramway to one battery the County couldn't do any more. Eighteen months ago an offer was made to construct the tramway for the council, provided the council would pay back interest on the outlay. That also was declined. Then when Mr Larnach was here the Piako County Council was represented by a deputation consisting of Messrs J.C. Firth, Williams (chairman of the Council), and Gould. Mr Firth was spokesman, and was successful in getting nearly all he asked for, conditionally on a county rate being struck. Mr Firth next brought onto the notice of the Minister the necessity of forming a connection to the new battery.... Did Mr Firth at the council meetings afterwards by his action, or rather inaction, prove that he was sincere in hoping the Government would assist the work? When the matter was being discussed, Mr Firth said never a word, but Cr Williams, and his other friends did - yea, even prophesied that "the new battery would be wiped out in two years by an avalanche, and bury everything beneath it," and therefore it would be money wasted to make the connection, and it was decided not to have anything to do with it.

He asked whether the council should 'be allowed to obstruct and handicap enterprises in which some of the councillors are not personally

³⁵⁹ Piako County Council, Waikato Times, 19 December 1885, p. 3.

³⁶⁰ Piako County Council, *Te Aroha News*, 13 March 1886, p. 2.

³⁶¹ Piako County Council, Waikato Times, 13 March 1886, p. 2.

interested'. 362 Unabashed, councillors at their next meeting resolved that, as they had not authorized the construction, 'they should recognize no claim with respect thereto', and also decided that Ferguson would be liable to any damage to trucks.³⁶³ Because he had been forced to meet all the cost above the subsidy, in April Ferguson received permission from Kenrick to mortgage the tramway because its cost had exceeded the subsidy by about £1,000.364 In June, when asking Larnach for a further subsidy of £500, he provided details of the amount he had been forced to pay and his expectation that his plant would save much more gold and silver than the current process. The additional subsidy would mean that he could complete its erection, whereby 'a great boon will be conferred upon the Colony'. 365 His request was declined. 366 In December, Fraser made one last attempt, telling Larnach that the council's refusal to take over the tramway and to pay the difference between its cost, which he estimated to be over £2,400, and the subsidy had 'burdened us with the outlay of a large amount of money' which they could have used to open up unworked ground and create work for unemployed miners.³⁶⁷ After this plea was ignored, no further requests for assistance were made to either council or government. The New Era Company had paid £1,400 of their limited capital to construct their tramway, whereas the Battery Company had not had to pay anything towards the tramway to its plant.

ERECTING THE BATTERY

By late June 1884, the water race had been surveyed 'and a contract let for clearing the timber half a chain in width along its course, some 60 chains in length'. Being 'about 300 feet above the machine site', the fall

³⁶² Letter from Peter Ferguson, *Te Aroha News*, 20 March 1886, p. 3.

³⁶³ Piako County Council, *Te Aroha News*, 17 April 1886, p. 2.

³⁶⁴ Peter Ferguson to Harry Kenrick, 12 April 1886; memorandum by Harry Kenrick, 13 April 1886, Te Aroha Warden's Court, General Correspondence 1886, BBAV 11584/3a; Register of Applications 1883-1900, 41/1886, BBAV 11505/1a, ANZ-A.

 $^{^{365}}$ Peter Ferguson to Minister of Mines, 14 June 1886, Mines Department, MD 1, 00/1182, ANZ-W.

³⁶⁶ Under-Secretary, Mines Department, to Peter Ferguson, 5 July 1886, Mines Department, MD 1, 00/1182, ANZ-W.

³⁶⁷ George Fraser to Minister of Mines, 18 December 1886, Mines Department, MD 1, 87/1442, ANZ-W.

would provide '60 horse-power nearly all year round'. The following month, the length of the race was given as about 50 chains. It picked up water from three tributaries of the Waiorongomai Stream upstream from the site plus Diamond Gully Creek, downstream. Two feet six inches deep, the same as its width at the bottom, at the top it was five feet wide. It was to be completed in one month. 369

Fraser made and tested all the machinery in Auckland before sending it by steamer to the Waiorongomai Landing for carting up the lower road. 370 A track was made to lower it from the road to the site, where from December 1884 onwards McKay supervised its erection. 371 'Considerable difficulty was experienced in sinking and getting a secure bottom for the wheel-pit', but by February this had been accomplished and 'the timber work for the wheel and for other parts of the machinery' was 'well-advanced' and it was expected that crushing could start in two or three months. 372 By the end of the month, the *Te Aroha News* considered it necessary to refute the rumours that the battery would not be completed, 373 rumours presumably prompted by the slower-than-expected construction. The framework was up, the shingling of the roof had been started, and the boarding would be done during the coming week. 374 All the machinery had been conveyed successfully; the heaviest piece weighed three and a quarter tons. 375

In August, a correspondent wrote that the battery would be ready to operate in about three weeks. 'Great credit' was due to McKay for lowering the machinery to the site 'without a single breakage'. But there was one fatality. Late in May, Thomas Robinson, a carpenter aged 42, died after

³⁶⁸ Te Aroha News, 28 June 1884, p. 2.

³⁶⁹ Te Aroha News, 19 July 1884, p. 2.

³⁷⁰ Te Aroha News, 25 October 1884, p. 2, 28 February 1885, p. 7.

 $^{^{371}\} Te\ Aroha\ News,\,13$ December 1884, p. 2; see also 8 November 1884, p. 2.

 $^{^{372}}$ Te Aroha Correspondent, $Waikato\ Times,$ 3 February 1885, p. 2, 28 February 1885, p. 2.

³⁷³ Editorial, *Te Aroha News*, 28 February 1885, p. 2.

³⁷⁴ *Te Aroha News*, 28 February 1885, p. 7.

³⁷⁵ Te Aroha News, 21 March 1885, p. 2, 11 April 1885, p. 2.

³⁷⁶ Te Aroha Correspondent, *Thames Advertiser*, 29 August 1885, p. 3.

being struck by a falling stone breaker.³⁷⁷ His death 'threw a great gloom over the whole place' because he was 'widely known and highly respected'.

Deceased and several others were engaged in assisting to raise the stone breaker (a large iron casting weighing upwards of three tons) from the floor of the battery to a place where it is to be fixed a little above the newly-erected furnace, and about 50 feet above the battery site. After the stone breaker had been raised about four feet, the hawser to which the tackle was attached suddenly parted with the strain, and the large mass of iron fell to the bottom of the skids with a fearful crash, and, canting a little to one side, struck Robinson, crushing part of his chest, breaking five of his ribs, and injuring him so severely that he died within ten minutes from the time the accident occurred. Another man named Edward Burton³⁷⁸ was standing on top of the stone breaker at the time it fell, but escaped with only a slight wound in the leg. Mr McKay, the manager in charge of the machinery, was also employed at the time near where the stone breaker fell, and had a very narrow escape. The tackle was well tried when raising the mass off the floor, and was thought to be sufficiently strong and perfectly safe, and no one apprehended that anything would give way; however the hawser, which was an eight-inch one, made of coir, snapped as already stated, although it appeared to be sound and strong. The deceased at the time of the accident was in the act of assisting Burton to take up a portion of the weight by hauling in an endless chain tackle fixed to a beam immediately above, and hooked on to a strop at the lower end of the stone breaker. When the accident occurred, Robinson was apparently about three feet from the skids, and no doubt would have escaped serious injuries if the stone breaker had laid where it had landed, but the foot of the breaker was on the opposite side to where Robinson was standing, and being considerably longer than the other side it landed on the longest part first, and immediately canted over about two feet, thus striking Robinson before he could get away.³⁷⁹

At the inquest, McKay and Burton, who was a labourer, deposed that the coir rope was strong enough, but Johann Myers denied this, for it had had considerable use; he considered that a new rope could have taken the

³⁷⁷ Death Certificate of Thomas Robinson, 22 May 1886, 1886/45, BDM; Inquest on Thomas Robinson, Justice Department, J 1, 1886/1050, ANZ-W; Waikato Times, 25 May 1886, p.

^{2;} Te Aroha News, 29 May 1886, p. 2.

³⁷⁸ See *Thames Star*, 2 May 1887, p. 2.

³⁷⁹ Te Aroha News, 29 May 1886, p. 2.

strain. Recalled, McKay admitted there were signs of it being rotten where it broke, while Ferguson explained it had not been tested; Fraser had told him it would stand a strain of 25 tons. The jury found nobody was to blame. 380

On 28 August, the large main driving pulley, made from over 1,000 feet of kauri, was placed in position.³⁸¹ By early September, all the machinery apart from a boiler was in place, as were 200 of the 600 feet of piping used for the water race. The *Te Aroha News* considered the battery was 'certainly a very fine one, and the owners richly deserve a handsome return for their pluck and enterprise in erecting so valuable a plant ... in the face, too, of so much opposition and cold water thrown on the movement'.³⁸²

On 24 December, a bushfire almost destroyed it. McKay and Fraser, who were at the site.

had a rough time of it for several hours, as the flames on several occasions gained possession of the dry material and boards lying around the battery. Mr Ferguson and others who were on the hillside above were unable to render any assistance for some time, as a regular sheet of flame and heavy volumes of smoke effectually shut them off until the fire had somewhat exhausted itself. Fortunately no damage was done to the building or works in progress in connection therewith, beyond the burning of some boards. 383

By late February 1886, after the low river level delayed their arrival, half the water race pipes were in place. 'Everything should be ready for a start next month'. Everything was 'of first-class quality, and put together in the best manner'. In March, the *Thames Advertiser* noted that, having been 'in course of erection for some two years' and 'greatly delayed' by the 'difficulty' of conveying material, it was ready to start crushing in about three weeks' time. Ultimately 'roasting furnaces for the preparatory treatment of some classes of ore' would be erected, 'but these must necessarily be dispensed with' while quartz from nearby mines was

³⁸⁰ Inquest on Thomas Robinson, Justice Department, J 1, 1886/1050, ANZ-W.

³⁸¹ Te Aroha News, 29 August 1885, p. 2.

³⁸² Te Aroha News, 12 September 1885, p. 2.

³⁸³ Thames Advertiser, 28 December 1884, p. 3; Te Aroha News, 2 January 1886, p. 7.

³⁸⁴ *Te Aroha News*, 27 February 1886, p. 2.

tested.³⁸⁵ Ferguson informed Larnach in June that the plant had cost £12,000;³⁸⁶ seven months later he told the warden that he and his three partners had spent over £10,000 erecting the plant, £1,400 on the tramway, £900 on the water race, and £480 purchasing the New Era, Premier, and Inverness claims.³⁸⁷

EXPLANATIONS AND ANTICIPATIONS

Even before the plant was erected, some doubted its suitability. A Te Aroha correspondent wrote in early April 1884 that the battery 'was looked upon by many as a doubtful undertaking, and there were misgivings as to its going on at all, but everyone is now hopeful'. 388 In June, as there were 'doubts in the minds of some' directors of mining companies about its 'gold saving capabilities', managers of 'some of the most important mines' were instructed to select seven pounds of ore, 'not too poor, not too rich, but a fair average quality', to be tested in Auckland. The Te Aroha News considered it would be 'difficult' to 'select from a reef, 5 or 6 feet in width, a fair sample in such an infinitesimal quantity', and warned that 'such tests only tend to mislead those who have them made, and they are of little or no practical use, for they invariably give much larger returns than can possibly be obtained, even with the most careful manipulation, under the ordinary process of treatment'. It noted that the process, to be 'of the most complete description', was anticipated to lose 'a much smaller percentage of gold' than by 'the ordinary method. The machinery will be driven by a hurdygurdy wheel, capable of working up to a hundred horse-power'. Fraser and Tinne, otherwise the Phoenix Foundry, had the contract to erect it within four months.389

Wilson reported that it would be able to reduce and amalgamate about 20 tons per day and its owners were confident that 'a far greater quantity of fine gold' would be saved compared with the current berdan process.³⁹⁰ As it

³⁸⁵ Thames Advertiser, 4 March 1886, p. 3.

³⁸⁶ Peter Ferguson to Minister of Mines, 14 June 1886, Mines Department, MD 1, 00/1182, ANZ-W.

³⁸⁷ Peter Ferguson to Warden, 2 February 1887, and appended note, Te Aroha Warden's Court, Application for Special Claim, BBAV 11582/3a, ANZ-A.

³⁸⁸ Te Aroha Correspondent, Waikato Times, 5 April 1884, p. 3.

³⁸⁹ Te Aroha News, 28 June 1884, p. 2; see also Waikato Times. 1 July 1884, p. 2.

³⁹⁰ George Wilson to Harry Kenrick, 9 April 1885, AJHR, 1885, C-2, p. 30.

was expected to save 80 per cent of the bullion at a cost of from £1 10s to £2 per ton, Ferguson claimed quartz lodes 'at present unremunerative' could be worked.³⁹¹ He told Larnach that 'the finest laboratory tests' demonstrated that the ordinary process saved 'only a very small percentage' of gold, instancing one made at Waiorongomai by Alexander Montgomery of the Thames School of Mines which extracted only 54.8 per cent. His plant would 'meet the exceptional treatment required to extract the gold and silver from the ore, when the metals are in a fine state'. 392 Kenrick wrote that much was 'expected from the very complete plant of McKay pans and crushers', which had been tested 'on a small scale' at Karangahake 'very successfully' and were expected to 'save a large percentage of gold at less than the present cost of treatment'. A furnace was being erected to roast ore before its treatment in the pans. 393 This furnace, which would calcine all refractory ores, was decided on shortly before the battery started work, the Te Aroha News applauding the owners of 'this splendid battery' making their plant 'as perfect as possible, regardless of expense'. 394

Experts with no financial connection with the company praised the battery. One, Professor James Black, ³⁹⁵ after his inspection in December 1885, described it 'as a really splendid plant, which should prove a great acquisition to the district, as it would be capable of saving the silver in the ore. Similar batteries were worked in Nevada on stone similar to ours, with great success'. ³⁹⁶ The process was based on 'an American principle' for treating silver ores similar to those at Waiorongomai, and was a modification of one that had 'been successfully at work for years in Nevada. It deserves every encouragement, and, being in the hands of enterprising men, one of whom', Alexander McKay, 'has had large experience in similar operations, it will doubtless get a fair trial'. ³⁹⁷ He did not promise success was guaranteed. One year later, in a letter to Larnach written after

³⁹¹ George Wilson to Harry Kenrick, 10 April 1886, AJHR, 1886, C-4A, p. 6; H.A. Gordon to Minister of Mines, 4 May 1886, AJHR, 1886, C-4, p. 2.

³⁹² Peter Ferguson to Minister of Mines, 14 June 1886, Mines Department, MD 1, 00/1182, ANZ-W.

³⁹³ Harry Kenrick to Under-Secretary, Mines Department, 27 April 1886, *AJHR*, 1886, C-4A, pp. 5-6.

³⁹⁴ Te Aroha News, 3 April 1886, p. 2.

³⁹⁵ See Cyclopedia of New Zealand, vol. 4 (Christchurch, 1905), p. 154.

³⁹⁶ Waikato Times, 15 December 1885, p. 2.

³⁹⁷ J.G. Black to Minister of Mines, 24 May 1886, AJHR, 1886, C-4B, p. 8.

Ferguson explained his pan-amalgamation process to him, another leading expert, James Park, 398 agreed with Ferguson that, whereas the normal process could not extract the silver, his method should. Ferguson had shown him 'some small cakes of Waiorongomai bullion got on a small scale in Auckland by the Fraser and Ferguson pan process'; the results were 'very satisfactory'. 399

George Fraser and Sons, who provided all the machinery, erected a similar, experimental, plant in Auckland in 1886. According to the 1887 *Handbook of New Zealand Mines*, they had

gone through the whole operation with great success. They have a reverberatory furnace capable of roasting a charge of 800lb, and have overcome the difficulty of dealing with the refractory ores. Tests made gave the following results: 800lb of burnt ore from the New Find Reef, Waiorongomai, gave 18dwt of gold, of the value of £3 12s, and 12dwt of silver, of the value of 2s 4 3/4d, being at the rate of £10 8s 7 1/4d per ton; or 65 per cent of fire-assay. 600lb of ore from the big reef on the Premier lease, Waiorongomai (almost worthless under the ordinary battery process), gave a return at the rate of £1 2s 9d per ton; and 250lb of ore from the same reef gave a return at the rate of £1 18s 8d per ton.... Steps are being taken to enable the New Era Reduction Works to cope with the difficulty in the same satisfactory manner by the erection on a large scale of reverberatory furnaces at their works, which are exceedingly well suited for an introductory plant of the kind, sixty horse-power being procurable by a Pelton wheel nine months in the year, and never less than twenty horse-power during summer. Firewood is plentiful, so that the cost of treatment even by steampower would be reduced to a minimum. 400

In May 1886, two reporters were shown over the battery, and another visited in the following month. The road to the site, 'cut on an excellent grade', ⁴⁰¹ traversed impressive scenery:

The track was in very bad order, particularly since the fall of recent showers of rain, and we had to step carefully along some very slippery places which invited a fall sheer down into the rocky

³⁹⁸ See Cyclopedia of New Zealand, vol. 2, p. 478; vol. 4, p. 155.

³⁹⁹ James Park to Minister of Mines, 27 December 1886, Mines Department, MD 1, 87/794, ANZ-W.

⁴⁰⁰ The Handbook of New Zealand Mines (Wellington, 1887), p. 324.

⁴⁰¹ Special Correspondent, 'Notes of a Trip to Te Aroha', *Thames Star*, 19 June 1886, p. 2.

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depths below. The scenery in the gorge was very wild and grand. Thick bush covered the mountains on both sides, amongst which we saw large numbers of kauri rikas and giant tree-ferns. At the very bottom a small mountain torrent dashed along a bed of boulders.... Just before reaching the battery, we crossed a slabbridge, then along the side of a high bank down the sides of which the bye-wash from Ferguson's water-race pours in the form of a waterfall, the water running across the track into the gorge below. We then caught sight of the battery buildings, and, really, we stood and gazed in amazement at the nature and situation of the structures.

It was 'imperative' to keep the track in good order to reduce the cost of transit of goods and ore. At the end of the track was

an immense receptacle, called the hopper, into which are emptied the truck-loads of stuff that come by a tramway from the reefs. The hopper is constructed of heavy timber, raised about twentyfive feet, with a great screen at the end of the rails protecting the trucks from falling headlong into the gorge, which is here nearly perpendicular. The stuff passes through into two shoots, which, a little lower down, merge into one of large dimensions leading, at an inclination of 80deg, into receivers two hundred feet below. The shoot is very solid and firmly planted along the face of the precipice. By the side of the shoot is a water-main, eighteen inches in diameter, which conducts the water from the race above to the battery. We worked our way down below, by the side of the shoot and grasping the battens which strapped it. So abrupt was it, that it seemed as though a false step, or yielding of the loose earth, would send us through space. About half-way down, on a ledge cut out of the rock, a large iron furnace is in course of erection. Below this on an excavated site stands the principal building covered over with a broad, spreading roof.⁴⁰²

At the end of the water race shoot a Pelton wheel driven by 300 feet of pressure drove all the machinery. 403

The entire absence of the stampers, with their deafening noise, so familiar in quartz mining, is at once detected here. In place of them we see a simple piece of machinery placed about 18 inches above the floor like an open mouth provided with a set of massive iron jaws. The stone is thrown into this mouth and the jaws moving back and forward silently crushes it and lets it fall below.

⁴⁰² Te Aroha Correspondent, Waikato Times, 27 May 1886, p. 4.

⁴⁰³ Special Correspondent, 'Notes of a Trip to Te Aroha', *Thames Star*, 19 June 1886, p. 2.

Seventy tons of stone can be masticated by this machine in eight hours. When the whole of the plant has been erected, this will in reality constitute the third process through which the stone will pass. It is intended to erect a receiver higher up, which will divide the quartz into smaller parts. From that it will pass into the furnace below it, to go through a process of fusion in order to destroy all the refractory ores it contains.⁴⁰⁴

This iron furnace was lined with ordinary brick 'faced with the very best fire brick procurable. There are four tuyere holes for the blast', the abundant firewood around the site providing the fuel. After being 'thoroughly desulpherized', the ore was cooled by a jet of water before going down a shoot to a second stonebreaker in the fourth storey of the battery building. After this machine, Baxter's Patent Knapping Motion, had reduced the quartz to the size of maize, it went to the grinding pan on the third floor.

This pan, which revolves, has two 3-ton wheels, which revolve on their own axles by the motion of the revolving pan. The portion of the pan between the edge and the centre where the wheels are is full of round holes punched in the iron, and as the quartz drops in the pan a fixed flange rakes it under the roller, and another flange rakes it over the holes, when the fine portions drop through the holes, and the coarser pieces are again raked under the wheels by the flange. After the quartz passes through the grinding-pan it has the appearance of coarse meal.⁴⁰⁷

Next, the ore went down to the McKay pans on the second floor. Each of the eight pans could treat '3cwt of ore per hour. The ore is placed in the pans in charges and reduced as fine as silk-dressed flour', a process 'precisely similar to the grinding machinery used for reducing flint in the glass-works in England' and 'not used in any other mining battery in the world'. A small boiler provided steam for these pans. 408

⁴⁰⁴ Te Aroha Correspondent, Waikato Times, 27 May 1886, p. 4.

⁴⁰⁵ Own Correspondent, *Thames Advertiser*, 13 May 1886, p. 2; Special Correspondent, 'Notes of a Trip to Te Aroha', *Thames Star*, 19 June 1886, p. 2.

⁴⁰⁶ Te Aroha Correspondent, Waikato Times, 27 May 1886, p. 4.

 $^{^{407}}$ Special Correspondent, 'Notes of a Trip to Te Aroha', *Thames Star*, 19 June 1886, p. 2.

⁴⁰⁸ Own Correspondent, *Thames Advertiser*, 13 May 1886, p. 2; Te Aroha Correspondent, Waikato Times, 27 May 1886, p. 4; Special Correspondent, 'Notes of a Trip to Te Aroha', *Thames Star*, 19 June 1886, p. 2.

We next enter a large chamber about eighty-feet long, one half of which is built at an elevation, like a stage. On this platform are erected the amalgamators, of which there are eight, some of them working. Each amalgamator is in the form of a large round iron tank, and contains at the bottom thirteen mullers, like iron buckets, revolving on a centrifugal motion round the tank, each muller with an independent revolution. These contain the quicksilver, and when grinding the tank is filled with water, and the pulverized stuff is thrown in. Steam is then introduced through a pipe, and the whole process is performed at a high degree of temperature, as the quicksilver acts more readily when well heated. The stuff is, at this stage, reduced to the fineness of snuff. From the amalgamators it passes through a small flue, with cold water playing on it, to large square tanks, or settlers, of which there are four, erected on frames on the lower portion of the chamber. These settlers receive all the sludge from the amalgamators, and the amalgam all settles at the bottom, from whence it is slowly ejected by specific gravity through a tube, and drops in [to] small enamelled iron buckets. It is then ready for the retort. The residium is then panned off by hand, and the quicksilver is returned to its original state.... In the process of amalgamation a large admixture of salt and sulphate of soda is used in order to precipitate the neutral elements in the minerals. The quartz contains a large proportion of sulphites. 409

At the end of the process, the tailrace to the creek was 'constructed on the buddle principle', with tailings being 'run over copper plates, and concentrated in a succession of wooden boxes or flumes before being finally being allowed to run to waste'.⁴¹⁰

One correspondent stressed that, unlike other batteries, there was 'no resort to stampers, receiving boxes, blankets, berdans, sluices, or tail-boxes, nor is there any sludge channel carrying away a large percentage of the precious metal. The whole plant is of the latest design, and very expensive'. The 'pluck, perseverance, and energy displayed by' Ferguson and Margetts was praised, for, 'should their anticipations be realized, the vast savings effected by their process will be an immense boon to the whole of the field, and will create a marked change in its prospects'. The plant, the second correspondent noted, was 'the only one of its kind in the Australian

⁴⁰⁹ Te Aroha Correspondent, Waikato Times, 27 May 1886, p. 4.

⁴¹⁰ Te Aroha Correspondent, *Waikato Times*, 27 May 1886, p. 4; Special Correspondent, 'Notes of a Trip to Te Aroha', *Thames Star*, 19 June 1886, p. 2.

⁴¹¹ Te Aroha Correspondent, Waikato Times, 27 May 1886, p. 4.

Colonies'. Costing 'something like £12,000', no expense had been spared, and 'the whole structure has been finished in a manner that reflects great credit' upon McKay, who had supervised the work. Ferguson was praised by overcoming 'the innumerable obstacles thrown in his way by interested parties'. The third one stressed that

The whole of the plant, with the exception of the stone-breaker, has been manufactured at the Phoenix Foundry, Mechanics Bay, Auckland, and is of the very best description. The beveled gearing for working the pans and amalgamators alone is a sight worth seeing. It is all carefully erected underneath the principal floor of the battery so that the chances of accidents are reduced to a minimum, and any requisite repairs can be easily effected. The calcining furnace has been erected under the superintendence of Mr A. Young from Messrs Fraser and Sons Foundry. There are also two retorting furnaces with an ample supply of retorts, so that it will be observed the plant is a most complete one in every respect.

Fraser and others had been experimenting 'on small parcels at his private laboratory' in Auckland 'to determine the most economical and suitable chemicals' required. The ore was believed to 'abound with tellurides', requiring special treatment and therefore 'extra expense and trouble'. The battery was 'arranged and erected' from Fraser's plans, and the work was 'of great magnitude', reflecting 'credit on all concerned, more especially the plucky shareholders, who, while working for their own benefit, are also solving a problem which may ultimately prove of great public benefit'.⁴¹³

THE NEW ERA BATTERY AT WORK

Wide public interest was illustrated by the government publishing a lithograph of the building and plans of both the plant and the McKay pans.⁴¹⁴ McKay was the first manager.⁴¹⁵ On 3 April 1886, the *Te Aroha*

⁴¹² Own Correspondent, *Thames Advertiser*, 13 May 1886, p. 2.

⁴¹³ Special Correspondent, 'Notes of a Trip to Te Aroha', *Thames Star*, 19 June 1886, p. 2.

⁴¹⁴ Lithograph of New Era Battery, *Handbook of New Zealand Mines* (Wellington, 1887), facing p. 323; plans of 'Ferguson's New Era Works Waiorongomai. Improved Silver & Gold Saving Plant', and McKay Pans, *AJHR*, 1887, C-5, after p. 72.

⁴¹⁵ Inquest on Thomas Robinson, Justice Department, J 1, 1886/1050, ANZ-W.

News announced that crushing would start in a few days time. 'The first general steady work will not commence until after the erection of the furnace, but any small parcels of free milling ore will be treated after next week'. 416 Not till 22 April was the battery fully at work, as the *Waikato Times* described:

The starting of Ferguson's Battery, an event which has been long looked forward to, and in connection with which there have been so many disappointments, is now an accomplished fact. After a few preliminary tests the machinery was fairly set in motion on Thursday last, and has since then been kept going continuously during ordinary working hours. On Friday the plant was inspected by a number of the townspeople, and by several visitors who came by the excursion train on that day, and the opinion generally expressed is that the whole of the arrangements are excellently adapted for the work to be performed. The machinery will thoroughly reduce over 200 tons of ore weekly, but though nothing can be said yet positively as to its gold-saving capabilities, there seems to be very little room for doubt that in the treatment of such quartz as exists on the Waiorongomai field, where the gold as a rule is unusually fine, it will prove to be greatly superior to the older method in use there. If it accomplishes what is expected of it a revolution will be effected in goldmining in this district, and the dullness that has so long prevailed in that industry will be succeeded by a period of steady prosperity.417

The many visitors all agreed it was 'a splendidly finished piece of work'. 418 The warden was 'agreeably surprised to find so complete and valuable a plant'. 419 As the stone breaker and roller pan worked 'admirably' in crushing Vulcan ore, there could be 'no doubt whatever that this method of reducing quartz' was 'a great improvement on the ordinary stamper process'. The first tests enabled the machinery to be adjusted. 420 Improvements and additions were made while tests proceeded. The roasting furnace was erected during May, the stonebreaker was shifted to be above it, and the furnace was readied for full operation in late June. 421 Fraser

⁴¹⁶ Te Aroha News, 3 April 1886, p. 2.

⁴¹⁷ Waikato Times, 27 April 1886, p. 2.

 $^{^{418}}$ Waiorongomai Correspondent, Waikato Times, 1 May 1886, p. 2.

⁴¹⁹ Te Aroha News, 15 May 1886, p. 2.

⁴²⁰ Te Aroha News, 24 April 1886, p. 2.

⁴²¹ Te Aroha News, 15 May 1886, p. 2, 22 May 1886, p. 2.

came from Auckland to observe the latter working 'admirably' on ore from different mines. By working three shifts, about 30 tons 'could be calcined daily'. Most of the 'outside machinery' had been roofed over, the main exception being the upper stonebreaker. Henry Christian Wick, 422 not previously mentioned, had 'returned and taken charge of the amalgamating department' and was having a house erected 'in the vicinity of the battery'. 423 Wick had formerly owned and managed batteries at Thames and Ohinemuri, and was generally regarded as an expert. 424 During July, he made 'several important alterations', for 'no expense' was 'being spared to make it complete in every particular'. Although able to test ore from any mine, Wick planned further changes to make it 'much more suitable for the class of stone likely to be received'. 425

To enable results to be compared, during August the rival batteries tested 30 trucks of ore from the New Find. The quartz was taken just as it was broken out, 'and so far as anyone was able to judge, the quartz supplied to each was of equal quality'. In both cases, the cost of treatment was £1 per truck, but whereas Ferguson's plant produced bullion valued at £75 9s 10d, Firth and Clark's obtained £115 12s 6d. The New Zealand Herald considered this result 'should not be regarded as a condemnation of the new process', for Fraser's 'small plant similar to the New Era battery' had 'saved double the amount of bullion from the same stone'. Fraser believed 'the deficiency shown in the battery tests was due to the want of skill' by those operating it, 426 and immediately after the results were published claimed they were 'calculated to mislead and create unduly a bad impression as to the usefulness' of his plant. He believed the Battery Company had received details from the Bank of New Zealand in Thames of his results, an aboveaverage return of £3 14s 7d per truck, several days before their own return was revealed. The latter surprised 'many outsiders, for they managed to get

⁴²² See paper on Henry Hopper Adams.

⁴²³ Te Aroha Correspondent, *Waikato Times*, 1 July 1886, p. 3; *Te Aroha News*, 3 July 1886, p. 3.

⁴²⁴ See *Thames Advertiser*, 19 September 1873, p. 2, 8 July 1874, p. 2, 6 July 1876, p. 3, 15
July 1876, p. 3, 11 August 1876, p. 3, 29 August 1876, p. 2, 19 January 1879, p. 3, 5 April 1878, p. 3, 11 October 1881, p. 3, 1 November 1881, p. 3; *Thames Star*, 1 October 1881, p. 2; letter from George Fraser, *New Zealand Herald*, 30 August 1886, p. 3; *Te Aroha News*, 18 September 1886, p. 3; *Cyclopedia of New Zealand*, vol. 2, p. 442.

⁴²⁵ Te Aroha News, 10 July 1886, p. 2, 24 July 1886, p. 2.

⁴²⁶ New Zealand Herald, 28 August 1886, p. 6.

nearly double the amount of gold which they usually get from the same quantity of stuff. I am very sorry that I did not obtain a sample of the stuff for assay', which would have proved much superior ore had been sent to the Battery Company. He cited fire assays of ore delivered to the New Era to prove it contained a large quantity of silver but had been treated as if gold-bearing.

Now, if the experts connected with Messrs Firth's battery can show how they manage to save so much gold out of the same kind of stuff, as supplied to the New Era plant on this occasion, they will charm the hearts of the shareholders of the New Find, for they must think that a new era has commenced, and that they will now have some prospect of soon getting another dividend.⁴²⁷

His provocative letter produced an immediate response from Adam Porter, 428 chairman of directors of the New Find Company, who detected an insinuation that 'there has been something little short of a conspiracy to damn' Fraser's plant. He warned against having faith in assays and small-scale trial crushings, and by quoting company records proved that the Battery Company had not received better ore and that some of Fraser's figures were 'imaginary'. The New Era had received 'the best stone' extracted 'for a considerable time'. He accused Wick of breaking an agreement to do the retorting at the same time as the Battery Company's ore was treated and to deposit the gold in the bank in Te Aroha. To prove the directors did not wish to be unfair to Fraser, they were 'prepared to let him have 50 trucks of stone from all parts of the New Find mine at the same value as is returned to them by the other battery, so that he can save as much as he likes, and the whole of the profit over the other battery will be his own'. 429

Fraser replied that his party had not wanted to publish the results, knowing 'full well' it was 'only a matter of a very short time and all doubts will be set to rest as to the advantages of the pans over battery crushing both for gold and silver ores', particularly ones 'containing a high percentage of silver'. His process had been used successfully in America for years, with returns of from 60 to 95 per cent whereas the best stamper batteries produced no more than 20 to 30 per cent.

⁴²⁷ Letter from George Fraser, New Zealand Herald, 30 August 1886, p. 3.

⁴²⁸ See paper on his life.

⁴²⁹ Letter from Adam Porter, New Zealand Herald, 1 September 1886, p. 3.

One would naturally expect that every citizen of this province would hail with pleasure the prospect of such improvements, and would at least throw no obstacles in the way, if they did not give a helping hand to bring them about. But I am sorry to have to say that, at least in Waiorongomai, such kindly feeling does not exist, for those very individuals who have had the management of the so-called fair trial test predicted long ago that our plant would be a failure, and have thrown every obstacle in the way they possibly could to prevent our getting a road or a connection with the tramway. The opposition to the New Era plant has been notorious, and but for the Hon Mr Larnach, who granted £1000 towards making the tramway, the connection would not have been made.

He responded to Porter's jibe about a conspiracy that Porter might 'call it what he pleases. I have my opinion of it, and I am not alone in that'. Defending the taking of assays, he referred again to the accurate ones he had cited, 'even at the risk of making him a little sick'. His machinery was 'so constructed that samples can be taken every few minutes, if desirable, from the ground quartz as it leaves the large roller pan, and before it goes into the grinding and amalgamating pan', meaning samples were 'not taken from a stone here and another there' but provided 'the fairest average sample' possible. By quoting his company's fire assays and the results from Firth and Clark's battery, he claimed it was 'utterly impossible' for the latter to have got the return claimed. Rather than take up Porter's offer to visit the New Find Company's office to 'wade through the documents', he used the annual balance sheet to prove his point. He also quoted the much better result obtained from 800 pounds of New Find quartz he had treated in his Auckland experimental plant. In concluding, he declined Porter's offer of 50 truckloads 'with thanks', as arrangements were being made to provide 'plenty of quartz'.430

The next letter to be published had been written by Hugh McLiver, manager of the New Find, 431 to his directors. The ore he had sent came from the Arizona run of ore, which he had expected to be of a good grade, being from the lode that produced good results for Fraser in Auckland. He did not treat Fraser's battery 'in any way but fairly and honestly as instructed', especially as Wick, now his manager, had 'frequently told me and others

⁴³⁰ Letter from George Fraser, New Zealand Herald, 4 September 1886, p. 3.

⁴³¹ See paper on the New Find mine.

that he was perfectly satisfied I had given him every fair play in value and quantity of dirt'. Fraser 'must know that his battery', even before these trials, 'had not proved satisfactory, the owners of quartz treated being far from satisfied with the results'. It did 'not require much skill to decide which plant will return the best results'.

Take, first, the course of treatment at Firth and Clark's stamp battery. First, we find that in stamper boxes gold is being saved, as silver [mercury] is always used in them, and a large percentage of gold is always obtained in them after each crushing. Then comes the copper plates, from which more than half the gold saved is obtained. Then the silver ripples, from which a further percentage is saved. Then comes large ripples and blankets, from which, if carefully washed and attended to, a further large percentage of gold is obtained after the same being treated in battery berdans. By the above continuous saving and catching four-fifths of gold saved is obtained, and then comes the tailing plant berdans, through which all the tailings not saved in the battery are treated, which return the balance saved. Let us even now go so far as to say that some of the tailings are allowed to run away or wasted, which should not be the case when properly looked after. You will see, by four-fifths of the gold being already saved from the dirt in the battery, as stated, the loss is not large should it occur through want of care; whereas, in the New Era battery, no gold is attempted to be saved till the dirt is put in the pans. As you are aware, the quartz passes first through the large stone breaker, then the furnace, then the small stone breaker, after which through rollers. No amalgamation or trying to save gold is attempted, no silver being used; consequently, by above no gold is being saved, they having entirely to depend on pans to amalgamate and save the gold from the quartz; and when we consider the principle on which the dirt is treated in the pans, where the dirt is treated so thick, cutting up and separating the quicksilver into thousands of particles, coating and sickening the same, there must be thousands of particles of our fine gold that never come in contact with the silver, and what is even thrown in contact with the silver, the silver being in such small particles, and coated with scum from quartz, it has no life in it to catch gold and save it. Besides, the charge being treated in pans is so thick that our fine gold cannot settle through it, consequently goes away in the thick sludge; the settlers being simply for trying to settle and bring together quicksilver, after being cut up, separated, and sickened in pans; whereas in berdans, from angle when fixed, the quicksilver lies in a large body in the lowest point in the berdan; and as soon as the gold is separated from the quartz or mineral by the action of passing under the drag, it is caught by the quicksilver and saved, as from the specific gravity of gold, and from the continuous stream of pure, clean water flowing into the berdans, the gold is bound to find the bottom of the berdan, and with the silver being in a body, clean and lively, the gold is at once caught and saved. Berdans, like all machinery, require care in working. I use the word "care" again, as it is possible to lose gold out of berdans if not carefully fed, and the right amount of water kept supplying the berdans. In view of the above statements of fact, I think it most unfair ungentlemanly of Mr Fraser, a perfect stranger to me, to attempt to injure myself and others by saying that he has not received fair play in receiving test trials of equal value and quantity as the Waiorongomai battery, and that we have attempted to injure his plant. I can only think that he must have been wrongly informed by persons who, not being able to carry out what they have said they could do, now attempt to blame innocent people, who have nothing whatever to do with the New Era battery or its erection, or in any way attempted to interfere with or in any way injure the same. 432

Wick responded, explaining the process. He did not condemn Firth and Clark's battery, which would be superseded by the pan process he and others had been using in a Tararu battery since 1870. After admitting that some batteries had ceased to use these pans, he disputed McLiver's understanding of the principles of amalgamation using mercury. It was 'very wrong' of him 'to condemn our process', which would put new life into mining at Karangahake and Waihi also because it would save more gold and silver 'in a non-metallic state'. Because the crushed stone was not in contact with water until charged in the pans, there was no chance of sulphides and chlorides being washed away.⁴³³

Fraser, in the longest letter of all, had what was to be the last word. In response to McLiver's 'bare-faced impudence and glaringly stupid assertions', he claimed that 'we have not had the very slightest show of fair play in these so-called tests, and further I dare to say that there has been a most determined and mean attempt to injure a most valuable property in the eyes of the public in the very birth of its starting'. He claimed McLiver had denigrated his plant long before it started and that he was one of those who had 'thrown all the obstacles they could in the way to hinder us getting a road, etc'. After confirming that Wick had been satisfied with the first ten

⁴³² Hugh McLiver to Directors, New Find G.M. Co., 4 September 1886 [date incorrectly given as 4 August], printed in *New Zealand Herald*, 8 September 1886, p. 3

 $^{^{433}}$ Letter from H.C. Wick, $New\ Zealand\ Herald,$ 15 September 1886, p. 3.

trucks he received, he admitted in passing that Wick had 'little or no experience in treating the raw ore in pans, although he has had long and most profitable experience of working tailings from batteries in the very same kind of pans'. He again complained that McLiver received the outcome of Wick's test before producing his 'marvel' result, nearly double the norm from Firth and Clark's battery. Although 'unfortunately' Wick omitted to retain samples of the ore in the first ten trucks, he had kept assays from the subsequent ones of poor ore, and produced figures to prove this point. Fraser claimed it was 'an utter impossibility' for the rival battery to have got the results they claimed from ore of this quality, and cited its records to show that it had not obtained the same results from similar quartz treated earlier. He denied that McLiver had taken ore from the same part of the mine for previous tests, again quoting assay results to prove this. For McLiver to claim Firth and Clark's battery saved four-fifths of the gold and that the berdans saved the remainder meant that he had 'little perception or regard for truth'. Their battery was no different from the first steam one Fraser himself erected at Thames 19 years previously and could not produce these results. As for his plant unsuccessfully crushing for other miners, their ore contained too much lead to be suitable for the pan process.

McLiver was aware of his syndicate's 'difficult position' of 'having got a man from America who professed to be an expert, but proved himself not to be up to his business'. (This was a reference to McKay, the patentee of the pans, who was never mentioned after the plant started work, and who had left New Zealand, temporarily.)

We were thrown back on our own resources, and we are sure that our present manager, Mr Wick, will not be long in gaining the experience necessary to enable him to cope with the difficulties, and the plant will prove itself that it is what is wanted, and ere long mines that have been closed up for want of a process that would enable them to yield a reasonable percentage of the bullion contained in the quartz, will again come to the front, and Waiorongomai, instead of being the deserted place it now is, will flourish. This is the object in view in putting this plant up; and we think at least, if people cannot give a helping hand, they should not throw obstacles in the way of progress.⁴³⁴

Around the time that Fraser was defending his process, the plant ceased to operate. Different accounts gave slightly differing results. Warden

⁴³⁴ Letter from George Fraser, New Zealand Herald, 17 September 1886, p. 6.

Stratford, who visited in February 1887, discovered only 80 feet of tunnelling and stoping had been done in the Premier, New Era, and Inverness. Ferguson told him 'the entire quantity of quartz treated', 140 tons, produced 84oz of retorted gold and 12oz of silver. ⁴³⁵ Gordon reported in May that as 'the company found no support from the claim-holders', only 'about 200 tons' were treated, then wrote that 'only 140 tons' yielded '87oz of bullion'. The refractory ore contained 'sulphide and tellurium of silver combined with arsenic', necessitating 'a different process' of treatment to that adopted. ⁴³⁶

According to the ever-hopeful local newspaper, 'although the smelting furnace was a failure financially', it had revealed rich ore deposits which additional machinery should be able to treat satisfactorily. Alocal correspondent reported 'a number of experiments' being made until operations 'unfortunately came to a standstill before any good result was attained'. Within a week of Fraser's final letter justifying the process, he took small trial parcels from several mines to test in his Auckland plant. He would 'personally be able to superintend the mode of treatment' at both plants, which would 'treat parcels of 5 tons each of the same class of ore'.

In May 1887, Gordon reported that Fraser, finding the battery 'would not realize the expectations formed', experimented in his Auckland plant to perfect it, for this had been 'very successful in treating samples of different ores' from 'every part of the district', so successful that it was 'looked on as a great favour, besides payment, to get him to test samples of two tons or so from the different mines which contain refractory ores'. He dry crushed the ore before roasting it in a reverberatory furnace which, 'with the addition of salt at a proper stage' to convert sulphates formed from sulphides into chlorides made the ore 'suitable for either amalgamation with the panprocess or ready for chlorination and leaching'. He proposed to erect a larger testing plant at Thames with a roasting furnace that was a modification of the White-Howell principle. The New Era Company, having 'watched with interest' his experiments in Auckland, planned 'to make such alterations and improvements in their crushing-plant before they commence crushing-

⁴³⁵ H.A. Stratford to Minister of Mines, 2 February 1887, Thames Warden's Court, Letterbook 1886-1893, folios 22-23, BACL 14458/4b, ANZ-A.

⁴³⁶ H.A. Gordon to Minister of Mines, 5 May 1887, *AJHR*, 1887, C-5, pp. 30, 72.

⁴³⁷ Editorial, *Te Aroha News*, 1 January 1887, p. 2.

⁴³⁸ Te Aroha Correspondent, Waikato Times, 13 September 1887, p. 3.

 $^{^{439}\} Te\ Aroha\ News,\, 25\ September 1886, p. 2.$

operations again, that they can treat the ores in a somewhat similar manner'. 440

By October 1886, 'several alterations and improvements for the better treatment of low grade quartz' had been made. 441 These 'considerable' changes consisted of adding new copper plates terminating with riffles 18 inches deep 'in which agitators will be adjusted' to keep the mercury 'lively'. Once the alterations were completed, ore from the Premier, May Queen, Inverness, and New Era would be tested. 'Samples containing about 200lb of quartz from different reefs' in these mines had been 'forwarded to Auckland for treatment at Fraser's new plant which is somewhat on the same principle'. 442 Gwyn Davis, reportedly experienced in battery treatment, inspected the plant and recommended that, after being crushed, the ore should be 'furnaced to get rid of the sulphur and other base metals before amalgamation'; these 'alterations would not cost much'. 443 Ore from the Rosemont at Waihi was tested using this process, with a Californian expert named Williams assisting. 444 He was probably Richard Eustace Williams, a Cornish miner who had been in California before settling at Thames and running batteries; in the 1890s he would be at Broken Hill before returning to manage the Waitekauri mine and to assist in managing the Waihi one. 445 Williams later described the New Era as 'the best plant ever erected in New Zealand, being identical with all the mills on the Comstock', in America. 446

In mid-December 1886, Fraser explained his methods to Larnach, appending copies of the results achieved in his Auckland testing plant between 19 August and 2 November. He explained the difficulties the New

446 Auckland Weekly News, 9 June 1888, p. 15.

⁴⁴⁰ H.A. Gordon to Minister of Mines, 5 May 1887, AJHR, 1887, C-5, p. 30.

⁴⁴¹ Te Aroha News, 9 October 1886, p.2, 16 October 1886, p. 2.

⁴⁴² Te Aroha Correspondent, *Thames Advertiser*, 8 October 1886, p. 3.

⁴⁴³ *Te Aroha News*, 13 November 1886, p. 2.

⁴⁴⁴ Waikato Times, 21 December 1886, p. 2; Te Aroha News, 26 February 1887, p. 2.

^{See Marriage Certificates of Richard Eustace Williams, 1879/59, Ethel Eliza Williams, 1901/1450, Mabel Elizabeth Williams, 1907/4916; Birth Certificates of Elizabeth Mabel Williams, 1886/1609, Richard Francis Stanley Williams, 1889/17698; Death Certificate of Richard Eustace Williams, 1942/29467, BDM; Marriage Notice, Thames Advertiser, 10 June 1879, p. 2; Thames Star, 8 December 1887, p. 2, 8 August 1889, p. 4, 4 April 1901, p. 2, 22 June 1901, p. 3; Ohinemuri Gazette, 21 June 1905, p. 2, 10 September 1913, p. 3; Auckland Star, 18 June 1919, p. 9, 28 November 1929, p. 21, 31 March 1942, p. 6.}

Era had encountered, such as the price of labour being so high that 'much more Capital' was required 'than the most careful could' have anticipated. The council's failure to take over the tramway and pay the difference between its cost and the government subsidy prevented them developing their mines and keeping the plant working. He had striven 'for many years to get a better system introduced for dealing with our gold and silver ores', and in the light of tests made of samples in America had based the plant on American methods. Whilst it had been 'very successful' in treating free milling ore, they had not found a way to remove the sulphur. His reverberatory furnace in Auckland was 'a great success', but having spent £10,000 the syndicate lacked the capital to erect a similar furnace for the New Era. 'We have been treated with anything but kindness by those who have a deep interest in the quarter where we have erected our plant. There seems to be a direct opposition to anything that will interfere with the old existing arrangements'.447 His request for assistance was ignored. The following month, Ferguson asked the warden for assistance. His plant was intended to treat ore 'which the ordinary battery won't touch, the precious metals being so combined with sulphur, chlorine, & tellurium'. Spending 'a large amount of capital' was 'necessary to erect reverberatory furnaces &c for preparing the quartz for the pan process', and he would have to raise this capital overseas. 448 In May, Fraser gave Larnach details of tests on Tui and Owharoa ore made between 30 December and 5 May and requesting a subsidy of £1,000 for the 'Gold and Silver Saving Plant' he planned to erect on the Thames foreshore which he was certain would be superior to the traditional process. 449 Again, Larnach failed to provide assistance.

FERGUSON'S SPECIAL CLAIM

As Ferguson relied on abandoned claims to provide quartz,⁴⁵⁰ his solution was the same as Firth's: own the mines himself and introduce foreign capital. In late December 1886 he visited Larnach in Dunedin to

⁴⁴⁷ George Fraser to Minister of Mines, 18 December 1886, Mines Department, MD 1, 87/1442, ANZ-W.

⁴⁴⁸ Peter Ferguson to Warden, 21 January 1887, Te Aroha Warden's Court, General Correspondence 1887, BBAV 11584/3b, ANZ-A.

⁴⁴⁹ George Fraser to Minister of Mines, 12 May 1887, Mines Department, MD 1, 87/1442, ANZ-W.

⁴⁵⁰ H.A. Gordon to Minister of Mines, 5 May 1887, AJHR, 1887, C-5, p. 30.

explain he wanted a special claim of 100 acres, sufficiently large to induce British capitalists to develop the mines and perfect the plant. He requested 12 months' protection for this property whilst absent overseas obtaining capital.⁴⁵¹ In late January 1887, he applied for 100 acres as Special Claim No. 2 (Firth's was No. 1), which at first he intended to call the Premier Extended Gold and Silver Mining Company. To develop the mines systematically and erect reverberatory furnaces and other machinery £100,000 would be raised 'outside of the colony'. 452 He was granted 166 acres in July. 453 This larger area was partly because Ferguson had underestimated the extent of the ground sought and because of the inclusion of John Bealby Smith's 20 acres, 454 which Ferguson argued could be better worked by one company. His proposed company would need to spend £50,000 before the mines were 'in thorough working order'. 455 His plant had intended to crush for the claims in its vicinity, but 'unfortunately our efforts in this direction have proved futile, as the claims from which we anticipated supplies of ore have gradually become abandoned for want of capital. His company would mine the abandoned F, Moa No. 1, Vermont, Inverness, Phoenix, Wellington, and Premier reefs, which if not worked 'on a large scale' with his plant would 'remain for some considerable time at least abandoned'.456

FORMING THE FERGUSON SYNDICATE COMPANY

 $^{^{451}}$ Peter Ferguson to Minister of Mines, 3 January 1887, Mines Department, MD 1, 87/794, ANZ-W.

⁴⁵² Te Aroha Warden's Court, Register of Applications 1883-1900, folio 5a, 21/1887, BBAV 11505/1a; Peter Ferguson to Warden, 21 January 1887, Application for Special Claim, BBAV 11582/3a, ANZ-A.

⁴⁵³ Te Aroha Warden's Court, Application for Special Claim, License granted on 11 July 1887, with map, BBAV 11582/3a, ANZ-A; for plan of the special claim, see map 4147, Map Library, University of Waikato Library, Hamilton (in Appendix).

⁴⁵⁴ See paper on the Waitoa Find.

⁴⁵⁵ Peter Ferguson to Warden, 8 February 1887; D.H. Bayldon to Warden, 19 March 1887, Te Aroha Warden's Court, Application for Special Claim, BBAV 11582/3a, ANZ-A.

⁴⁵⁶ Peter Ferguson to Warden, 2 February 1887, Te Aroha Warden's Court, Application for Special Claim, BBAV 11582/3a, ANZ-A.

To finance his trip to Britain to raise capital, Ferguson made an arrangement with a prominent Auckland moneylender, John Abbott, 457 who came to Te Aroha especially to negotiate with him. 458 Abbott had earlier invested in 15 Waiorongomai claims and four companies. 459 On 14 July, three days after the special claim was granted, it along with the tramway, water race, machine site, and plant were transferred to Abbott for the nominal sum of 5s each. 460 With these as security, Abbott lent him £600 in addition to £200 already provided. Their agreement was heavily weighted in Abbott's favour. It stipulated that Ferguson would have 12 months 'within which to form a company or otherwise dispose of the property; and should he be successful in doing this Mr Abbott was to receive five per cent on the cash paid, one third of the paid up share capital, and £1800 cash'.461 Ferguson took a large-scale plan of the goldfield, details of assays, and reports on the reduction works, tramways, and other features. 462 He travelled via the United States of America, where he 'garnered all the information requisite for the economic reduction of quartz on the most scientific and improved principles'. Although he intended to submit 'a full report' to the Mines Department on his return, 463 there is no such report on file. Early in October, with a leading Thames mine manager he inspected a dry crushing process in London. 464 He 'so far ingratiated himself into the good opinion of experts that one of their number placed at his disposal, free of charge, a commodious suite of rooms'. Ferguson distributed '2,000 or 3,000 copies' of the Handbook of New Zealand Mines, but 'after a vigorous canvass' his efforts to float the New Era in London were aborted by the Bank of New Zealand not paying a dividend and by the government's

 $^{^{457}\,\}mathrm{See}$ New Zealand Herald, 18 January 1901, Monthly Summary, p. 4.

 $^{^{458}}$ Te Aroha News, 23 July 1887, p. 2.

<sup>Te Aroha Warden's Court, Register of Te Aroha Claims 1880-1888, folios 233, 234;
BBAV 11567/1a; Register of Licensed Holdings 1881-1887, folios 3, 5, 8, 10, 12, 16, 19, 21,
26, 27, 31, 55, 64, BBAV 11500/9a, ANZ-A; New Zealand Gazette, 23 March 1882, p. 490,
18 May 1882, p. 728, 22 June 1882, p. 897, 14 December 1882, p. 1885.</sup>

⁴⁶⁰ Assignment from Peter Ferguson to John Abbot, 14 July 1887, Te Aroha Warden's Court, Certified Instruments 1887, BBAV 11581/8a, ANZ-A.

⁴⁶¹ Warden's Court, *Te Aroha News*, 21 November 1888, p. 2.

⁴⁶² Auckland Weekly News, 29 January 1887, p. 17; Peter Ferguson to Minister of Mines, 22 June 1887, Mines Department, MD 1, 87/794, ANZ-W; Te Aroha News, 23 July 1887, p. 2.

⁴⁶³ Te Aroha News, 21 January 1888, Supplement, p. 8.

⁴⁶⁴ Te Aroha News, 3 December 1887, p. 2.

financial statement. 'Nothing daunted, he visited all the manufacturing centres, distributing information relative to New Zealand, always keeping his main object in view'. In Glasgow he 'made a most favourable impression' and was introduced to a syndicate. 465 It was expected that a company with a capital of £30,000 would be floated there, the New Era syndicate being 'remunerated in paid up shares'. Before this would be arranged, 10 or 20 tons of ore would be sent to Glasgow for treatment and an expert, a Mr Gibson of Melbourne, 'critically' examined the machinery and mines in the first week of January. 'He appeared to be thoroughly satisfied and highly pleased with the connections and mode of tramways', and 'also approved of the very efficient water-race'. 466 Gibson, also described as 'a mining expert from Ballarat', also inspected the Crown at Karangahake, then for sale.467 Samples were broken out from the Premier and Inverness later that month: 'upon the results obtained will depend in great measure successful floating of the company'. 468 That he had the support of residents was indicated during a banquet held at Waiorongomai to honour Adams for attracting Australian capital, when he was toasted for his efforts to raise capital. 469

In April, Abbott, when seeking a further three months' protection for the special claim, informed the warden that Ferguson was negotiating with 'a powerful syndicate to introduce capital and supplement the present machinery with the latest scientific plant'. The unnamed expert had been sent to report and a parcel of ore was on its way to enable the Glasgow syndicate 'to judge as to the correct apparatus and mode of treatment'. 470 On 20 May, Ferguson announced there was 'every prospect' of his securing 'the best discovered process for saving gold and silver in ores, however refractory'. In only one case were 'the most severe tests' anything but 'most satisfactory'. The syndicate owning the process consisted of 'gentlemen of unlimited means (up to date they have spent over seventy thousand pounds in prosecuting their researches) and seem to delight in facing and overcoming difficulties'. They had 'a regular staff of 50 chemists' in their

⁴⁶⁵ *Auckland Star*, 13 January 1888, p. 5.

 $^{^{466}\,}Auckland\,\,Star,\,13$ January 1888, p. 5; Te
 Aroha News, 14 January 1888, p. 2.

⁴⁶⁷ Ohinemuri Correspondent, Waikato Times, 12 January 1888, p. 2.

⁴⁶⁸ Te Aroha News, 21 January 1888, p. 2.

⁴⁶⁹ Te Aroha News, 14 April 1888, p. 2.

⁴⁷⁰ Te Aroha Warden's Court, Applications for Protection 1888, John Abbott to Warden, 5 April 1888, appended to 6/1888, 4 March 1888, BBAV 11289/12a, ANZ-A.

'chief office' and sometimes 'double the number'. Had it not been for 'the delay in the Premier ore arriving in London, I should be on my way out with the said process in my pocket'. He expected that, once this ore had been tested, it would take two months to complete negotiations and to decide on the most suitable modifications to the plant and developments in the mines. With regard to the machinery good progress has been made. I have had a machine made, and have it running at the works here'. The mill he expected to use gave 'most satisfactory results' and cost less than £100. 'It reduced dry ore to a fineness of 2500 holes per square inch' and could treat ten tons in 24 hours; he would 'very probably bring ten or twelve out'. He had been shown the need to use the best scientific knowledge by 'a large going concern' he could visit 'as often as I choose' as he negotiated with its directors and the largest shareholders. He was doing

all in my power to interest the gentlemen with whom I am daily associated so that we may command the best technical talent for Te Aroha goldfields, and I think that I can safely say that I have succeeded, for as soon as possible after the manipulation of the ore arrangements will be made to send out the most efficient staff of experts from their works, including the technical master, the latter gentleman being very anxious to reside in New Zealand after reading and hearing so much about the colony.⁴⁷¹

In an October application for another period of protection, Abbott explained that because of the ore sent to Glasgow 'not turning out so satisfactorily as was expected' the syndicate wanted more time to arrange new terms;⁴⁷² it must be assumed these were less favourable for Ferguson than the original ones. This poor ore delayed the flotation for 'some months'.⁴⁷³

That the warden, Henry William Northcroft, was not impressed with Abbott's role was revealed at the first hearing in November, when Margetts, on Abbott's behalf, sought another three months' protection for the special claim:

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 $^{^{471}}$ Te Aroha News, 14 July 1888, p. 2; Auckland Weekly News, 28 July 1888, pp. 14-15.

⁴⁷² John Abbott to Warden, 8 October 1888, Te Aroha Warden's Court, Applications for Protection 1888, 117/1888, BBAV 11289/12a, ANZ-A.

⁴⁷³ Te Aroha News, 24 November 1888, p. 5; Auckland Weekly News, 24 November 1888, p.

The Warden remarked that he had been informed that Abbott had advanced £800 on the security of the whole of the New Era property, and now claimed £2000 to relinquish his claim. If by next court day it could be clearly shown that Abbott had been paid off, he would entertain the application for protection, but if Abbott claimed to be owner, he would insist upon his having two men to each acre of ground, or forfeit the ground. Protection granted till next court day.⁴⁷⁴

In summarizing the arrangement, Northcroft noted that the 12 months had 'expired in July without negotiations being settled, but recently a cash offer of £2000 had been made in full satisfaction of Mr Abbott's claim, and refused by him, he threatening to foreclose and made the present application for protection'. Area in Northcroft said that he would, 'as far as was reasonable, try to assist' those who had spent so much time and money developing the property, but he would not permit 'the ground to be held for merely speculative purposes'. Having been informed that Abbott had agreed to accept the £2,000, he adjourned the application for 14 days to be sure of the facts, for he understood 'the Home capitalists declined to conclude negotiations' whilst Abbott 'had a claim over the property'. If he refused to accept the £2,000, Northcroft would require him 'to put on a man for every two acres. He understood Mr Abbott appeared to consider he had done a most generous thing in consenting to accept £2000'. Area

Agreement was reached in Glasgow on 9 November between Ferguson and the promoters of the new company. The capital, in £1 shares, was only £15,000, but it could be increased. The mines and plant were bought for £10,000-worth of fully paid-up shares plus £2,000 in cash.⁴⁷⁷ On 30 November, ten days after Abbott transferred his property back to him, Ferguson sold his special claim, tramway, plant, water race, and machine site to the Ferguson Syndicate Company Limited.⁴⁷⁸ The £2,000 in cash went to Abbott, not Ferguson. Abbott did accept the offer and transfer the property back to Ferguson on 20 November, but at the beginning of December announced that, because of recent but unspecified information,

⁴⁷⁴ Warden's Court, *Waikato Times*, 10 November 1888, p. 2.

⁴⁷⁵ Warden's Court, *Waikato Times*, 24 November 1888, p. 2.

⁴⁷⁶ Warden's Court, *Te Aroha News*, 21 November 1888, p. 2.

⁴⁷⁷ Company Files, BT 2/1799, Scottish Record Office, Edinburgh.

⁴⁷⁸ Te Aroha Warden's Court, Certified Instruments 1888, Assignments, 20 November 1888, 30 November 1888, BBAV 11581/9a, ANZ-A.

he viewed reports about the company's flotation with 'suspicious incredulity'.⁴⁷⁹ Once the agreement was reached, Ferguson wrote 'most confidently of the success of the process'.⁴⁸⁰

Of Ferguson's syndicate, Margetts was still actively involved. Fraser retained an interest but was not able to continue investing. 481 Judging by the 11 letters he received from one firm of solicitors between August 1884 and September 1887, his finances were insecure throughout these years. The solicitors threatened him with legal proceedings over calls owing to Potter's Patent Wool Scouring Machine Company, the Mariebel Gold Mining Company, and the New Zealand Stud and Pedigree Stock Company; over payment of a promissary note; and over a debt to the Auckland Brick and Tile Company. Eight were received in 1887. 482 In July 1888, Fraser, his son George, and three other prominent Aucklanders petitioned to be adjudged bankrupts because of a failed land speculation at Ellerslie. 483 Fraser explained his position:

I have been in business as an ironfounder and engineer during the last 28 years in Auckland. Since the 10th of May, 1886, the business has been carried on under the style of George Fraser and Sons, my two sons having a half interest between them. Stock was not taken when they joined. I simply admitted them as partners without capital. Early in 1885, I was strongly urged and, unfortunately, agreed to join two land syndicates, namely, the Ellerslie and Remuera.... About the same time I took 250 shares in Robert Graham's Waiwera property, and this I was entirely prompted to by friendly feelings towards Mr Graham, who was a very old friend. They were £1 shares. I have already paid £500 on account of calls, and am still liable for £234 10s 9d, for which no

⁴⁷⁹ Waikato Times, 4 December 1888, p. 2.

⁴⁸⁰ Te Aroha News, 1 December 1888, p. 2.

⁴⁸¹ Auckland Weekly News, 10 August 1889, p. 20.

⁴⁸² Jackson and Russell to George Fraser, 9 August 1884, 21 August 1884, Jackson and Russell Letterbook no. 28, pp. 585, 646; Jackson and Russell to George Fraser, 25 November 1886, Jackson and Russell Letterbook no. 33, p. 45; Jackson and Russell to George Fraser, 13 May 1887, 2 June 1887, 10 June 1887, 25 June 1887, 20 July 1887, 23 July 1887 (personal letter from James Russell), 1 August 1887, Jackson and Russell Letterbook no. 34, pp. 248, 377, 456, 515, 693, 707, 741; Jackson and Russell to George Fraser, 5 September 1887, Jackson and Russell Letterbook no. 35, p. 187, MS 360, Library of the Auckland Institute and War Memorial Museum.

⁴⁸³ Thames Advertiser, 9 July 1888, p. 2.

action has been taken. About the same time, also, I joined five other persons in the purchase of some coal-bearing land at Hunua. I took 2-12ths of the whole, and I have already contributed £700, without any return.... In my trade business no profit and loss account has been made since Mr [Theodore] Tinne withdrew from the concern, somewhere about 1883, and the balance-sheet of that time can be produced. I considered I was solvent in the early part of 1885, when I went into the various speculations referred to, although at that time I had a considerable overdraft at the bank, but I was hopeful of realising sufficient out of the s.s. Triumph [which he refloated and refitted]484 to wipe off all my liabilities. This hope, as is well known, has not been realised. The general depression of the last two or three years has told seriously upon our trade. Nothing, of course, could be done to diminish our overdraft, in fact the amount increased. The bank's security is mortgaged over 700 acres of land and second mortgage over dwelling house and land, the total estimated value being £5300, the first mortgage liability on the house being £702. My schedule of assets and liabilities relating to the foundry business is being prepared. I cannot speak now as to the exact position, but believe that the one will about balance the other. My private debts do not exceed £20. The only unencumbered asset I have is the household furniture, worth about £200. Under existing circumstances I cannot suggest any compromise. 485

Fraser was discharged in July 1889 after his barrister informed the court that 'the proceedings were regular, and the report of the Assignee was favourable'. The amount his creditors received was not reported. Shortly afterwards, ten of the company's workers sued for £446 17s 1d, being wages owing, and within a week of promising to pay his sons filed as bankrupt. The secured liabilities of the firm were £20,613 6s 8d and the unsecured £3,701 16s 9d, but the assets were only £5,400. They owed over £1,500 in wages. George Fraser, junior, stated that since his bankruptcy his father had ceased to be a partner, 'but as his services were necessary he continued

⁴⁸⁴ Auckland Weekly News, 18 October 1884, p. 17, 1 November 1884, p. 26, 17 January 1885, p. 24.

 $^{^{485}\,}Auckland$ Weekly News, 21 July 1888, p. 35.

⁴⁸⁶ Auckland Supreme Court, Bankruptcy Register, folio 64, BBAE 5639/1a, ANZ-A; *New Zealand Herald*, 16 July 1889, p. 3.

⁴⁸⁷ Auckland Weekly News, 27 July 1889, p. 10, 3 August 1889, p. 14.

⁴⁸⁸ Mercantile and Bankruptcy Gazette, 3 August 1889, p. 237.

⁴⁸⁹ Thames Star, 1 August 1889, p. 2.

as manager on a salary of £6 per week, the same amount he drew as a partner'. Included in the assets was 'interest in Waiorongomai mining leases and machinery (now known as the Ferguson Syndicate), £2000'.⁴⁹⁰ Fraser's sons had told the employees their father 'would feel morally bound to see the affair through', meaning he would try to pay their wages.⁴⁹¹ At a meeting of creditors, mostly their employees, the firm offered its workers 5s in the £, other creditors to get 2s. After 'a pretty lively discussion', Fraser said that, although 'not now a member of the firm', he was offering 5s to the workers 'and the remainder by instalments'. He 'charged certain men with trying to damage his character'. After more debate, 55 of the 62 workers accepted his proposal, as did the court.⁴⁹² Other creditors received a first and final dividend of 1 1/2d.⁴⁹³ A committee of supervisors oversaw the firm for the next four years.⁴⁹⁴

In June 1890, because a composition had been made with the creditors, the firm's bankruptcy was annulled.⁴⁹⁵ In December, Fraser announced that, being 'freed from the liabilities with which he was for some time hampered', he had become sole proprietor of the Phoenix Foundry.⁴⁹⁶ As he and his firm were in danger of going bankrupt again in 1892, he provided £350 to the firm, which by the end of 1893 was in a sound position, those who had contributed funds were repaid, and the supervisors ceased to oversee it.⁴⁹⁷ In 1900 the reconstructed firm of George Fraser and Sons Ltd was registered with Fraser as a director; he had sold the old firm to his sons for paid up shares and their meeting all his liabilities except for the mortgage on the property. He retained only one share, distributing the remainder amongst his family.⁴⁹⁸ He died a year later, aged 69, from

⁴⁹⁰ Auckland Weekly News, 10 August 1889, p. 20.

⁴⁹¹ Auckland Weekly News, 17 August 1889, pp. 14-15.

⁴⁹² Auckland Weekly News, 24 August 1889, p. 20, Supreme Court, 28 September 1889, p. 22.

⁴⁹³ Mercantile and Bankruptcy Gazette, 17 August 1889, p. 253.

⁴⁹⁴ Minutes of Meetings of the Supervisors of George Fraser and Sons, 1889-1893, MS 89/188, Library of the Auckland Institute and War Memorial Museum.

⁴⁹⁵ Supreme Court, Auckland Weekly News, 21 June 1890, p. 19.

⁴⁹⁶ Auckland Weekly News, 20 December 1890, p. 46.

⁴⁹⁷ Minutes of Meetings of the Supervisors of George Fraser and Sons, 13 May 1892, 10 January 1893, 12 April 1893, 20 November 1893, Minute Book 1889-1893, Library of the Auckland Institute and War Memorial Museum.

⁴⁹⁸ Company Files, BADZ 5181, box 1994 no. 19189, ANZ-A.

diabetes and chronic heart disease, five months after his wife. 499 His estate was valued at £1,628 15s 5d. 500

THE FERGUSON SYNDICATE COMPANY

The Ferguson Syndicate Company was incorporated in Scotland on 28 November 1888. As £10,000-worth of shares out of a total capital of £15,000 had been used to purchase the property, it was seriously under-capitalized. By April 1889, shareholders had paid 15s on their £1 shares.⁵⁰¹ Those who held vendors' shares (which they did not pay for, nor have to pay calls) included Ferguson with 1,000, his wife Jean with 200, his brother Duncan with 200, and either his father or another brother, John, with whom he was living at the time, with 1,250. John Stewart MacArthur, Robert Wardrop Forrest and William Forrest, all of Glasgow, (and who had developed the MacArthur-Forrest cyanide process for treating gold),⁵⁰² had 100 shares each, and MacArthur was a director. James Napier, a Glasgow chemist later employed at Waiorongomai and elsewhere as an amalgamator and a pioneer in New Zealand of the use of cyanide, 503 held 400 shares and was a director. Robert Napier, of the same address, presumably a brother (his father was William, also a chemist and metallurgist),⁵⁰⁴ held 100. The remaining 39 shareholders were all Scots, mostly living in Glasgow. Their occupations comprised six merchants, two stockbrokers, a grain merchant, an iron merchant, a linen manufacturer, a timber agent, an aural surgeon, a writer, an engineer, a consulting engineer, a chemist, a metallurgical

⁴⁹⁹ Death Certificates of George Fraser, 29 July 1901, 1901/3737; Christina Fraser, 13 February 1901, 1901/600, BDM.

⁵⁰⁰ Testamentary Register 1900-1903, folio 93, BBCB 4208/14, ANZ-A.

⁵⁰¹ Summary of Capital and Shares as at 9 April 1889, Company Files, BT 2/1799, Scottish Record Office, Edinburgh.

⁵⁰² See A. Scheidel, The Cyanide Process: Its practical application and economical results (Sacramento, 1894), pp. 13, 108-116; Alan L. Lougheed, Cyanide and Gold: The Cassel Cyanide Company and gold extraction, 1884-1927 (Buderim, Queensland, 2001), pp. 3-10; David V. Fenby, 'Going for Gold with Cyanidation', in New Zealand is Different: Chemical milestones in New Zealand history, ed. Dennis Hogan and Bryce Williamson (Christchurch, 1999), pp. 199-201.

⁵⁰³ See Te Aroha News, 4 December 1889, p. 2; Cyclopedia of New Zealand, vol. 2, pp. 492-493.

⁵⁰⁴ Death Certificate of James Napier, 21 September 1908, 1908/3453, BDM.

chemist, and 21 who did not record their occupation.⁵⁰⁵ The chemists and engineers might be assumed to have understood the cyanide process. Everyone retained their interests in February 1890, only the sharebroker and a merchant selling a small number of shares to other shareholders; two whose occupations were previously unrecorded now themselves as a shipbroker and a consulting engineer.⁵⁰⁶

In February 1889, the *Te Aroha News* was informed that the Ferguson Syndicate was being referred to in a directors' report to Cassel shareholders:

A permanent arrangement of a satisfactory nature has been entered into with the syndicate proprietary of a very large mining property in New Zealand, under which the Cassel Company's process will be used by all the Companies into which the property may ultimately be divided, without any expenditure whatever on the part of the Cassel Company. Operations will be proceeded with as rapidly as possible, and if this extensive property turns out at all according to anticipations, the Directors feel assured that the Cassel Company cannot fail to benefit largely.⁵⁰⁷

On 1 August 1889, an agreement was reached between the Ferguson Syndicate and the Cassel Gold Extracting Company, which owned the MacArthur-Forrest patents. The syndicate was granted the right to use their Cassel process on condition that it increased the capital by £5,000 to £20,000 and issuing 4,000 of these new shares to the Cassel Company as fully paid-up, plus one-fifth of the capital and assets 'present and future'. Once these were transferred, the Cassel Company would purchase the remaining 1,000 shares for 15s each, the balance of £250 being met by providing potassium cyanide to that value as and when required, but not before calls were made on the 5s owing on other investors' shares. ⁵⁰⁸ By February 1890 this amount had been called up. ⁵⁰⁹

⁵⁰⁵ List of Persons holding Shares, 9 April 1889, Company Files, BT 2/1799, Scottish Record Office, Edinburgh.

⁵⁰⁶ List of Persons holding Shares, 28 February 1890, Company Files, BT 2/1799, Scottish Record Office, Edinburgh.

⁵⁰⁷ Te Aroha News, 2 February 1889, p. 2.

⁵⁰⁸ Agreement between the Cassel Gold Extracting Company and the Ferguson Syndicate Company, 1 August 1889, Company Files, BT 2/1799, Scottish Record Office, Edinburgh.

⁵⁰⁹ Summary of Capital and Shares, 28 February 1890, Company Files, BT 2/1799, Scottish Record Office, Edinburgh.

MacArthur purchased 17 additional shares in October. 510 Thomas Melville, a member of the Edinburgh Stock Exchange for a 'considerable period' before settling in Auckland in 1881,511 received 800 vendors' shares.⁵¹² When in Glasgow floating the Crown Mines he had helped Ferguson form his company. 513 In November the Minister received a letter from Melville stating that he had spent 'thousands of pounds' in Glasgow testing the cyanide process, and as 87 per cent of the bullion in 20 tons from the Crown had been saved, this process would be tried on ore from this and three other Karangahake mines.⁵¹⁴ As Gibson had lauded the ore but warned that a new mode of treatment was required, a contract was made with the owners of the Crown, the company expecting this ore to be the best to prove the worth of the process. 515 The Cassel Company received one-fifth of the Crown's capital plus an annual rental for the use of its plant.⁵¹⁶ After Melville returned to New Zealand in early 1889 as the sole agent of the Cassel Company, under his direction a cyanide plant was erected for the Crown, which in July 1889 commenced testing small samples from this and other Karangahake mines.⁵¹⁷ When builders first arrived to erect the Karangahake plant, amongst those greeting them was Ferguson. 518

On the day before Melville left Glasgow to return to New Zealand, details were finalized to form a company to work Ferguson's ground, and sufficient capital was provided to Ferguson to enable him to order machinery. Melville believed that if these Waiorongomai and Karangahake ventures proved successful he would have 'no difficulty whatever in raising five or six times the money he has got at present, because all that the

⁵¹⁰ List of Persons holding Shares, 28 February 1890, Company Files, BT 2/1799, Scottish Record Office, Edinburgh.

⁵¹¹ Auckland Weekly News, 14 May 1881, p. 21.

⁵¹² Company Files, BT 2/1799, Scottish Record Office, Edinburgh.

⁵¹³ New Zealand Herald, 3 September 1887, p. 5; Te Aroha News, 14 November 1888, p. 2.

⁵¹⁴ Wellington Correspondent, *Auckland Star*, 8 November 1888, p. 5.

⁵¹⁵ Te Aroha News, 2 February 1889, p. 2; Auckland Star, 11 February 1889, p. 3.

⁵¹⁶ Alan Lougheed, 'The Cyanide Process and Gold Extraction in Australia and New Zealand 1888-1913', Australian Economic History Review, vol. 27 no. 1 (March 1987), p. 47.

⁵¹⁷ Auckland Star, 11 February 1889, p. 3; Te Aroha News, 27 July 1889, p. 2, 12 October 1889, p. 2; New Zealand Herald, 27 September 1889, p. 4, 3 February 1890, p. 6; Lougheed, 'Cyanide Process', p. 47; Schiedel, p. 13; Fenby, p. 202.

⁵¹⁸ Recollections of Peter Macfarlane, Auckland Star, 10 August 1929, p. 13.

people at Home want is something that can be relied upon in which to invest their money'. 519 At Te Aroha it was believed that Ferguson was the representative in New Zealand of 'capital equal to £96,000',520 but although the Glaswegian investors could provide much more capital they revealed no inclination to invest more than a minimal amount until the company proved itself successful. It had been anticipated that Ferguson would return to Waiorongomai in mid-January 1889 and 'give a strong impetus to' mining. 521 but he did not leave Britain until then. A Waiorongomai correspondent wrote that, 'judging from the expectancy of his numerous friends, it is a miracle that a banquet had not been arranged for his reception'. There was 'some rather ill-natured talk' about 'the quiet way' his ground was 'being shepherded from fortnight to fortnight. Only the other day I heard it said, were it a poor man's patch of an acre or so, it would have been forfeited long ago'. 522 In late March, Ferguson returned after nearly two years' absence. According to a Waiorongomai correspondent, 'his undoubted mining knowledge, experience, and perseverance' had been crucial in forming the new company. As he had 'done more than many men would have done in like circumstances, refusing liberal offers' to stay in Britain, there was expected to be 'a public recognition to his loyalty to the place of his adoption'. Ferguson announced that his company had 'ample capital to thoroughly work the ground', and should the ore 'warrant the expenditure' it would spend 'from £100,000 to £120,000' in development; £10,000 was available to drive two 'large tunnels' immediately. 523 Other reports gave £6,000 as the amount to be spent prospecting. Ferguson called tenders for several drives and for repairing the water race and tramway, and 'making excavations for the reception of machinery', which was en route from Glasgow. He would 'personally superintend operations for the present', but in about two months time 'an expert will arrive to take over the property'. 524 He informed the Mines Department that capital was subscribed on the understanding that he would manage both battery and

⁵¹⁹ Auckland Star, 11 February 1889, p. 3.

 $^{^{520}}$ A Te Aroha correspondent cited in *Thames Star*, 22 August 1889, p. 2.

⁵²¹ Waiorongomai Correspondent, Waikato Times, 10 January 1889, p. 2.

⁵²² Te Aroha Correspondent, Waikato Times, 22 January 1889, p. 3.

⁵²³ Waiorongomai Correspondent, Waikato Times, 26 March 1889, p. 2.

⁵²⁴ Thames Correspondent, *Auckland Star*, 25 March 1889, p. 3; *Te Aroha News*, 27 March 1889, p. 2.

mine. 525 Described as 'Superintendent for the Syndicate', 526 from 21 January he received a monthly salary of £20. 527

THE FERGUSON SYNDICATE PLANT AND MINE

On his return, Ferguson announced that 'specialists' already on their way from Britain would test 'different grades of ore', using several processes to determine the one to use. 528 On 6 December 1888, the Ferguson Syndicate had ordered its first batch of potassium cyanide, 529 and the following month it signed a contract to use the Cassel process, 530 the first time anyone at Waiorongomai had decided to try it. Having used cyanide in Glasgow on quartz taken from his mines, Ferguson was satisfied that, under the direction of an expert from Glasgow, it would extract 'a high percentage' of the value. 531

Machinery from Britain was being installed in April under Ferguson's supervision to produce a 'thorough' plant.⁵³² At the end of that month, Melville, accompanied by Peter McIntyre, inspected the plant.⁵³³ McIntyre, MacArthur's assistant in Glasgow, in 1888 had set up the Cassel plant at Ravenswood, Queensland, which late that year produced the first 'cyanide gold' on any goldfield.⁵³⁴ He had arrived in Karangahake in February 1889 to supervise the erection of a plant for Crown Mines.⁵³⁵ MacArthur also visited Karangahake, briefly, in 1890.⁵³⁶

⁵²⁵ Peter Ferguson to Under-Secretary, Mines Department, 26 March 1889, Mines Department, MD 1, 89/212, ANZ-W.

⁵²⁶ Te Aroha News, 1 May 1889, p. 2.

⁵²⁷ Te Aroha Warden's Court, Plaints 1891, 23/1891, BBAV 11572/2a, ANZ-A.

⁵²⁸ Waiorongomai Correspondent, Waikato Times, 26 March 1889, p. 2.

⁵²⁹ Lougheed, Cyanide and Gold, p. 59.

⁵³⁰ Ohinemuri Correspondent, Te Aroha News, 2 February 1889, p. 2; Lougheed, Cyanide and Gold, p. 15.

⁵³¹ H.A. Gordon to Under-Secretary, Mines Department, 8 June 1889, AJHR, 1889, C-2, p. 45.

⁵³² Waikato Times, 27 April 1889, p. 2.

⁵³³ Te Aroha News, 1 May 1889, p. 2.

⁵³⁴ Lougheed, 'Cyanide Process', p. 46.

⁵³⁵ Lougheed, 'Cyanide Process', p. 47; Schiedel, p. 13.

⁵³⁶ Fenby, p. 202.

To use cyanide, Ferguson erected a Lamberton grinding mill⁵³⁷ to reduce the ore, and 12 percolating tanks.⁵³⁸ A contract was let to fell kauri for these tanks, to be erected alongside the existing building, and 'a number of men' were excavating and doing other preliminary work. 539 The cyanide building measured 88 feet by 28 feet, and the tanks were 12 feet long, 9 feet wide, and 3 1/2 feet deep.⁵⁴⁰ The local newspaper reported that two new rock-breakers would reduce the quartz to the size of 'small road metal, as a 1/2 to 1 inch cube', which would be reduced further by this mill until passing 'through screens varying in fineness according to the quality of the ore'. This powdered ore would be placed 'in charges of five tons to each tank', about half-a-ton of water being added to each ton of ore, which was then treated by 'gas made from cyanide of potassium, termed cyanaten', under the supervision of British experts. Ferguson intended 'to lay off several lines of tramways to connect the various mines with the new plant', and 'steady' mining would commence once 'a certain amount of the plant' arrived.541

Delivering the machinery was delayed by the state of the lower road, which had to be made fit for heavy traffic, and treatment could not commence until the water race was repaired.⁵⁴² By December, after repairs and re-ballasting the tramway was 'in excellent order'.⁵⁴³ Very wet weather 'considerably retarded' extending the plant and prevented the carting of machinery.⁵⁴⁴ A shortage of timber also caused delays, and what timber was delivered was too saturated by wet weather to use.⁵⁴⁵

⁵³⁷ Google provides details of this mill.

⁵³⁸ H.W. Northcroft (Warden) to Under-Secretary, Mines Department, 4 May 1889, AJHR, 1889, C-2, p. 101; for full details of the processes to be used in the plant, excluding the cyanide treatment, see H.A. Gordon to Minister of Mines, 1 June 1890, AJHR, 1890, C-3, p. 47.

⁵³⁹ Te Aroha News, 13 April 1889, p. 2, 20 April 1889, p. 2, 1 May 1889, p. 2.

⁵⁴⁰ Te Aroha News, 1 May 1889, p. 2, 13 July 1889, p. 2.

 $^{^{541}}$ $Te\ Aroha\ News,$ 1 May 1889, p. 2; see also 25 May 1889, p. 2.

⁵⁴² Piako County Council, Minutes of Meeting of 13 April 1889, Matamata-Piako District Council Archives, Te Aroha; *Te Aroha News*, 22 May 1889, p. 2.

⁵⁴³ Te Aroha News, 25 May 1889, p. 2, 23 October 1889, p. 2, 4 December 1889, p. 2.

 $^{^{544}\} Te\ Aroha\ News,\ 13\ July\ 1889,\ p.\ 2,\ 31\ July\ 1889,\ p.\ 2,\ 24\ August\ 1889,\ p.\ 2.$

⁵⁴⁵ Te Aroha News, 31 July 1889, p. 2; Waiorongomai Correspondent, Waikato Times, 8 October 1889, p. 2.

During April 1889, several miners re-started work in the special claim. 546 Ferguson planned to put in two 100-foot drives in the Premier, one on the hangingwall and the other on the footwall, 'and cut through the reef in several places' and 'between these drives to sink 80ft of winzes'. Test parcels were to be taken from the Inverness, Silver King, Phoenix, Vermont, and Wellington reefs.⁵⁴⁷ These plans meant he supported the Te Aroha Silver and Gold Mining Company's proposed low level tunnel from Army Creek because it would intersect several of these lodes. In urging the government to subsidize this project, he claimed to be having 'very encouraging results'. This tunnel 'would be an outlet for our mine and enable us to prospect and develop at a great depth'. 548 Work was 'steadily progressing' in May, with a contract being offered to extend the Phoenix low level. 549 In June he started driving 300 feet in the Premier low level, the contractors making 'fair progress' in the following month and breaking out good ore in both the Premier and Inverness.⁵⁵⁰ During October, contractors continued to develop the mines.⁵⁵¹ After a rich patch was found in the Premier some chains north of the original 1881 discovery and from 1,800ft to 1,900ft above sea level, adits and winzes were made to send ore 'down in passes from one level to another to the hoppers at the head of the tramway'.552

Arthur E. Wilson arrived from Glasgow in June to supervise the use of cyanide. ⁵⁵³ He would later do likewise at Waihi before returning to Glasgow in 1895, earning 'high commendation for his efficient management' and for being 'the right man in the right place'. ⁵⁵⁴ Once the laboratory and assay furnace were completed in August, he assayed small parcels daily. ⁵⁵⁵ That

⁵⁴⁶ Te Aroha News, 13 April 1889, p. 2.

⁵⁴⁷ George Wilson to Under-Secretary, Mines Department, 25 April 1889, AJHR, 1889, C-2, p. 101.

⁵⁴⁸ Peter Ferguson to Premier, n.d. [April 1889?] (telegram), Mines Department, MD 1, 90/119, ANZ-W.

⁵⁴⁹ Te Aroha News, 11 May 1889, p. 2.

⁵⁵⁰ Te Aroha Warden's Court, Applications 1889, Application 50/1889, BBAV 11289/12a, ANZ-A; *Te Aroha News*, 13 July 1889, p. 2, 31 July 1889, p. 2.

⁵⁵¹ Waikato Times, 31 October 1889, p. 2.

⁵⁵² H.A. Gordon to Minister of Mines, 1 June 1890, *AJHR*, 1890, C-3, pp. 46-47.

⁵⁵³ Te Aroha News, 19 June 1889, p. 2; Lougheed, Cyanide and Gold, p. 15.

⁵⁵⁴ Thames Star, 20 September 1895, p. 2; Fenby, p. 202.

⁵⁵⁵ Te Aroha News, 31 July 1889, p. 2, 24 August 1889, p. 2, 23 October 1889, p. 2.

the capital was insufficient was revealed in mid-August, when the New Era claim was seized by the bailiff on behalf of the Union Bank under a warrant of distress against Ferguson and sold to meet debts owing. Wilson, the only one bidder, bought it on behalf of the syndicate for £5.⁵⁵⁶ This sum would do little to meet the debt of £75 6s, but Wilson did pay £14 for rent due.⁵⁵⁷ A Waiorongomai correspondent commented:

The seizure of the property has caused considerable comment, and, to a great degree, thrown a damper on our hopes.... Unkind people have gone so far as to account for the present action as to say that the Scotch are tenacious of the Siller [silver], but be that as it may, the syndicate have forwarded a large quantity of valuable machinery, and it is to be sincerely hoped it will not, through disuse, catch rust.⁵⁵⁸

In September operations appeared 'to be slow', with 'very few men' expanding the battery.⁵⁵⁹ Two months later, ore was being conveyed to the mill, and once 'the necessary belts, etc', arrived, 'a preliminary start' would be made to treat it with cyanide. 560 When Gordon, the inspecting engineer, visited in January 1890 he was guided around the mines by Ferguson. 'The new workings in the Premier mine (where good gold was a short time since discovered on the eastern side of the main reef, a considerable distance north of any of the workings), were first visited'. From a drive being put in to connect with the winze 'some really excellent stone' was being broken out, and Gordon was 'highly pleased with the very promising appearance of the reef and show of gold in the stone. There can be no doubt of the value of this discovery'. Because good gold had been found 'in entirely new ground' indicated 'the strong probability that good gold may also be discovered to the southward when carrying in the low level tunnel'. At the reduction works 33 bags of 'excellent ore' awaited treatment 'by crushing in the Lamberton mill and pan amalgamation - pending the erection of the permanent [plant] - on the Cassel Extracting Company's cyanogen

⁵⁵⁶ Te Aroha News, 14 August 1889, p. 7, 21 August 1889, p. 2.

⁵⁵⁷ Te Aroha Warden's Court, Assignment dated 12 August 1889, Certified Instruments 1889, BBAV 11581/10a, ANZ-A.

⁵⁵⁸ Waiorongomai Correspondent, Waikato Times, 20 August 1889, p. 2.

⁵⁵⁹ Waiorongomai Correspondent, Waikato Times, 17 September 1889, p. 2.

 $^{^{560}}$ Te Aroha News, 4 December 1889, p. 2.

system'.⁵⁶¹ A correspondent noted that 'although it has been kept somewhat dark, for reasons best known to those in charge, it has not been altogether a secret that for some weeks past very good gold has been found' in the Premier, creating 'new and encouraging prospects'.⁵⁶²

In late March, a correspondent reported everything was ready to start once 'the long expected rain' came. The hoppers, the ore passes in the Premier, and the tramway trucks were all full and able to keep the plant 'continually going. At the battery everything has been cleaned up and put in order'. ⁵⁶³ On 5 April, the local newspaper described the situation on the eve of the first crushing:

Through good and through evil report the operations of the syndicate have been steadily carried on; and, under the energetic management of Mr P. Ferguson, their works have assumed an importance which is likely soon to be recognized. The scene of their present operations lies in the northern part of the ground formerly held by the old Premier Company, which ground in now included in the special claim held by the syndicate. A short distance up hill from the original Premier workings there is an enormous outcrop of quartz extending for many chains in length, and forming a continuation of the main lode which runs N. and S. through the goldfield. It is in the neighbourhood of this huge outcrop that the Syndicate has for some time past been operating, and where the principal workings are situated. The highest of these is 180 feet in perpendicular height, above the Premier Co's upper level; between these points a good deal has been done in the way of driving and sinking to prove the vast body of stone. In a small time the whole of the workings will be connected with each other, and it will then be possible to send stuff from the highest part of them through to the hopper at the Premier low level, with very little handling. Trial samples of the ore have been taken from numerous parts of the lode, and in most instances the tests made by the resident assayer (Mr Wilson) have been satisfactory. Some of it has been proved to be of exceptionally good quality, two loads of picked stone which was treated a short time since having yielded £200 worth of gold and silver. Generally speaking the ore is of free and friable nature, and contains very little of the baser minerals. At the Company's reduction works everything is in readiness for treating the ore on a large scale. Over 90 per cent of the assay value of the ore treated has been saved. The average number of men employed by

⁵⁶¹ Bay of Plenty Times, 6 February 1890, p. 2.

⁵⁶² Te Aroha Correspondent, Waikato Times, 1 February 1890, p. 2.

⁵⁶³ Waiorongomai Correspondent, Te Aroha News, 26 March 1890, p. 2.

the Syndicate has for some time past been fifteen, but many more will be required as soon as the preparatory works now in hand at the mine are completed, which will be in about two months. The enterprise displayed by the New Era Syndicate in the face of great difficulties and discouraging circumstances will, it is hoped, have a fitting reward. 564

On 8 May, it was reported that Ferguson had 'for some time past been obtaining satisfactory returns'. Late in July he implicitly admitted this report was incorrect by arranging for 100 tons to be treated at the rival battery. Work continued in both mines and plant for a time, a report in late July stating that

they are timbering up at No. 2 level, preparatory to stoping out a large reef about 12 feet in thickness. Communication is completed from this level to the No. 5 low level, and it is expected that six men will be able to keep the mill at work at the rate of 10 tons per day.

At the mill the drying furnace is ready, and a supply of liners and cups for the McKay Pans are being carted up and put in position. Crushing, grinding, and amalgamating will be commenced on Friday [1 August]; and as the return from this portion of the mine has already proved payable, there is every prospect of a steady return for some time to come.⁵⁶⁷

Early in August, 'large quantities of quartz' were being treated, ⁵⁶⁸ but the plant ceased operating before the end of that month, ⁵⁶⁹ and never restarted. In October it was reported that of the 'exceedingly small' output at Waiorongomai during the past few months the 'greater portion' had come from Ferguson's ground. ⁵⁷⁰ George Wilson reported that, in the year to 31 March 1891, 120 feet had been driven and 20 fathoms stoped out, returning

⁵⁶⁴ Te Aroha News, 5 April 1890, p. 2.

⁵⁶⁵ Waikato Times, 8 May 1890, p. 2.

⁵⁶⁶ Te Aroha News, 23 July 1890, p. 2.

⁵⁶⁷ Te Aroha News, n.d., reprinted in Thames Star, 28 July 1890, p. 4.

⁵⁶⁸ Waikato Times, 7 August 1890, p. 3.

⁵⁶⁹ Te Aroha Warden's Court, Register of Applications 1883-1900, 40-43/1890, BBAV 11505/1a, ANZ-A.

⁵⁷⁰ Thames Star, 11 October 1890, p. 2.

201 ounces valued at £1 9s an ounce.⁵⁷¹ Gordon reported ten men had extracted 201 tons, producing 172 ounces of bullion with that value.⁵⁷²

THE END OF FERGUSON'S SYNDICATE

In September 1890 the sale of the special claim to meet a debt was avoided by money being cabled from Glasgow, and the company was granted two months' protection for all its properties.⁵⁷³ This gave sufficient time for instructions to be received from Glasgow. Some residents 'were anxious to have the ground thrown open' to other miners.⁵⁷⁴ In December, Ferguson's brother Duncan, who had arrived as the company's agent to supervise the mining,⁵⁷⁵ applied for 12 months' protection to give time to test the ore 'on a large scale' before investing further capital and restarting work. The warden granted only 14 days, 'plenty of time to make the tests necessary, and if at the end of that period he wished a little longer time, he might be willing to grant it, but he would then have to be furnished with some definite information of what they proposed to do'. He pointed out that the Waiorongomai battery could test their ore.⁵⁷⁶

A few days later, Peter Ferguson complained that, as the council's tramway was not being worked, he could not get quartz to his mill and his directors were 'anxiously waiting' for the results of a trial crushing.⁵⁷⁷ At the beginning of 1891, when he applied for 12 months' protection, Northcroft declined to recommend this on the arguments put forward. One was that he could not obtain miners: 'This, you will remember, I pointed out to you at the time was erroneous & misleading'.⁵⁷⁸ In February Duncan Ferguson asked McLiver to prepare an exhaustive report on the mines to

⁵⁷¹ George Wilson to Under-Secretary, Mines Department, 14 May 1891, AJHR, 1891, C-4, p. 156.

⁵⁷² H.A. Gordon to Minister of Mines, 8 June 1891, *AJHR*, 1891, C-4, p. 43.

⁵⁷³ Te Aroha Warden's Court, Register of Applications 1883-1900, 40-43/1890, BBAV 11505/1a, ANZ-A; Te Aroha Correspondent, *Thames Star*, 4 September 1890, p. 2.

 $^{^{574}}$ Waikato Times, 4 October 1890, p. 2.

⁵⁷⁵ H.W. Northcroft to Under-Secretary, Mines Department, 8 August 1891, Mines Department, MD 1, 91/685, ANZ-W.

 $^{^{576}\} Thames\ Star,\, 12$ December 1890, p. 2.

⁵⁷⁷ Piako County Council, Waikato Times, 20 December 1890, p. 4.

⁵⁷⁸ H.W. Northcroft to Peter Ferguson, 7 February 1891, Thames Warden's Court, Warden's Letterbook 1886-1893, folio 412, BACL 14458/2b, ANZ-A.

take to the directors when he left for Glasgow late that month, 'together with his views on the present position' and his estimate of the amount of capital required to develop the mines and to produce 'a fair return'. The *Te Aroha News* understood that, should McLiver's report warrant it, the syndicate would probably 'expend a considerable sum' on development and erecting 'suitable machinery'. The was to be disappointing, for in July the special claim was forfeited for non-working. Ferguson's Syndicate then acquired it once more, to forfeit it for the final time in 1892. The same statement of the syndicate that the special claim was forfeited for non-working.

In 1895, Gordon explained that, after floating his company, Ferguson made the common mistake of introducing machinery 'which had been very little used for the reduction of quartz-ores' and which 'proved an entire failure so far as the first reduction process was concerned. The only really good' machinery, the McKay pans, 'were only suitable for treating ore by amalgamation', but as the ore contained 'gold in a finely-divided state' it 'ought to have been treated by the cyanide process', as originally intended. 'Through some disagreement amongst the shareholders' in Scotland 'owing to the disappointing returns of the extraction by amalgamation', operations soon ceased. ⁵⁸² This outcome meant that Henry Hopper Adams was the first person to use cyanide at Waiorongomai. ⁵⁸³ Clearly the Cassel Company had decided to concentrate their efforts on treating the superior ore of the Crown mine at Karangahake, ⁵⁸⁴ meaning that Waiorongomai missed out on being the second place in New Zealand to test the cyanide process.

The company blamed the poverty of the ore for the bad results.⁵⁸⁵ But clearly the machinery was also to blame. When William Hutchison, the metallurgical engineer employed at the Crown Mines plant, later devised a drying kiln, he stated 'that the design is not new, nor altogether his own,

⁵⁷⁹ Te Aroha News, n.d., reprinted in Thames Advertiser, 13 February 1891, p. 2.

⁵⁸⁰ Te Aroha Warden's Court, Plaint Book 1880-1898, 11/1891, BBAV 11547/1a; Certified Instruments 1891, press cutting of Warden's Court notice of 22 July 1891, BBAV 11581/12a, ANZ-A.

⁵⁸¹ Te Aroha Warden's Court, Plaint Book 1880-1898, 5/1892, BBAV 11547/1a; Plaints 1892, 5/1892, BBAV 11572/2a, ANZ-A.

⁵⁸² H.A. Gordon to Minister of Mines, 24 July 1895, *AJHR*. 1895, C-3, p. 66.

⁵⁸³ John McCombie, 'Beginnings of Cyanidation', *Mining Magazine* (London), vol. 5 (June 1911), p. 456.

⁵⁸⁴ See Sybil M. Jack, 'The Introduction of Cyaniding in New Zealand: A Case Study in the Role of Technology in History', *Prometheus*, vol. 2 no. 1 (June 1984), pp. 25-26.

⁵⁸⁵ Lougheed, 'Cyanide Process', p. 47, n. 15.

the idea having been borrowed from the drying-kiln erected by the New Era syndicate at Waiorongomai, but which was so faulty as to be practically useless', for 'only the lower side of the ore was exposed to the heat'. 586

According to Northcroft, the plant could not have operated effectively because of insufficient water power 'for the greater part of the year', and recommended its removal 'to the flat where there would be no such drawback'. Instead, in late 1891 it was decided to remove it to the new find at Waiomu and re-erected 'on the site of the Paraquet plant' earlier 'pulled down and removed' by the Ferguson Syndicate. 'Obadiah' commented: 'Such is mining, dear boys. Pull down, remove, burst up, reform, re-erect. This is mining thanks to some of our guns [experts] 588 and legislators and will be till mining is carried on like any other business'. 589

On 9 December 1891 the property of the syndicate, now in liquidation, was offered for sale: the tramway and its wire ropes and rails, the water race and its pipes, and the battery building and all its machinery.⁵⁹⁰ In the following March the special claim was forfeited, and in the following month an appeal against the forfeiture failed.⁵⁹¹ Accordingly, in September the remaining machinery, plant, and buildings were sold for £200 to A. & G. Price and removed for re-location.⁵⁹² A syndicate of local miners obtained the machine site, water race, hopper, and battery building, planning to erect 10 head of stampers and two 'Watson and Denny's silent overflow pans' on the battery site,⁵⁹³ but nothing came of these plans. One concentration tank still remained in 1931,⁵⁹⁴ but has now decayed totally.

⁵⁸⁶ James Park, The Cyanide Process of Gold Extraction: A text-book for the use of metallurgists and students at schools of mines, etc (Auckland, 2 ed., 1896), pp. 95-96.

⁵⁸⁷ Thames Star, 12 December 1890, p. 2.

⁵⁸⁸ The New Partridge Dictionary of Slang and Unconventional English, ed. Tom Dalzell and Terry Victor (London, 2006), vol. 1, p. 936; a 'great gun' was 'an important, powerful, influential person': Jonathon Green, The Cassell Dictionary of Slang (London, 1998), p. 532.

⁵⁸⁹ 'Obadiah', 'Shares and Mining', Observer, 10 October 1891, p. 15.

⁵⁹⁰ Advertisement, Auckland Star, 21 November 1891, p. 8.

 $^{^{591}\} Thames\ Star,\, 29\ March \,1892,\, p.\,\, 2,\, 14\ April \,1892,\, p.\,\, 4.$

⁵⁹² Advertisement, Auckland Star, 2 September 1892, p. 4; Thames Advertiser, 10 September 1892, p. 2, 14 September 1892, p. 3; A. & G. Price, Ledger 1890-1896, folio 112, A. & G. Price Archives, Thames.

⁵⁹³ Te Aroha News, n.d., reprinted in Thames Star, 7 November 1892, p. 4.

⁵⁹⁴ Te Aroha News, 7 January 1931, p. 5.

The battery would be remembered in the Te Aroha district as 'Ferguson's Folly'.⁵⁹⁵ Little remains on the site, but part of a timber structure on the bottom terrace are what remains of the cyanide tanks, the oldest surviving evidence of the first field trials of this process in New Zealand.⁵⁹⁶

The failure of the battery to produce the results anticipated had serious financial consequences. Three small firms had taken out warrants of distress on 19 August 1890 for a total of £147 9s 9d. ⁵⁹⁷ On 4 September, its property was to be sold by the bailiff 'unless certain claims to local tradesmen' were paid. ⁵⁹⁸ This sale was cancelled because on that date 'the matter was settled, the money having been cabled out from Home'. ⁵⁹⁹ Twelve days later, the company was sued for £7 12s 9d for cartage and six miners sought wages totalling £111 6s 8d; these debts were paid. ⁶⁰⁰ On 9 June 1891, the company was successfully sued by two miners, the brothers Christopher and Robert Guy, for wages totalling £56 4s 9d; ⁶⁰¹ the latter had been the company's underground boss. ⁶⁰² When Melville, named as the defendant, appealed to the Supreme Court, it decided that the magistrate had no jurisdiction because, being registered in Scotland, the company could not be sued by New Zealand residents. ⁶⁰³ A *Te Aroha News* editorial criticized this judgment:

⁵⁹⁵ Te Aroha News, 7 January 1931, p. 5.

⁵⁹⁶ Peter Petchey, 'The Archaeology of the New Zealand Stamp Mill' (PhD thesis, Department of Anthropology and Archaeology, University of Otago), Appendix, especially figure A109.

⁵⁹⁷ Te Aroha Warden's Court, Home Warrant Book 1883-1928, 47-49/1890, BBAV 11498/1a;
Te Aroha Magistrate's Court, Civil Record Book 1889-1896, 47-49/1890, BCDG 11221/1c, ANZ-A.

⁵⁹⁸ Waikato Times, 4 September 1890, p. 2.

⁵⁹⁹ Thames Star, 4 September 1890, p. 2.

⁶⁰⁰ Te Aroha Magistrate's Court, Civil Record Book 1889-1896, 54-60/1890, BCDG 11221/1c, ANZ-A.

⁶⁰¹ Te Aroha Magistrate's Court, Civil Record Book 1889-1896, 45, 46/1891, BCDG 11221/1c, ANZ-A.

⁶⁰² Memorandum by Peter Ferguson, 14 June 1892, Mines Department, MD 1, 92/663, ANZ-W.

 ⁶⁰³ Thames Advertiser, 16 July 1891, p. 2; Auckland Weekly News, 18 July 1891, pp. 29-30,
 25 July 1891, p. 14.

When such an act of injustice is possible under the present law, it is high time that legislation should be introduced to deal promptly and effectively to amend the mining regulations. We hear a good deal said as to the benefits which the introduction of capital by foreign companies would give to the mining industry, but this case will, we think, show that there is another side of the story. The Ferguson Syndicate have the power to take away all the gold they may win ... but they cannot be sued in the colony for the payment of wages due to their workmen. If this is the kind of benefit which foreign capitalists confer on the mining industry the less we see of them the better. 604

The under-secretary, concerned that those dealing with British companies needed to be protected, asked Northcroft, who had found the company liable, for details. 605 Northcroft explained that both men had been employed by the assayer, Arthur Wilson, who 'paid them from time to time leaving a balance due'. When Duncan Ferguson arrived from Glasgow, he dismissed Wilson, who left New Zealand temporarily, but kept the two men on and paid the balance due to them and part of their wages while he supervised the mining. When he departed in February, he left

a balance of wages due and did not intimate to the men at work in the mine that any change had taken place. They continued to work for a considerable time under the direction of Mr Peter Ferguson ... who was so far as they knew placed in charge of the mine by the Syndicate's instructions and not having been discharged or informed they were not working for the Syndicate they considered they were till some time in April last their attention was drawn to an advertisement signed by one Thomas Melville stating he was the only authorised agent for the Ferguson Syndicate in New Zealand and would not recognise any liabilities unless incurred under his order.

When they explained to Melville that they had continued to work under the instructions of Wilson and Duncan Ferguson, he replied: 'They had better apply to those who had employed them - knowing that both Mr Wilson and Duncan Ferguson were on their way home to Glasgow'. Northcroft summarized why he rejected the legal arguments put forward by Melville's counsel and reported that the miners would 'carry the case to the

⁶⁰⁴ Editorial, Te Aroha News, n.d., reprinted in Thames Star, 20 July 1891, p. 2.

⁶⁰⁵ Under-Secretary, Mines Department, to H.W. Northcroft, 27 July 1891, Mines Department, MD 1, 91/685, ANZ-W.

Court of Appeal'.⁶⁰⁶ To the delight of the mining community, this court found in favour of their right to sue;⁶⁰⁷ as there was no record of this happening; perhaps the company settled out of court.

At an extraordinary general meeting on 24 June 1891, shareholders agreed that, as the company could not 'by reason of its liabilities continue its business', it should be wound up. 608 On 21 September, Ferguson received one month's salary in lieu of notice of dismissal as manager. 609 'Obadiah', in noting that the Glasgow syndicate had 'burst up', commented that Ferguson, who had floated it, 'was the first to put in the pen,610 which is not likely to help him should he take another trip on a second errand. He will have a warm reception and like his namesake of old', meaning St Peter, 'may have to deny himself'. 611 What had happened was that, when all the vendors' shares were cancelled by order of the Court of Session on 4 July 1889 and then reissued differently, the secretary recorded that Ferguson's 1,000 shares 'were not transferred by the holder but were cancelled' by the court and 'he did not participate in the re-issue'. His shares were transferred to the Cassel Company, making him the only original shareholder not to retain an interest. 612 Did he suspect the new plant would fail?

On 20 July 1891, Ferguson sued the company for £135 2s. This amount comprised the cost of two chairs for the laboratory, one large mercury pot on which he was owed £60, provision of an office from 1 April 1889 to 31 January 1891 for which he wanted rent at 5s for these 96 weeks, 'use of 2 horses occasionally and one horse continuously' for 98 weeks at 15s a week, and the cost of one machine license, £1.613 At the hearing on 4 August, it was announced the lawyers had agreed to fix amount of the claim at £100.

⁶⁰⁶ H.W. Northcroft to Under-Secretary, Mines Department, 8 August 1891, Mines Department, MD 1, 91/685, ANZ-W.

⁶⁰⁷ Auckland Weekly News, 31 October 1891, p. 21, 21 November 1891, p. 30; Thames Star, 17 November 1891, p. 2.

⁶⁰⁸ Company Files, BT 2/1799, Scottish Record Office, Edinburgh.

⁶⁰⁹ Te Aroha Warden's Court, Plaints 1891, 23/1891, BBAV 11572/2a, ANZ-A.

 $^{^{610}}$ 'To put in the pen' has not been traced in any dictionary of slang, but clearly meant to abandon his interest.

^{611 &#}x27;Obadiah', 'Shares and Mining', Observer, 10 October 1891, p. 15.

⁶¹² Note by Peter Robertson Lunan, List of Persons holding Shares, 23 February 1890, Company Files, BT 2/1799, Scottish Record Office, Edinburgh.

⁶¹³ Te Aroha Warden's Court, Plaints 1891, 23/1891, BBAV 11572/2a, ANZ-A.

For one month, Ferguson would take no action to obtain this sum, the company had the right to move that the warden's court had no jurisdiction because it was registered in Britain, and its assets could not be touched without Ferguson's consent. On the same date, Melville sued Ferguson for £22 6s 3d advanced to him; he was ordered to pay after one month. Then, on 19 September, Ferguson sued the company under a warrant of distress for £112, and a sale of its special claim, water race, machine site, and its machinery and equipment was advertised, but 'a few minutes before noon' on 28 September, 'the time appointed for the sale', Melville paid him £140 'in full payment of debt and costs'. In October, the company refused to pay A. & G. Price £28 0s 4d, Melville instructing this firm to ask Ferguson for payment. Accordingly, they wrote to him requesting 'your cheque by return of post. Then you can take action for recovery against the Company'. When he did not pay, he was sued; as he did not sue the company, perhaps he accepted that the debt was his responsibility.

With the removal of the plant, the New Era tramway became superfluous. As government funds had assisted with its construction, in 1892 Wilson asked whether it could be sold. The Mines Department considered it could, on condition that the government recovered its £1,000 from the proceeds. Wilson believed its removal would be 'to the injury of

⁶¹⁴ Te Aroha Warden's Court, Plaint Book 1880-1898, 23/1891, BBAV 11547/1a, ANZ-A; Te Aroha Correspondent, *Thames Star*, 4 August 1891, p. 2.

⁶¹⁵ Te Aroha Magistrate's Court, Civil Record Book 1889-1896, 56/1891, BCDG 11572/2a, ANZ-A.

 ⁶¹⁶ Te Aroha Magistrate's Court, Home Warrant Book 1883-1928, 23/1891, BBAV 11498/1a;
 Plaints 1891, 23/1891, BBAV 11572/2a, ANZ-A; *Thames Star*, advertisement, 25
 September 1891, p. 3, 30 September 1891, p. 2.

⁶¹⁷ A. & G. Price to Peter Ferguson, 9 October 1891, and account for Peter Ferguson, 22 October 1891, A. & G. Price Letterbook 1891-1893, pp. 100, 110, A. & G. Price Archives, Thames.

⁶¹⁸ Thames Magistrate's Court, Plaint Book 1890-1894, entry for 22 October 1891, BACL 13737/2a; Civil Record Book 1890-1895, folio 80, entry for 13 November 1891, BACL 13735/1a, ANZ-A.

⁶¹⁹ George Wilson to H.A. Gordon, 28 January 1892, Inspector of Mines, Thames, Letterbook 1888-1892, p. 587, YBAZ 1240/1, ANZ-A.

⁶²⁰ Memoranda of H.A. Gordon and H.J.H. Eliott (Under-Secretary of Mines), 5 February 1892, Mines Department, MD 1, 00/1182, ANZ-W.

the district', 621 and Gordon did not want it removed either, writing in his 1895 report that it was 'still in good order' and available for anyone who chose 'to open up any mines in this neighbourhood'. 622 As nobody did so choose, in June 1897 the department was asked by the manager of the Great Western whether he could purchase its steel rope for his proposed aerial tramway. 623 Wilson reported that, as the line was 'now rotten and the rope deteriorating in value every year', rather than 'allow it to rot on the ground' it should be sold.624 The department agreed, on condition that it received a third of the sale price. 625 Accordingly, Ferguson sold the rope for £15, but urged the purchaser not to pay £5 to the council because of 'the Cowardly treatment I received at their hands and for which the Council received the severest censure' from the Goldfields Committee. 'As for the Government it will never be out of my debt. I therefore object to any deductions being made in my account'.626 After discussion amongst officials about past 'friction' between Ferguson and the council, he was not required to pay anything to it. 627 In 1900, he sold the rails and brakes for £50 to the Crown Mines, 628 giving the government its third. When the council

⁶²¹ George Wilson to Thomas Melville, 20 February 1892; George Wilson to Devore and Cooper, 26 February 1892, Inspector of Mines, Thames, Letterbook 1888-1892, pp. 591, 600, YBAZ 1240/1, ANZ-A.

⁶²² H.A. Gordon to Minister of Mines, 24 July 1895, AJHR, 1895, C-3, p. 66.

⁶²³ C.R. Farquharson to George Wilson, 24 June 1897, Mines Department, MD 1, 00/1182, ANZ-W.

⁶²⁴ George Wilson to Under-Secretary, Mines Department, 30 June 1897, Mines Department, MD 1, 00/1182, ANZ-W.

⁶²⁵ Memorandum of 30 June 1897, Mines Department, MD 1, 00/1182, ANZ-W.

⁶²⁶ Peter Ferguson to Henry Reynolds, 11 November 1897, Mines Department, MD 1, 00/1182, ANZ-W; Warden to Under-Secretary, Mines Department, 8 December 1897, Te Aroha Warden's Court, Letterbook 1883-1900, p. 447, BBAV 11534/1a, ANZ-A.

⁶²⁷ Under-Secretary, Mines Department, to Henry Reynolds, 24 November 1897; Joseph Hickson, Receiver of Gold Revenue, Te Aroha, to Under-Secretary, Mines Department, 8 December 1897; Under-Secretary, Mines Department, to Joseph Hickson, 17 December 1897, Mines Department, MD 1, 00/1182, ANZ-W; see also County Clerk to Under-Secretary, 31 August 1900, Piako County Council, Letterbook 1899-1901, p. 278, Matamata-Piako District Council Archives, Te Aroha.

⁶²⁸ County Clerk to Crown Mines, 23 August 1900; County Clerk to Albert Edwards, 28 August 1900; County Clerk to Under-Secretary, Mines Department, 31 August 1900,

requested its third, claiming an 1897 agreement with the Minister, the latter denied any such agreement existed, as proved by his files, for he had kept careful records 'owing to the conflicting interests'. 629

AFTER WAIORONGOMAI

Once the Ferguson Syndicate ceased operations, William Morris Newsham⁶³⁰ and party and Ferguson and party became tributers in the Premier for about six months, breaking out 806 tons for a return of 251oz 7dwt.⁶³¹ That was Ferguson's last involvement with Waiorongomai apart from applying for the Aroha Consolidated Special Claim in November 1896; when the brief boom collapsed he withdrew his application in the following April.⁶³² He had moved to Paeroa in 1892, living in a 'substantial residence' purchased from Wick,⁶³³ where he worked for the Cassel Company.⁶³⁴ According to his later account, he spent the early 1890s trying to solve the difficulties some had found in combining wet crushing with cyanide treatment. He

employed every opportunity of experimenting on numerous methods of trying to solve the mechanical difficulties ... and believed that I had succeeded, and would have had the scheme put to the practical test on a large scale but for the fact that the

Piako County Council, Letterbook 1899-1901, pp. 267, 271, 278, Matamata-Piako District Council Archives, Te Aroha.

- 629 E.W. Cave (Receiver of Gold Revenue, Te Aroha) to Under-Secretary, Mines Department, 29 August 1900, Te Aroha Warden's Court, Letterbook 1883-1900, p. 578, BBAV 11534/1a, ANZ-A; County Clerk to Under-Secretary, Mines Department, 31 August 1900; Under-Secretary, Mines Department, to County Clerk, 5 September 1900; A.J. Cadman to County Clerk, 8 October 1900, Mines Department, MD 1, 00/1182, ANZ-W.
- 630 See paper on his life.
- 631 Thames Advertiser, 31 August 1891, p. 2, 8 February 1892, p. 4; Warden to Under-Secretary, Mines Department, 14 May 1892, AJHR, 1892, C-3A, p. 15; H.A. Gordon to Minister of Mines, 28 July 1892, AJHR, 1892, C-3, p. 48.
- ⁶³² Te Aroha Warden's Court, Register of Applications 1891-1899, Hearing of 12 November 1896, BBAV 11505/4a, ANZ-A.
- 633 Certificates of Title, vol. 48, folio 19, Land Information New Zealand, Hamilton.
- ⁶³⁴ Thames Advertiser, 27 June 1892, p. 2, 26 September 1892, p. 2; Ohinemuri Gazette, 24 September 1892, p. 2.

management of dry-crushing mills would not grant facilities for doing so. On several occasions from 1891 to 1894, I approached the managers of the Waihi and New Zealand Crown Mines respectively, and discussed with them the question of wetcrushing, but no change in the system would be permitted.

As he could make no progress in New Zealand, he went to Melbourne 'to finish some experiments in Electrolytic Precipitation', which he 'safely' predicted would 'soon be adopted instead of precipitating on zinc shavings'. He unsuccessfully negotiated in 1895 and 1896 to test his system at Karangahake and was advised to test it in the Waiorongomai battery, but this used dry crushing whereas Crown Mines was proving the benefits of wet crushing. 635 This version of events prompted an immediate response from Frederick Richard William Daw, general manager of Crown Mines, 636 who denied meeting him in 1896, as claimed. When Ferguson early in 1897 sought permission to experiment on Waiorongomai ores, 'his conversation did not lead me to think that he possessed any technical knowledge' and Daw did not feel justified in letting him use the Waiorongomai plant. Ferguson's method had 'no connection whatever with the process adopted in the Crown Mines'. 637 Ferguson rejected Daw's refutation, and on 5 January 1898 stated that he had 'written to several gentlemen who can verify my statements' and would send their replies to the New Zealand Herald. 638 The mining reports for the remainder of that month and the correspondence columns for both January and February did not include anything more on this dispute. It was just possible that, if such people did write in support of Ferguson, the newspaper did not consider it sufficiently newsworthy for publication, but it is highly likely that a letter from Ferguson announcing that he could prove his case would have been published.

By 1897, Ferguson was living in Parnell and working on his inventions. In October, when he described himself as a mining engineer, he applied for five patents: 'an improved electrolytic amalgamator', 'an improved pulveriser', 'an improved electrolytic precipitating box', 'an improved agitating and settling vat', and 'improvements in the process of an apparatus for extracting gold and silver from ores and other substances'. 639

⁶³⁵ New Zealand Herald, 22 December 1897, p. 6.

⁶³⁶ See Cyclopedia of New Zealand, vol. 7, p. 39.

⁶³⁷ Letter from F.R.W. Daw, New Zealand Herald, 25 December 1897, p. 3.

⁶³⁸ Letter from Peter Ferguson, New Zealand Herald, 5 January 1898, p. 6.

⁶³⁹ New Zealand Gazette, 28 October 1897, p. 1976.

Two years later, he applied for one for 'an improved agitating and settling pan'. 640 His last application was in 1901, for 'an improved automatic amalgamating bullion and mercury trap'. 641

In 1904, when described as a 'mining expert', he visited a Drury coal mine with other members of the syndicate planning to develop it. 642 During the first years of the twentieth century, he prospected on Maori land in Northland. In December 1904 he applied for a prospecting license over 300 acres in the Kaeo Survey District.⁶⁴³ When he died, in June 1905, an obituary stated that 'during the past few years his efforts have been directed towards developing the copper deposits at Whangaroa, and this enterprise he had just succeeded in bringing to a promising state, after considerable delay owing to negotiations with the Government and Natives'. 644 Before his death, 'several valuable lodes of rich sulphide of copper' were located, and he surveyed a tramway to Whangaroa Harbour. 645 After his death, his name lived on when The Ferguson's Syndicate Ltd was incorporated in December 1905, his widow transferring his Whangaroa leases to it. In 1907, when this company had a smelting plant at Waiomu, its name was changed to The Ferguson's Mining and Smelting Company, and it was hoped to raise more capital by issuing more shares. 646 It obtained mining leases for the exceptional period of 63 years 'under special clauses of the Mining Act, 1905', which Ferguson 'was instrumental in getting passed'. During his life 'he located several lodes of high-grade sulphide of copper ore on the property, but it was not deemed advisable to make their existence public until the title to the land had been secured'. He had 'laid off and graded an excellent line for a tramway from the lodes to Whangaroa Harbour', a distance of about three miles. 647 It was hoped the Electrolytic

⁶⁴⁰ New Zealand Gazette, 10 November 1899, p. 2111.

⁶⁴¹ New Zealand Gazette, 11 July 1901, p. 147.

⁶⁴² Auckland Star, 18 April 1904, p. 5.

⁶⁴³ New Zealand Mines Record, 16 December 1904, p. 213; Auckland Star, 28 December 1904, p. 2.

⁶⁴⁴ Ohinemuri Gazette, 23 June 1905, p. 3.

⁶⁴⁵ Auckland Star, 23 May 1906, p. 4.

⁶⁴⁶ Company Files, BADZ 5181, box 202 no. 1209, ANZ-A; *Auckland Star*, 2 February 1907, p. 5.

⁶⁴⁷ Auckland Weekly News, 31 May 1906, p. 23.

Smelting Company of Australia would acquire an interest, but when this failed to eventuate the company was forced to wind up in 1910.⁶⁴⁸

Ferguson's death on 18 June 1905 from acute influenza and cardiac failure at the age of 66 was 'somewhat unexpected'. His only known illness before then was a stroke in 1898 that for a time left him in a critical state. An obituary, typically ignoring his more belligerent behaviour, stated that his 'kindly temperament and straightforward disposition endeared him to all his friends', who had smothered his coffin under 'floral tributes'. His widow described him as 'the beloved husband of Jean Ferguson. Deeply regretted'. She would live until 1945, when aged 91.653

CONCLUSION

Ferguson's struggles were typical of many a miner convinced that they had good ore and a good process. He had inadequate financial backing, rival battery owners, no initial access to a machine site by either tramway or road, a local body reluctant to assist, political manoeuvering at local and national levels, a battery process that even after improvements did not produce the result promised, a new cyanide process that might have worked but was not used, and low grade ore. Ferguson was persistent, even pugnacious, and like some other miners claimed to have skills as an inventor; although the outcomes did not live up to his dreams, he was hardly alone in this.

Appendix

Figure 1: Waiorongomai mining area, showing New Era Battery and branch tramway and lower road leading to it, mapped by Max Oulton,

⁶⁴⁸ Auckland Star, 21 April 1910, pp. 4, 7.

⁶⁴⁹ Death Certificate of Peter Ferguson, 18 June 1905, 1905/2437, BDM; New Zealand Herald, 21 June 1905, p. 4.

 $^{^{650}}$ Paeroa Correspondent, $New\ Zealand\ Herald,$ 27 September 1898, p. 5.

⁶⁵¹ New Zealand Herald, 21 June 1905, p. 4; slightly rephrased version in *Ohinemuri Gazette*, 23 June 1905, p. 3.

⁶⁵² Death Notice, Auckland Weekly News, 22 June 1905, p. 34.

⁶⁵³ Death Certificate of Jean Ferguson, 2 July 1945, 1945/20962, BDM; Auckland Star, Death Notice, 2 July 1945, p. 1, 7 July 1945, p. 9.

- University of Waikato, published in Waitangi Tribunal, *The Hauraki Report: Wai 686* (Wellington, 2006), vol. 2, p. 478; used with permission.
- Figure 2: 'Special Claim, Waiorongomai, Applied for by Peter Ferguson', 9 July 1887, Map no. 4147, University of Waikato Map Library.
- Figure 3: 'Ferguson's Special Claim No. 2', c. March 1888, Te Aroha Warden's Court, Mining Applications 1888, 6/1888, BBAV 11289/12a, ANZ-A [Archives New Zealand/Te Rua Mahara o te Kawanatanga, Auckland Regional Office]; used with permission.
- Figure 4: Plan accompanying application by Peter Ferguson for 300ft low level tunnel in Premier linked to the County tramway by branch tramway, 26 June 1889, Te Aroha Warden's Court, Mining Applications 1889, 50/1889, BBAV 11289/12a, ANZ-A [Archives New Zealand/Te Rua Mahara o te Kawanatanga, Auckland Regional Office]; used with permission.
- Figure 5: Malcolm Hardy, plan of his re-pegging Ferguson's Machine Site, 10 May 1932, Te Aroha Warden's Court, Mining Applications 1932, 20/1932, BCDG 11289/2a [Archives New Zealand/Te Rua Mahara o te Kawanatanga, Auckland Regional Office]; used with permission.
- Figure 6: W. Deverell, 'New Era Battery. Waiorongomai Te Aroha' (lithograph), The Handbook of New Zealand Mines (Wellington, 1887), facing p. 323.
- Figure 7: 'Ferguson's New Era Works, Waiorongomai. Improved Silver & Gold Saving Plant', AJHR, 1887, C-5, after p. 72.
- Figure 8: Enlargement of main part of 'Ferguson's New Era Works', showing (from right) the first stone breaker, the calcining furnace, the second stone breaker, the roller pan, the grinding and amalgamating pans, the settler pans, the steam boiler, and the Waiorongomai Stream, AJHR, 1887, C-5, after p. 72.
- Figure 9: 'McKay's Amalgamator, (large pan.)', AJHR, 1887, C-5, after p. 72.

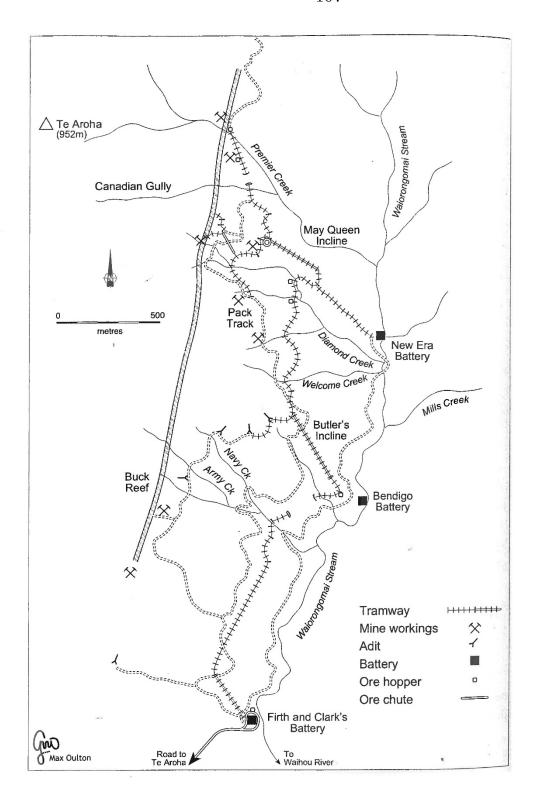


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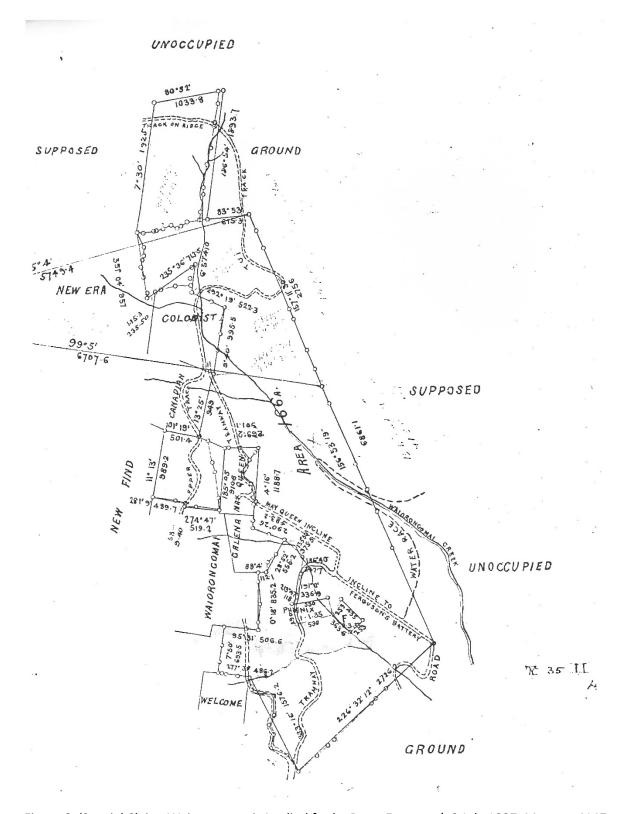


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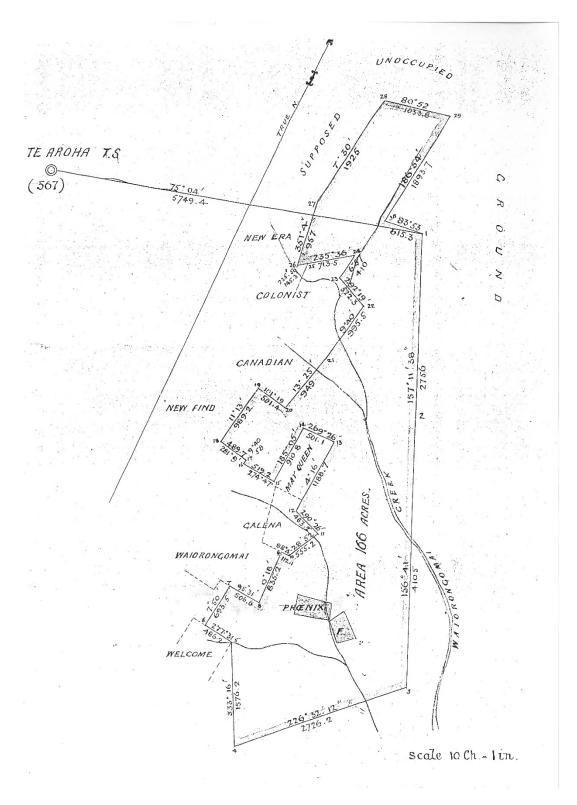


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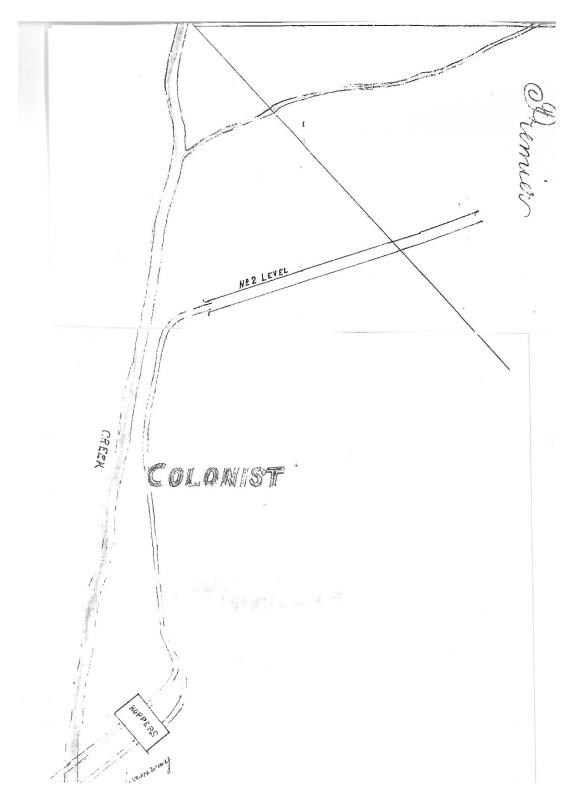


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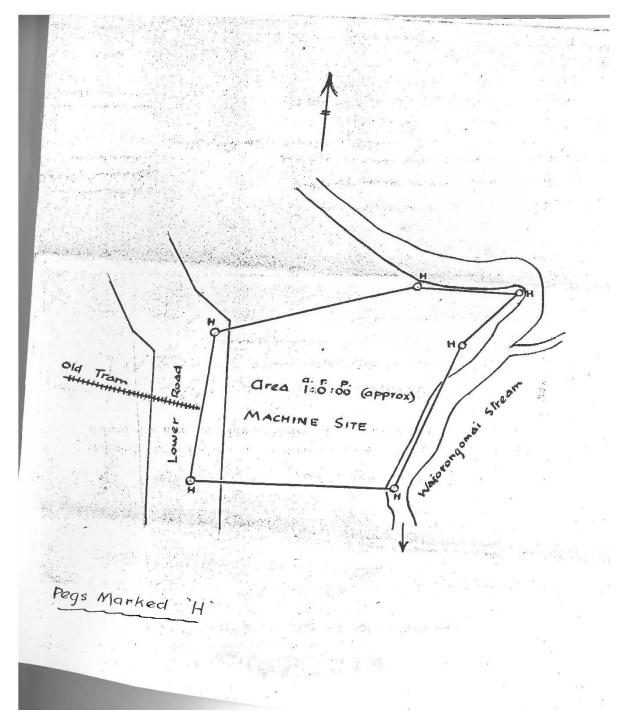


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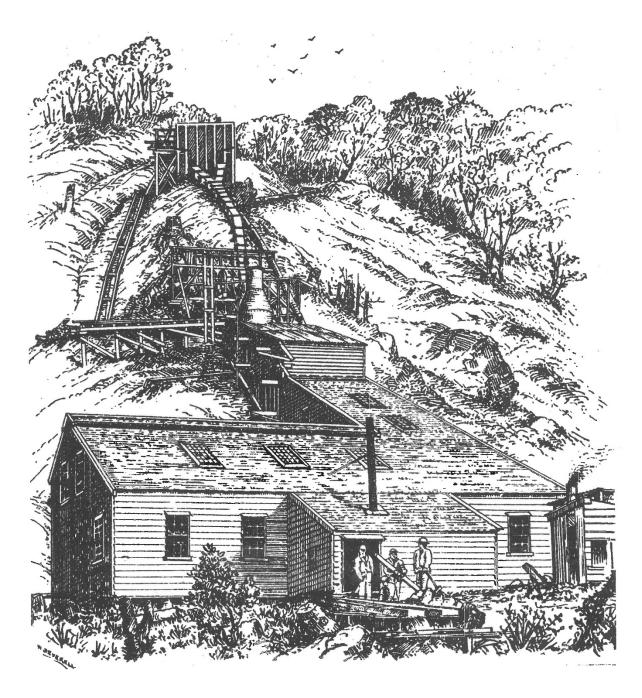


Figure 6: W. Deverell, 'New Era Battery. Waiorongomai – Te Aroha' (lithograph), The Handbook of New Zealand Mines (Wellington, 1887), facing p. 323.

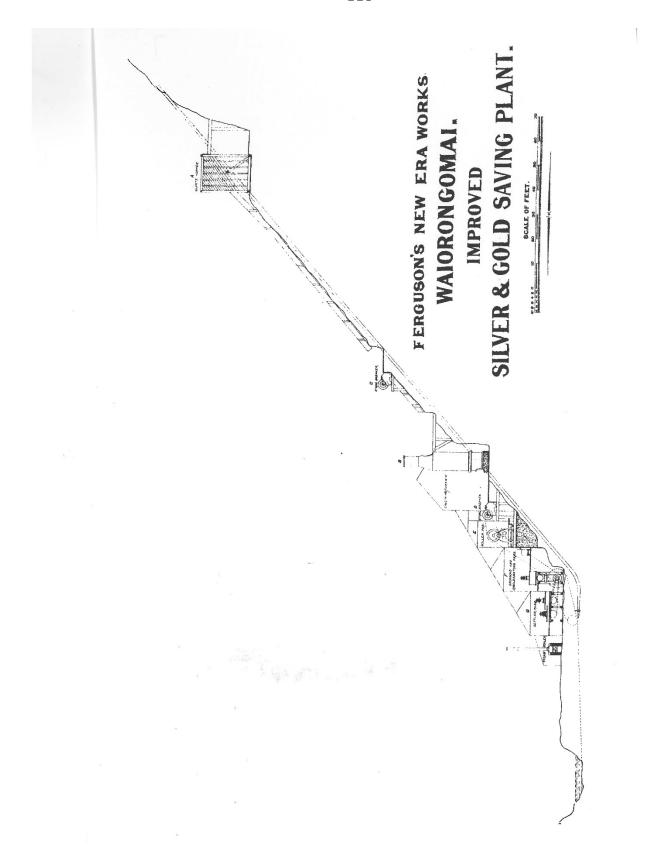


Figure 7: 'Ferguson's New Era Works, Waiorongomai. Improved Silver & Gold Saving Plant', AJHR, 1887, C-5, after p. 72.

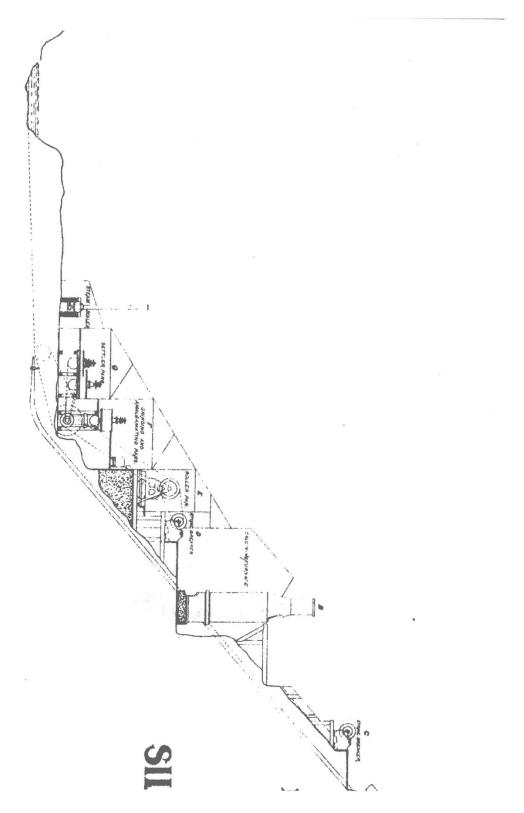


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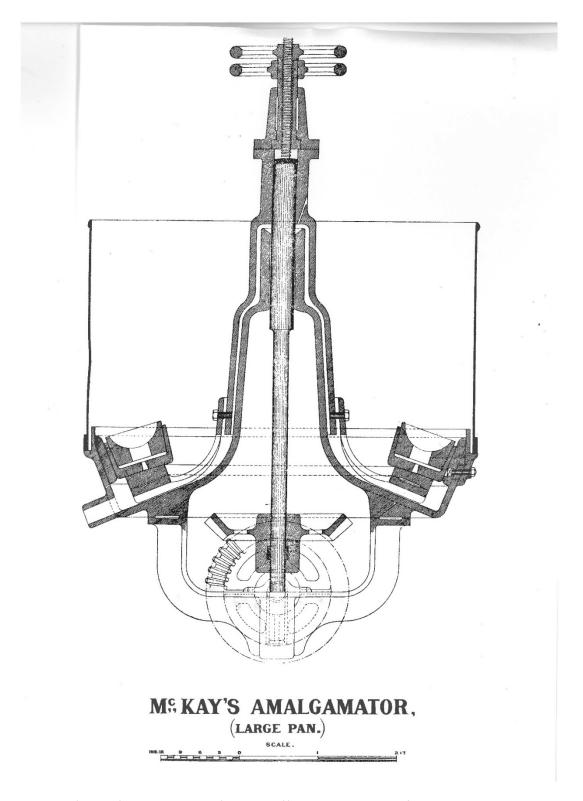


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