

Reveiled in the Record: Thomas Logan, and origins of the Cromwell Quartz Mining Company, Bendigo, Otago

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The Otago gold rush has not received the level of academic scrutiny and analysis accorded to similar events in Australia, despite occasional incisive scholarly (but unpublished) theses lining university library shelves.¹ Consequently, accounts of the Otago rush have tended to be the preserve of local enthusiasts, writing historical narratives rather than in-depth examination of cultural historical aspects of the goldfields. Notwithstanding this limitation, some books, such as those produced for the Otago Centennial Publications in 1951, are compelling histories by writers who were participants in the events they describe.² The writers' proximity to the action does not render their texts free from error; written without the use of computers, online resources like the National Library's paperspast site³ or archival sources in Archives New Zealand and the Hocken Library, means that gaps in the historic record were sometimes bridged with speculation or reasoned interpolation. This paper deals with one example of this type of interpretation and through gleaning new information from primary sources, re-writes a key part of the received narrative from the earliest days of Bendigo, Central Otago.

The received narrative

James Crombie Parcell, a prominent and well-respected Cromwell lawyer, wrote the *Heart of the Desert* to detail the gold, farming and governmental history of the Cromwell region, which included Bendigo Gully. In reaching the conclusion that the discovery of the Cromwell Company's riches was predicated on a brazen fraud committed by Thomas Logan, he constructed the foundations upon which every subsequent writer has discussed the first years of quartz mining at Bendigo. According to Parcell,

Thomas Logan had gone to Bendigo in 1863 and taken up a quartz claim that nobody would look at. He could produce some wonderful specimens of gold-studded quartz which people would only admire and throw away. Nothing but alluvial mining was considered worthwhile. Logan, while working as an ordinary miner most of his time, fought steadily from 1863 to 1866 to get someone with money to come into partnership with him and open up the reef. At last, on the strength of the report Julian Coates made in 1865, a party of Dunedin capitalists formed the Bendigo Quartz Mining Company and took up sixteen and a half acres of land, including Logan's area. Logan thought they were treating him unfairly and retaliated in kind by losing the leader and running out on poor, hungry stone. The syndicate soon got tired of it and dropped the claim which Logan promptly took up again. But Bendigo was away to a bad start, being dubbed a duffer by all those who did not know the inside story.⁴

In 1976, Stan and Ron Murray wrote *Costly Gold*⁵, a popular history which sought to debunk the myths of the ‘good old days’ of the Central Otago gold mining, and the book which was directly responsible for igniting my passion for Otago’s gold rush history. The Murrays re-worded Parcell’s narrative, repeating his assertions:

In 1862, Logan ... discovered, in an old claim, an outcrop of broken quartz in which the gold could be seen with the naked eye In 1864 Julian Coates found a cluster of reefs up on the hillside very close to Logan’s, and ... he formed a company, staked out a claim, and won the right to work it ... [and] the Mining Warden held that [Logan] had forfeited the right to it and allotted it to the new company ... [however Logan] was invited to take charge of developing the new mine.... [and he] began to organise things with such obvious ability (and such hidden thought for his own interests) that, having taken out a limited amount of goldbearing rock, he skilfully “lost” the lead. And he had so completely failed to reveal his own rich lode that the company concluded the mine was a duffer, and abandoned the whole enterprise.⁶

More books followed, all repeating Parcell’s assertion of Logan’s dishonest dealings with his business partners or employer.⁷ If this collection of narratives is correct, then it is clear that Thomas Logan, Otago pioneer and quartz company builder, started on his path to riches with a significant act of dishonesty, and the true pioneers of the Bendigo quartz reefs remain both unrecognised and cheated of the wealth which came from the mine. Only a close examination of remaining primary sources can support or refute this.

Figure 1: *Thomas Logan*



Figure 2: *George Wellington Goodger*



Source Fig. 1 and Fig. 2: Courtesy Ron Murray Collection

The Bendigo Quartz Mining Company, 1866

The contemporary newspapers reveal some of the gaps in the narrative which led Parcell to make his assertions about Logan. In January, 1866, a company called the Bendigo Quartz Mining Company employed ‘two experienced reefers’ to prospect for a reef.⁸ Their efforts attracted the attention of the Cromwell correspondent for the local newspaper, the Clyde-domiciled *Dunstan Times*. In April he wrote:

An addition to the prospects of Bendigo has been made during the past month. A wealthy company in Dunedin has inaugurated perseverance in search of a quartz reef in this district and judging from all appearance the object of this enterprising party is to be obtained.⁹

The company announced their intention to erect a quartz stamper battery at the mouth of the Bendigo Gorge, registered their claim, extracted half a ton of stone and sent it to Melbourne for assaying.¹⁰ The report was a favourable three ounces of gold per ton from the Ballarat assayer.¹¹ Clyde-based surveyor Julian Coates completed a survey of the claim area in early June,¹² and then, strangely, the newspapers for the remainder of 1866 and for all of 1867 fall silent about quartz mining at Bendigo. Warden Stratford’s comprehensive summary of mining activity in the Upper Clutha area, published in September 1866, does not mention quartz at all and there is no reference to Bendigo quartz in any of the Wardens Court’s files of the time.¹³ In 1869, local commentators, writing with the benefit of hindsight, accused the company of ineptitude, short-sightedness and ‘lacking persistence’.¹⁴ But whatever their reasons, soon after making many public declarations of their intent, completion of extensive exploratory work and the expenditure of a large sum of money, sometime in June 1866 the company abandoned their efforts and left Bendigo.¹⁵ This does not place Logan at Bendigo before the company arrived, nor suggest he was employed by the company, or that he lost the lead of rich quartz to swindle his employers. Nevertheless, some additional evidence supports part of Parcell’s assertion.

A correspondent to the *Otago Witness* in November, 1869 – writing after the news of the riches of the Cromwell Company claim at Bendigo was made known – said that Logan was an experienced quartz miner from Victoria who, since mid-1863 had

spent time prospecting the stone in the vicinity of Cromwell, and became satisfied of its auriferous character. The ground now belonging to the Cromwell Quartz Mining Company was about three years ago taken up by Mr Logan along with one of the present members of the company named John Garrett.¹⁶

Given that the Bendigo Quartz Mining Company employed two men to locate and exploit a reef in the Cromwell area and that when the company left the area, two men, Thomas Logan and John (Jack) William Garrett took a lease on a quartz claim at Bendigo, suggests that the proximity in time between the ending of the Company’s efforts and the registering of the Logan/Garrett claim was suspiciously short. The last reference to the Company noted the survey on June 20 1866, while Logan and Garrett’s claim was registered on July 14 at the Clyde Warden’s Office,¹⁷ lending some credence

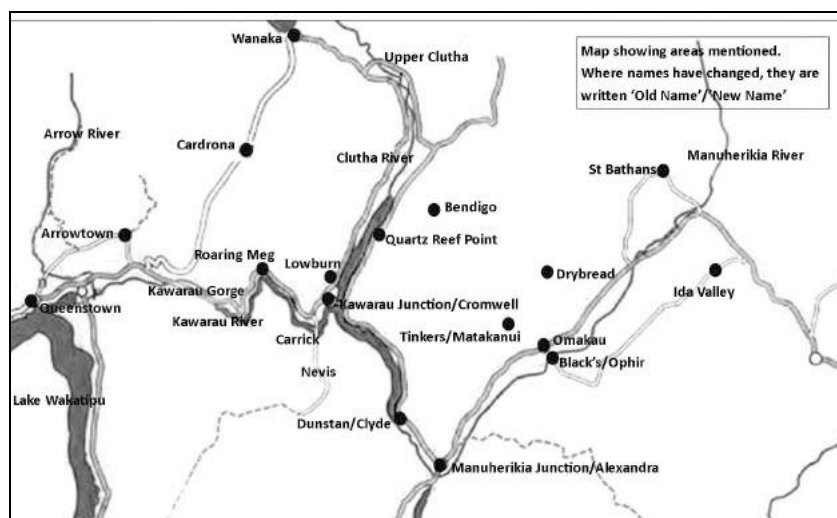
to Parcell, Murray *et al*'s description of Logan's actions. More evidence emerged in 1868 when the *Otago Daily Times* reported

at Bendigo Gully, quartz reefing is likely to be effectively carried out this year. Last year, some work was done following a "leader;" but the work was abandoned for reasons not generally known. Messrs Barrett [sic] and Logan have resumed operations, and, judging from the quartz already raised, a splendid quartz reef is on the eve of being developed.'¹⁸

At a stretch, this could be – and clearly has been interpreted to produce a link between the abandonment of the work of the company and Logan and Garrett working the reef anew. However, it does not identify Logan and Garrett as the men previously working with the company on the 'leader'; it makes no connection between them 'resuming operations' and the previous work; the date is wrong by an entire year and most importantly, for reasons I will make clear, this report makes no accusation of them having profited from cynical manipulation of the stone being worked on.

No proof of dishonesty exists in the contemporary sources. Given this paucity of supporting material, it is making quite a leap to assert that the two miners hired by the company were Logan and Garrett and that they acted dishonestly to steal the riches from the Dunedin investors. But since so many writers have done just that, it is necessary to look at the evidence behind these years at Bendigo.

Figure 3: Regional map of area covered in this paper.



Source: The author.

James Julian Coates,¹⁹ the man named by Parcell, the Murrays, Hall-Jones and Vincent Pyke as the finder of the Bendigo Reefs, occupies a critical role in the events surrounding Bendigo's quartz discoveries. He was appointed the Dunstan-Mt Benger District Chief Surveyor on March 26, 1863,²⁰ and began work to investigate and survey the alluvial flats between Dunstan (renamed Clyde in 1865) and Manuherikia Junction (sometimes called 'Lower Dunstan', becoming 'Alexandra' at the same time as Dunstan was renamed). For this investigation, as with later surveys at the warden's behest, he was required to make note of the auriferous potential and geology of the ground and to make recommendations for further investigation. He was also busy mapping, writing

reports and conducting surveys under the commission of syndicates and quartz mining companies, all of whom relied on his independence, financial disinterest and professionalism.

Coates appears in the pages of the *Otago Witness*, *Otago Daily Times* and *Dunstan Times* throughout 1864 and 1865, reporting on alluvial fields, completing surveys and making recommendations on the prospects for new quartz finds. His work took him all over the Dunstan, from German Hill in the Ida Valley,²¹ to the American Reef at Black's diggings,²² and on to the Union Jack Reef at Hindon. At Black's he conducted a crude field assay of some sample stone to yield his estimate of the likely return,²³ while at Hindon he showed the thoroughness of his approach, when he commented:

Not being satisfied that the quartz so presented to me was a portion of the vein stone in situ, I proceeded to make a survey of the country in its vicinity, and discovered two other out-crops, which enabled me with tolerable accuracy to ascertain its direction.²⁴

Figure 4: *The Bendigo Mine.*



Source: James Park, 'The Geology of the Cromwell Subdivision, Western Otago Division, Plate XI', *New Zealand Geological Survey, Bulletin No.5*, NZ Govt. Printer, Wellington, 1908, facing p. 50.

In 1865, he was sent to Bendigo, where he wrote a detailed account of the prospects of the area, including an analysis of the terrace drifts in the gully which led him to declare that the geological strata of the gravels there would reward sluicing men if adequate water could be conveyed to that place. His report had two critical aspects: first, on the strength of Coates' recommendation, a group of local sluicers from Quartz Reef Point and the Amisfield Burn formed the Aurora Syndicate to build a ten mile-long race²⁵ from Devil's Creek to Bendigo to exploit these terraces and second – and most importantly for this paper – *he made absolutely no mention of quartz at Bendigo.*²⁶

In 1866, as previously discussed, the company employed men to extract stone and announced their plans for a stamper battery at Bendigo. This was not necessarily enough to attract the attention of Coates, but the next move the company made certainly was. Registering a quartz mining claim was a three-stage process: filing a prospecting claim, organising a survey of the claim area, registering that survey with a mining lease

and the paying the lease fees. True to this practice, the 'Bendigo Quartz Mining Company' registered their prospecting claim on March 14, 1866,²⁷ and then engaged Coates to complete a survey of their area at Bendigo. With Coates on leave throughout April and May, 1866²⁸, they were delayed in having this vital step completed until June. Coates' duties were simple and prescribed, both by professional ethics and his status as a government official: he was required to complete a survey on the land under claim as required by the Goldfields Act of 1865.²⁹ He did not and could not hold a pecuniary interest as prospector, shareholder, organiser, office holder or employee of any company for whom he completed a survey. This long-standing convention was reinforced by the public opprobrium accorded early in 1866 to a surveyor called Hardy, who made the error of mixing his professional work and his own financial interests at the Tokomairiro's Canada Reef Mine.³⁰ This resulted in a court case and a very public castigation of Hardy at the hands of the *Otago Witness* editorial writers.³¹ Coates was engaged by the Bendigo Quartz Mining Company to do a survey under the terms of the legislation, nothing more.

Nevertheless the work the company prospectors were undertaking at Bendigo did not happen in secret, for alluvial miners who were in the Bendigo Gully area noted the activity and headed up the hill to peg out their own claims near the company men. Their actions had potential benefits: if the company made a rich strike, these men stood to gain from the sale of shares in their ground to speculators and other miners. It was precisely this sort of behaviour that led the Warden, Vincent Pyke, issuing a local edict preventing such behaviour at Bendigo in 1870 (he had been enraged to find men claiming ground and making no effort to work it, relying instead on the fevered speculation to yield the opportunity for a windfall sale to a newcomer).³² However, such action was fraught with risk, as these later arrivals would not necessarily have known which of the many datum pegs in the ground around the area being worked actually applied to the company claim, and without their own registered claim, they had no rights whatsoever under the Mining Act. This had been the case in early June 1866 when Coates arrived with his assistant Bates to survey the Bendigo Quartz Mining Company claim. The *Dunstan Times* records that they

surveyed a prospecting claim for the fortunate company and while doing so caused a considerable amount of annoyance to those who for some time had marked out claims in close proximity to the spot where the company men had sunk for the reef.³³

The sight of the surveyors ripping out datum pegs found on the sixteen surveyed acres cannot have endeared them to the other miners. In a desperate scramble, these local prospectors pegged new claims beside the delineated company ground and recommenced their search.³⁴ Coates, in addition to completing his survey, took time to re-evaluate the alluvial prospects of the area, but while many more reef systems were found in the 1869-75 quartz boom at Bendigo, Coates did not discover, refer to, or even speculate about the possible existence of additional lodes in his report. This analysis of the local prospects was then incorporated into an extensive description of the entire

Dunstan field, which was filed and published in mid-June. It stated that surveys had been conducted over a sixteen-acre quartz claim, north-south over the crest of a hill beside the gully known locally as Specimen Gully.³⁵ Coates then moved from Otago to Auckland,³⁶ and his survey of the Bendigo Quartz Mining Company's ground was never registered; no copy was filed with the Warden and no ground rental was paid on the lease.³⁷ This suggests that by the time the survey was complete, the company was defunct and that no more expenditure was authorised.

Figure 5: *Welshtown, the most photographed ruin in Bendigo and two other former cottages.*



Source: The author, 2011

Complicating my analysis of the role and actions of Coates are statements made by the local newspapers and also by Vincent Pyke. When the reefs had proven payable and in the midst of a quartz 'rush' at Bendigo, the *Dunstan Times* announced in October 1869 that:

the reefs at Bendigo Gully and the Upper Nevis were discovered as early as 1863 ... [and] in September of that year, specimens in which the presence of the precious metal was plainly distinguishable were brought into Clyde ... [but] the public mind was too much occupied with alluvial mining in those days to pay much attention to quartz mining.³⁸

They repeated and added detail to this assertion in November, stating:

Some three or four years since, in the columns of this journal, we drew attention to the fact of the existence of Quartz Reefs in the locality of Bendigo Gully, and ... we were supported by the experience and knowledge of Mr Coates, at that time District Surveyor, who, in an elaborate report, entered at great length on the subject. On the faith of these representations, a company of Dunedin capitalists applied for a lease of sixteen and a half acres in the name of the Bendigo Quartz Mining Company; a shaft was sunk on the reef, but, unfortunately for them, the gold was not struck, and consequently, after the expenditure of a large sum of money, they abandoned it.³⁹

In 1874 they returned to this theme:

In 1863 gold-bearing quartz was found upon the surface of several of the little chain of hills which are known now as Bendigo ... Mr. Mining Surveyor Coates, of the Dunstan, was the first to initiate a systematic search, and through Messrs Connell and Moodie, of Dunedin, a party of men prospected for some months the very ground now held by the Cromwell Company, and which has lately proved the richest quartz mine in New Zealand.⁴⁰

Vincent Pyke, the veteran goldfields administrator, lawmaker and Member of Parliament was to echo these statements in 1887 when declaring that:

In 1864 Mr Julian Coates, at that time mining surveyor at Dunstan, reported to Mr Warden Robinson, that he had found a hill bestrewn with golden quartz, and a rich reef projecting from the surface. But no reliance was placed on his statement.⁴¹

The *Dunstan Times*, in the opinion of the author a reliable authority, in addition to goldfields supremo Vincent Pyke, unequivocally credit Julian Coates with discovering the original reef at Bendigo, refuting the earlier summary of events. To go against both major sources needs strong evidence.

When the reef systems of Hindon were first discovered in late 1863, Julian Coates wrote a report that was published in the *Otago Daily Times*,⁴² and when rumours of a reef on the Serpentine emerged in January 1864,⁴³ and were confirmed with an application for protection,⁴⁴ he again appeared in print. When a rich new field at the Waihola was found in May of that year, he reported 'hills thickly strewn with quartz debris', and recommended 'the line of country between the Waihola and the Waipori to the attention of quartz reefers, ... [being] of opinion that, if thoroughly prospected, good results would accrue'.⁴⁵ But there is total silence from Coates about the location that became known as Bendigo, a telling observation, for he never failed to report his activities, and the newspapers never failed to publish them, even recording his casual opinions. Furthermore, in November 1864, each of the Otago mining surveyors furnished a report summarising the alluvial, sluicing and deep-sinking activities, together with the quartz potential in the areas for which they were responsible. Coates' contribution summarised considerable activity from Quartz Reef Point to the Carrick, yet highlighted no activity, or potential, or quartz at Bendigo Gully⁴⁶ – in fact, he did not use the Bendigo name or location at all. Additionally and notably, in two detailed summaries published in the *Otago Witness* in July 1865 that detailed quartz discoveries in areas across the province, from Hindon to Macetown, not once was there a mention of Bendigo as a potential location for development of a quartz industry. In a later report compiled his June 1866 on the quartz reef explored by the Bendigo Quartz Mining Company, Coates discussed work done to find and work the reef but without any reference to having been there himself on previous occasions. This contrasts completely with every other quartz report he ever wrote, where he details how it was first explored, when and by whom, thus suggesting that in the case of Bendigo the reef had just been found and was entirely new to him.⁴⁷

Writing with an imprecision and prevarication which contrasts with his reports of other reefs, Pyke prefaced comments in his book about Bendigo with ‘*I think I am correct in saying*’, and adding, ‘*I should not care to say positively who discovered the famous Bendigo reef*,’ In his other accounts, it is clear from the meticulous use of dates and personal details that he had reports and surveys at hand as he wrote, but Bendigo was outside his area of responsibility until 1868. Again, there is a very strong similarity between Coates’ report of Hindon having ‘hills thickly strewn with quartz debris’ and Pyke’s report of Coates describing Bendigo as ‘a hill bestrewn with golden quartz’, in addition to the similarity between Pyke’s narrative and the newspaper’s description. It is reasonable to conclude, given that the *Dunstan Times* premises was immediately across the road from Pyke’s Clyde office, that he used the paper’s archives to fill in any gaps and conflated their accounts with Coates’ comments as he remembered them.

Can the *Dunstan Times* be wrong? None of these assertions are made or repeated by the local newspaper, the *Cromwell Argus*,⁴⁸ the newspaper that emerged in 1869 as the sometimes bitter competitor to the *Dunstan Times*. Their rivalry meant that any opportunity to show a degree of inside knowledge or prescience on the Dunstan paper’s part was seized on to show up their upstart new rival. Also, the *Dunstan Times*, with George Brodie as its editor, printed its first copy in February 1864,⁴⁹ replacing the older *Dunstan News*. Thus neither editor or newspaper were around in 1863 to be shown quartz samples. Finally, Julian Coates, the man they quote with such enthusiasm, was no longer available to correct these versions of events, for he was up north, never to return to Otago. No reference to any report of Coates finding the quartz reef at Bendigo exists prior to 1866. If it had been written, it simply beggars belief to suggest that it would have been ignored, and neither the newspapermen nor the miners were that stupid.

So what happened to the Bendigo Quartz Mining Company? Were they really the victims of an almighty swindle? With a gap in the records, no-one can be certain. But what remains to be examined is whether the conclusion other writers have drawn that Thomas Logan stole Otago’s most profitable quartz mine from its true finders is correct.

The local press of the time was neither the political beast of today’s dailies, nor an acquiescent, unbiased observer. Editors and correspondents would spring into print whenever they perceived an injustice was done or a wrong needed righting and it is clear that the laws of slander and defamation were either lacking or sparingly applied when it came to what they wrote. It can be reasonably concluded then, that if Thomas Logan cheated the Dunedin Syndicate out of the wealth of the quartz mine at Bendigo, they would not have remained silent. Mining swindles on any scale were comparatively rare, and were never ignored if they were discovered. One such case involved two miners, Thomas Hall and Frederick Hoffman who were in a dispute in 1877. Hall cancelled Hoffman’s share in the Tipperary Quartz Company near Queenstown and fooled the local Warden into supporting his move.⁵⁰ The case ended in stalemate, due to the irrevocability of a Warden’s Court decision, but the opprobrium vented by the paper, letter writers and other miners certainly showed that such a rort would not be

swept aside as a *fait accompli* and Hall was hounded out of town. Logan received no such treatment.

The investors in the Bendigo Quartz Company were organised by Connell and Moodie, a Dunedin-based firm of Surveyors and Sharebrokers who, as part of their advertising, declared that they 'never held shares in any company whatever'.⁵¹ They were also the promoters of the Canada Reef Quartz Mining Company,⁵² the company that had prosecuted Surveyor Hardy for his actions there. These were not men to be trifled with. Any injustice, failure to follow procedure or falsity in a transaction led to court cases and suits for damages, with the pages of the *Otago Daily Times* habitually containing examples of this. Would Connell and Moodie have stayed silent about criminal swindling by Logan? It is more than improbable, especially once rich finds were declared, to suggest that they would meekly accept such an injustice given that if he had got away with it they would have appeared impotent, ineffectual, incompetent or untrustworthy as investment organisers. No court case eventuated.

The local papers each had an opinion on the work of the 1866 Bendigo Quartz Company, and none was complimentary – but no-one suggested dishonesty. The *Southland Times* of November 11, 1869 stated:

a company of Dunedin capitalists applied for a lease of sixteen and a half acres in the name of the Bendigo Quartz Mining Company; a shaft was sunk on the reef, but unfortunately for them, the gold was not struck, and consequently, after the expenditure of a large sum of money, they abandoned it. The reef was next taken up by Messrs Logan, Garrett and party.⁵³

The *Dunstan Times* correspondent proved a harsher critic, saying,

The [Dunedin Company] expended some small amount of money; but, like most people who know nothing about quartz mining, got tired and gave up just when they should have vigorously continued their operations.⁵⁴

Writing in 1874, the Cromwell correspondent to the *Otago Witness* adopted a softer polemic, claiming that Messrs Connell and Moodie's party

undoubtedly found the surface reef, but there was very little gold in it ... and the project was abandoned. Had the parties only kept on a little longer, and sunk a shaft higher up towards the top of the hill, instead of on its side, they would have found the prize scarcely below the surface'.⁵⁵

This correspondent was at pains to note that the earlier party was looking on the side of the hill, not where Logan and Garrett made their discovery, giving one pointer to what really happened at Bendigo. That Coates' survey was north - south gives another, since the pattern of quartz reefs across the whole Bendigo area is east-west. But the fact remains that the company was working in an area that a respected surveyor had identified as worth pursuing, that healthy assays had been achieved, and that considerable legal protection offered by a legal survey was followed by heavy expenditure. What could have gone wrong?

Maybe they just were not very good at the work of mining quartz. A hint at ineptitude is found in the *Dunstan Times* report of April 7, 1866:

Their intention was to sink a shaft alongside the reef, then drive into it to test the value of the stone. However, that plan has been found to be impractical without timber, and consequently they are at present sinking dead through the reef.

Any company which did not obtain timber for bracing purposes was not a serious quartz mining concern, but a mere prospector ineffectually scratching at the surface, unable to safely sink a shaft to any depth. Timber prevented cave-ins, allowed for deep claims to be developed, and indicated a professional approach; not having timber can only suggest the opposite. That they were attempting to 'sink dead' on the reef indicates that they were digging in the blind hope they would find the reef, not following indications of auriferous quartz they knew to be there. This is not how experienced quartz miners worked. Perhaps these people were not the 'experienced quartz men' their employers thought they were. Maybe they were simply hopeful miners fortunate enough to have secured the financial backing of a syndicate of investors who were prepared to pay their wages for as long as they could. When the investors tired of spending money for no appreciable gain, they simply closed their wallets and ordered the men to cease their work. This seemingly amateurish approach could not contrast more strongly with that of Thomas Logan, Jack Garrett, Brian Hebden and George Goodger.

Thomas Logan and Jack Garrett Prospect Quartz at Bendigo

Thomas Logan had experience mining in the Victorian fields of Ballarat and Bendigo and had joined the rush to Hartley's Beach in Otago in early 1863. He settled in the Cromwell area, finding work with mining syndicates sluicing the river terraces of Lowburn, the Upper Clutha and in the Kawarau Gorge⁵⁶. He was convinced that there had to be gold-bearing quartz reefs in the region and was determined to find them.⁵⁷ This is confirmed in a 1922 article penned by *Otago Daily Times* owner Sir George Fenwick⁵⁸. Fenwick, before he bought into the Dunedin papers, was one of the pioneers of the *Cromwell Argus* and witnessed the incredible fortunes won by the Cromwell Quartz Mining Company in the late 1860s and early 1870s. According to him, Logan used to talk of his early years in the Cromwell region and

how he had worked as a wages hand in some of the sluicing claims of the district, had saved a few pounds and taken to prospecting on his own account until funds ran low and he worked for more; how he again resumed his prospecting in the ranges; of his failure to "strike" anything very promising.⁵⁹

In 1875, the *Otago Daily Times* goldfields reporter recalled the fact that Logan was 'a most energetic prospector, and who used, years ago, to spend a deal of time looking for reefs in the ranges here', noting that he had prospected for auriferous quartz as far as Black's, Tinker's and Thompson's Gullies. He finished the narrative by lauding him for the fact that 'no man in the Dunstan or Cromwell Districts ever expended so much time and money in looking for reefs'.⁶⁰

In mid-1866 Logan arrived at Bendigo. His persistence was rewarded when he found the outcrop of a promising-looking reef just above the small gully explored and abandoned by the earlier company.⁶¹ He invited William John ('Jack') Garrett, to join

him to develop his claim. Garrett, another miner with experience of Victoria, had arrived at the Dunstan in late 1863. Logan and he had first met when each were involved in sluicing operations at the Roaring Meg; Logan when he worked with John Stewart sluicing near the Roaring Meg Hotel,⁶² and Garrett when he headed an ambitious scheme which sought to flume water over the Kawarau in pipes suspended from wire ropes to access virgin ground on the opposite side of the river.⁶³ He and Logan made an unlikely business pairing; Logan was deliberate and reserved⁶⁴ while Garrett was a 'sporting man,' renowned for his passion for thoroughbred horses and his geniality and generosity.⁶⁵

Logan and Garrett knew that a syndicate of two or more miners had an advantage over their solitary counterparts when it came to quartz claims. They applied for registration of their claim under the terms of the mining regulations, thus preventing any other quartz mining concerns from forcing them out, and to that end, registered their quartz claim in July 1866.⁶⁶ Logan and Garrett struggled when their credit with Cromwell retailers began to dry up, as they were torn between the desire to explore the increasingly promising ground on Bendigo and the need to eat.⁶⁷ Their situation was further complicated by the high costs associated with a quartz lease. One indication of how lean things were is shown by the fact that a Clyde hotelier had to sue Garrett for payment of the cost of his hotel stay when he registered the claim.⁶⁸ Under the terms of the Gold Mining Lease Regulations, the application for a quartz mining lease required a £20 deposit, an official survey, a 21-day objection period and rent of £5 per acre per year payable in advance (this was halved in late 1866). For this they got the right to apply for a claim along 400 yards of the quartz vein and 200 yards across the lode.⁶⁹ These were substantial sums in 1866, and in the end, the financial pressure sent them looking for a third partner. They needed someone dependable, enterprising and most importantly, solvent, and found that someone when were introduced to Brian 'Charcoal Joe' Hebden by the Danish entrepreneur and erstwhile Bendigo ferry business owner, George Magnus Hassing.⁷⁰ Hebden had emigrated from Ripon, North Yorkshire to the Cromwell area in about 1864, and having pursued a range of projects, from dam building and mining at Quartz Reef Point with the Nil Desperandum Company, to sluicing at Rocky Point and running a charcoal business from the various Clutha River Islands to supply the blacksmiths in the Cromwell region.⁷¹ He showed remarkable enterprise for his age, being only 26 in 1867 when he joined Logan and Garrett as a partner by paying £20 for his shareholding. The expanded syndicate commissioned the survey they needed to register their claim and got down to the work of extracting quartz. For over a year after the handshake that sealed their deal, Hebden worked his mining and charcoal interests to support the other two shareholders on the claim at Bendigo.⁷² This gives some indication of how long they had to work to find what they were looking for, a sharp contrast to the brief four months exploration spent by the Bendigo Company some eighteen months earlier. Despite Hebden's best efforts, by the time they had payable gold-bearing stone to show potential investors, it was only the tolerance of John Perriam of the Lowburn Store that kept them all from starving.⁷³ But Logan, Garrett and Hebden had found exceptional stone and they knew it. They also knew that their next step would require substantial investment in a quartz stamper battery, the water rights to

drive it, men to run it and a road to connect it to their claim. This saw the need for another serious investor to come on board.

Canadian-born George Wellington Goodger came to Cromwell in 1862 as one of its first residents.⁷⁴ He had first-hand mining experience on the goldfields of California and Victoria, mined at Hartley's Beach, Quartz Reef Point, and was briefly involved with the Nil Desperandum Company and their 1864 project to dam the Clutha.⁷⁵ He built the Cromwell water supply race, traded in timber, worked as a builder and leased a small property on the Cromwell flats where he ran dairy cows.⁷⁶ In 1865 he invested his accumulated earnings to set up the Junction Commercial Hotel in Cromwell, in 1866 he was appointed to the first Cromwell School Committee, found and developed the Cromwell lignite pit and on his farm harvested the region's first crop of hay.⁷⁷ In 1867 he even became, albeit briefly, Mayor of Cromwell, after William Jackson Barry forgot to sign the official papers which would have confirmed his re-election.⁷⁸ Goodger somehow also found time in that year to build the Swan Brewery on the outskirts of town, in the present-day Brewery Creek.⁷⁹ For the entrepreneurial Goodger in 1868, seeing chunks of quartz liberally studded with gold was persuasive argument and he joined the enterprise.

The Cromwell Quartz Mining Company at Bendigo

Logan, Garrett, Hebden and now Goodger registered their 'Cromwell Quartz Mining Company' in July 1868, purchased a quartz stamper battery and water wheel from a defunct Hindon mining company and moved it to their site at Bendigo.⁸⁰ In the six months it took to erect their battery and waterwheel, they and their newly-hired employees raised and paddocked over 500 tons of stone and hired roadmen to blast out a three mile dray road from their claim on the hill down to the battery at the gorge's mouth.⁸¹ The company ledger shows that even with Goodger's money, affairs were tight, and loans from the local Gold Receiver, Borthwick Baird, were needed to tide them over until the gold started to arrive.⁸²

The Cromwell Company's 30ft steel water wheel was sufficiently substantial for the five-head battery they erected to be expanded to fifteen heads should a good supply of water and future returns allow.⁸³ Logan and his partners ignored the convention of celebrating when commissioning their machine, simply naming it 'The Solway Battery' while getting on with the business of producing gold. Rumours of great wealth started to circulate and when a May 1869 edition of the *Dunstan Times* ventured a guess at Logan and company gaining over 200 ounces of gold from just ten days work, other miners and investors took notice.⁸⁴ Three more 'cakes' of gold came from the claim in June, news that was confirmed in July when Vincent Pyke announced that ten days' crushing had yielded 238 ounces, or more than triple the most profitable yield per ton declared by any previous Otago quartz enterprise.⁸⁵

In July the news of a second find on the Bendigo diverted attention away from Cromwell Company activities, as Edward Barnes, one of the Aurora Sluicing Syndicate men, found a reef parallel to and north of the Cromwell Company reef. Logan allowed this group to do a trial crushing of their stone in the Solway Battery, and cannot have

been surprised to see that the Aurora groups' good fortune attracted more prospectors to Bendigo to try their luck. The Solway Battery was hard at work, and while the company had to contend with frequent breakdowns of the second-hand machine, over 500 ounces of gold were deposited with the Cromwell Gold Receiver in July and all loans to Baird were repaid.⁸⁶

The September 1869 newspapers reported the beginnings of a 'quartz mania,' and unconfirmed rumours emerged (which were nevertheless published and even raised in parliament) that the Cromwell Company shareholders were each paid a staggering £4,000 dividend.⁸⁷ By October the area surrounding both the Cromwell Company lease and the Aurora ground was littered by test pits, new shafts, claim pegs and excited prospectors. Yet while this storm of prospecting and speculation swirled around them, Logan and his partners quietly got on with the business of working their claim. Reports emerged regularly, each revealing impressive yields, with 157 ounces of gold from four days crushing in September, 216 ounces from ten days a fortnight later, and finally details which suggested that Cromwell Company stone would continue to be a consistent two-and-a-half to three ounces of gold per ton.⁸⁸

In October, an excited *Dunstan Times* journalist declared that Logan, Garrett, Hebden and Goodger had been offered £10,000 for a one-fourth share in the company, a statement picked up and repeated in newspapers across New Zealand and Australia.⁸⁹ This statement was parroted so often that Garrett felt compelled to write to the *Otago Witness*, saying 'Sir, as it has been stated and repeated that we have refused an offer of £10,000 for one of our leases on the Bendigo Reef, we would feel favoured by your publication of this, our distinct contradiction of such statements'.⁹⁰ He implied that such an offer would be very acceptable to the shareholders, if one was forthcoming. The whole region became further awash with speculation after Vincent Pyke confirmed an earlier rumour that Cardrona-based prospector Charles Colclough had found very rich stone at Bendigo with a possible yield of over 100 ounces to the ton.⁹¹

At some point in mid-December 1869, things went sour within the Cromwell Company. On 24 December, directly under the *Cromwell Argus* Warden's Court column notice advising receipt of a petition to overturn the Cromwell Company's exclusive water right at Logantown, was a one line notice advising of a petition for the dissolution of the partnership of Logan, Garrett, Hebden and Goodger.⁹² Five days later more details emerged from the Warden's Court hearing on the matter, when explicit notification that the petition had been filed by Garrett against Logan was revealed. At the hearing, which was postponed due to the illness of Logan, Hebden was appointed temporary manager of the mine pending a second hearing on 5 January 1870.⁹³ What could have caused such a rift in an already successful, immensely profitable concern remains a mystery, but it is probable that the frequent speculation in the newspapers about what shares might be worth had caught Garrett's imagination, tempting him to request that the partnership be dissolved so he could sell up and live well on the proceeds. The reasons will never be known, because within two days of this hearing, Jack Garrett was dead, killed after a fall from a half-broken thoroughbred horse he had just purchased. At the inquest five days later, Logan stood and wept for his friend, declaring how Jack Garrett had 'by his liberality and genial manner, made many friends

in this and the neighbouring districts'. He also said (despite the recent Court action) that he 'was, and had always been, a true friend and dependable partner'.⁹⁴ With Garrett's death, all moves to dissolve the company were set aside, relationships were restored and the remaining partners applied themselves to the business of the Cromwell mine.

The Cromwell Company's Bendigo mine proved to be the richest in Otago and the three surviving shareholders became very wealthy men. Brian Hebden married in March 1870, but his wife died in late 1871, so he sold his shares to Cromwell Gold Receiver Borthwick Baird,⁹⁵ and returned to Ripon, Yorkshire. There he remarried, started a family and settled into the life of wealth that his hard work at Bendigo had earned him, buying into the nearby family-owned Moss Varnish Works.⁹⁶ In 1875, Thomas Logan sold two-thirds of his shareholding for £10,000, precipitating the 1876 formation of the Cromwell Quartz Mining Company, a public company with 12,000 shares of £6 each.⁹⁷ Baird and Goodger each had 4,000, Logan 1,200 and the rest were held by Dunedin businessmen.⁹⁸ Logan shifted to New South Wales, where he ran a number of railway contracts before eventually returning to Dunedin where he died in 1897.⁹⁹

Conclusion

James Crombie Parcell wrote a masterful local history at a time when a pencil, typewriter and a stack of *Dunstan Times* and *Cromwell Argus* newspapers were all the resources available to him. A combination of the limitations under which he worked and the incomplete information available to him led, in the case of Thomas Logan's quartz find at Bendigo, to Parcell inferring that a dishonest action had led to a massive gold find. Re-examining the evidence and surveying primary sources has led to another interpretation.

As part of this research into Bendigo's history, interviews were conducted with Geoff Duff and Ron Murray, two of the writers who have repeated Parcell's assertion that Logan committed theft. Both passed away recently, but both encouraged the author in this work, Duff stated he 'always felt the story did not seem consistent with the character of Logan', while Murray declared 'if we have drawn the wrong conclusions, you must re-write our history and set the record straight'.¹⁰⁰

Thomas Logan deserves to be remembered as the honest, hardworking (and lucky) prospector who found and opened up the Cromwell Company Quartz Mine at Bendigo, not as a cheat who stole riches from his employer.

Endnotes

¹ Examples of the very best of these are: A.P.F. Browne's *The Otago Goldfields, 1861-1863: Administration and Public Life* (Honours long essay, University of Otago, 1994), Jennifer Dickinson's *Picks, Pans and Petticoats: Women on the Central Otago Goldfields*, University of Canterbury, Christchurch, 1993, and Grahame Morton's *Gold, Law, and Freemasonry: Vincent Pyke in Otago, 1862-67*, Honours long essay, University of Otago, 1994. This is a representative list only. A comprehensive listing would feature around 12-15 dissertations and theses, but surprisingly few doctoral theses.

² Regarded as canonical in Otago's gold rush narrative historiography are the following: Robert Gilkerson, *Early Days in Central Otago*, Dunedin, 1930; James Crombie Parcell, *Heart of the Desert, Dunedin, 1951*; and Vincent Pyke, *History of the Early Gold Discoveries in Otago*, 1887.

³ <http://paperspast.natlib.govt.nz/cgi-bin/paperspast>

⁴ Parcell, *Heart of the Desert*, p. 126.

⁵ John Stanley Murray and Ron W. Murray, *Costly Gold*, Auckland, 1976. Stan Murray was a retired Presbyterian Minister and Ron Murray was a widely-respected Cromwell historian who worked for 30 years as a clerk for James Parcell.

⁶ *Ibid.*, pp. 66-8.

⁷ Geoff Duff, *Sheep May Safely Graze – the Story of the Morven Hills Station & the Tarras District*, Tarras, 1978, p. 73; Erik Olssen *A History of Otago*, Dunedin, 1984, p. 66; Noel Kennedy and Ron Murray, *Early Pioneers in the Cromwell Area, 1863–1880*, Cromwell Historical Society, Cromwell, 2004, p. 2. Ron Murray also wrote a similar entry in Jane Thomson (ed.), *Southern People*, Dunedin, 1998, p. 284; John Hall-Jones, *Goldfields of Otago, an Illustrated History*, Invercargill, 2005, p. 88; Gerald Cunningham, *Illustrated History of Central Otago and Queenstown Lakes District*, Auckland 2005, pp. 50-51.

⁸ *Dunstan Times*, 7 April 1866.

⁹ *Ibid.*.

¹⁰ *Otago Daily Times*, 27 June 1866, *Dunstan Times*, 19 May 1866, *Dunstan Times*, 7 April 1866.

¹¹ *Dunstan Times*, 29 June 1866.

¹² *Ibid.*

¹³ *Otago Daily Times*, 13 September 1866.

¹⁴ *Dunstan Times*, 5 November 1869.

¹⁵ *Ibid.*

¹⁶ *Otago Witness*, 20 November 1869, p. 9.

¹⁷ Registered in the name of Garrett, Clyde Warden's Court Mining AG Leases Register 1864-1872, July 1866 Receipts, Archives New Zealand Dunedin Office [hereafter ANZDO], DAEQ 21670 Acc.

¹⁸ *Otago Daily Times*, 13 February 1868, p. 4.

¹⁹ Note that while Coates is generally referred to as 'Julian Coates', his full name was 'James Julian Coates', and is occasionally called 'James Coates' in newspaper reports.

²⁰ *Otago Witness*, 25 April 1863, p. 5.

²¹ *Ibid.*, 3 February 1865, p. 5.

²² *Ibid.*, 17 June 1865, p. 4.

²³ *Ibid.* This was no small undertaking, requiring him to smash a 50 pound sample of stone, roasting the fragments in a jury-rigged coal-fired furnace, and finally sprinkling with water to reduce it all to fine fragments ready to be pounded into powder in an iron mortar. He then took 10 pounds of this and panned it off to examine the yield. He then added mercury and retorted the resulting amalgam. Quite a lot to do without any laboratory equipment or purpose-built assaying facilities.

²⁴ *Otago Witness*, 17 June 1865, p. 11.

²⁵ Units used in this paper: 1 acre = 0.4047 hectares; 1 foot = 0.3048 m; 1 yard = 0.9144 m; 1 mile = 1.609 km.

²⁶ *Ibid.*, 23 September 1865, p. 6.

²⁷ Unusually – a word that is over-used when discussing this company, this was not registered in the company name, but was registered in the name of 'Connell and Moodie', Clyde Warden's Court Mining AG Leases Register 1864-1872, March 1866 Receipts, ANZDO, DAEQ 21670 Acc.

²⁸ *Otago Witness*, 16 June 1866, p. 4.

²⁹ New Zealand Institute of Surveyors, an incorporated society established to monitor and maintain the professional and ethical conduct of surveyors in New Zealand, confirms that these standards prevailed at that time and are required today.

³⁰ By coincidence, Charles Todd became manager of this company in 1870 and was to later become manager at Bendigo in 1878.

³¹ *Otago Witness*, 12 January 1866, p. 13.

³² The edict took much of the heat out of the situation at Bendigo and while there was some speculation, it did not reach the levels that Pyke feared. About three months later the edict was rescinded as an inappropriate use of his powers.

³³ *Dunstan Times*, 29 June 1866.

³⁴ *Ibid.*, 6 July 1866.

³⁵ *Otago Daily Times*, 11 June 1866, p. 5. Note that two other sites in the Dunstan field adopted the same name, including the prominent claim at the Nevis.

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- ³⁶ *Daily Southern Cross*, 11 May 1870, p. 2. This announces the bankruptcy of Coates, giving his address as Alten Rd, Auckland.
- ³⁷ Clyde Warden's Court Mining AG Leases Register 1864-1872, 1866 Receipts, ANZDO, DAEQ 21670 Acc D573 19b.
- ³⁸ *Dunstan Times*, 8 October 1869, p. 2.
- ³⁹ *Southland Times* (quoting the *Dunstan Times*), 15 November 1869, p. 3.
- ⁴⁰ *Otago Witness*, 22 August 1874, p. 6.
- ⁴¹ Vincent Pyke, *Early Gold Discoveries in Otago*, published in the *Otago Witness*, 25 March 1887, p. 14.
- ⁴² *Otago Daily Times*, 28 November, 1863, p. 5.
- ⁴³ *Ibid.*, 14 January 1864, p. 6.
- ⁴⁴ *Ibid.*, 18 March 1864, p. 10.
- ⁴⁵ *Ibid.*, 18 May 1864, p. 11.
- ⁴⁶ *Ibid.*, November 18, 1864, p. 9. Before areas were given names, they were referred to in reports as 'a gully 14 miles north of the Junction, or 'on the western slopes of the Dunstan Range' etc. None of this is evident
- ⁴⁷ For example, see *Otago Daily Times*, 12 June 1866, p. 5.
- ⁴⁸ This includes retrospective pieces such as the one written in the *Dunstan Times* in 1874.
- ⁴⁹ *Otago Daily Times*, 10 February 1864, p. 6.
- ⁵⁰ *Ibid.*, 26 September 1877, p. 5.
- ⁵¹ Connell was the surveyor engaged to lay out the township of Wakefield in 1863 (Survey Plan, Otago Land District, Plan Number SO 15036, Land Information New Zealand), located near the site of the Rocky Point Hotel (now a pottery); *Otago Witness*, 22 August 1874; *Otago Daily Times*, 16 February 1866, p. 3. The full text of the advertisement states 'Connell and Moodie, Stock and Sharebrokers and Mining Agents, are prepared to attend to the organisation and starting of MINING COMPANIES, which are ascertained to be of a thoroughly BONA FIDE CHARACTER, and to the transaction of all necessary business connected with the registration and working of the same, as regards brokerage and accountantship ... From their known principle of never holding shares in any company whatever, parties placing shares in their hands for sale, or requesting information with a view of buying, may rely upon receiving disinterested advice'.
- ⁵² *Otago Daily Times*, 26 February 1866, p. 1.
- ⁵³ *Southland Times*, 15 November 1869, p. 3.
- ⁵⁴ *Dunstan Times*, 17 December 1869.
- ⁵⁵ *Otago Witness*, 22 August 1874, p. 6.
- ⁵⁶ Dunstan Warden's Court Plaintiff Record Book '62-65, Entry for August 24, 1863, Logan and Party vs. Donegan and Party: disputed use of a water race, ANZDO, DADO Acc D557 130c; Water Race Application dated 18/07/64, signed by Logan and Stewart; Clyde Warden's Court Applications, ANZDO, ABBO Acc D98 7299).
- ⁵⁷ *Otago Witness*, 22 August 1922. This was the recollection of Sir George Fenwick, pioneer of the *Cromwell Argus* newspaper, who recounted a conversation in 1870 with Logan about how he had got started in quartz mining.
- ⁵⁸ *Otago Witness*, 14 February 1922, p. 63.
- ⁵⁹ *Ibid.*, 22 August 1866, p. 61.
- ⁶⁰ *Otago Daily Times*, 15 February 1875, p. 3.
- ⁶¹ This is implied by the statement in the *Otago Witness*, 22 August, 1874, that 'had the parties only kept on a little longer, and sunk a shaft higher up towards the top of the hill, instead of on its side, they would have found the prize scarcely below the surface. But such was not their luck'.
- ⁶² Water Race Application dated 18/07/64, signed by Logan and Stewart; Clyde Warden's Court Applications, ANZDO, ABBO Acc D98 7299.
- ⁶³ Water race application signed by H. Paddon, Thomas Elliot, John W. Garrett and Robert Bovill, date 12 April 1864. This application met with an objection, which indicates both that Garrett had let his miner's right lapse and that the enterprise had been working there since January 1864; Clyde Warden's Court Applications, ANZDO, ABBO Acc D98 7299.
- ⁶⁴ *Otago Witness*, 22 August 1922.
- ⁶⁵ *Cromwell Argus*, 5 January 1870.
- ⁶⁶ Under the terms of the Gold Mining Lease Regulations published in the *Otago Gazette* 28 Oct, 1863 pp. 425-427, the application for a quartz mining lease required a £20 deposit, an official survey, a 21-day objection period and rent of £5 per acre per year, payable in advance. For this they got the right to apply of a claim along 400 yards of the quartz vein and 200 yards across the lode. Their claim was registered in

the name of Garrett, Clyde Warden's Court Mining AG Leases Register 1864-1872, July 1866 Receipts, ANZDO, DAEQ 21670 Acc.

⁶⁷ George Magnus Hassing, *Pages From the Memory Log of G.M. Hassing*, Invercargill, 1930, pp. 45-47.

⁶⁸ Clyde Magistrate's Court Judgement Book, ANZDO, DADO Acc D557 138a. The debt was to James Patterson of the 'Old Bendigo Family Hotel'. Patterson would later open a sister hotel at Logantown.

⁶⁹ Published in the *Otago Gazette* 28 Oct, 1863 pp. 425-427.

⁷⁰ Hassing, *Pages From the Memory Log*, p. 42.

⁷¹ *Dunstan Times*, 3 February 1866; 2 June 1866; *Otago Witness*, 22 August 1922.

⁷² *Otago Witness*, 7 June 1884. This is a detail supplied by the Cromwell Police Sergeant from 1864 to 1889, John Cassells. He was a shareholder in the Aurora Quartz Mining Company.

⁷³ *Otago Witness*, 22 August 1922.

⁷⁴ *Ibid.*, 7 June 1884; Kennedy and Murray, *Early Pioneers in the Cromwell Area*, p. 22.

⁷⁵ Clyde Warden's Court Applications, ANZDO, ABBO Acc D98 7302, Water Race Applications dated June 1864 and others from August, 1864 and several in 1865; Goodger is one of the original eight shareholders in the Nil Desperandum Company dated 28th September 1864. In October 1864, he divested himself of this shareholding. Clyde Warden's Court Applications, ANZDO, ABBO Acc D98 7302. D.A. Jolly, writing as 'Pioneer' in the *Cromwell Argus* 3 August 1908, was also a member of the *Nil Desperandum* Company.

⁷⁶ *Dunstan Times*, 11 April, 1868 refers to the race being built in 1863; *Otago Witness*, 7 June 1884; *Dunstan Times*, 11 April, 1868.

⁷⁷ Kennedy and Murray, *Early Pioneers in the Cromwell Area*, p. 22; *Dunstan Times*, 10 February and 31 March 1866; *Otago Daily Times*, 17 May 1866.

⁷⁸ *Dunstan Times*, 30 August 1867.

⁷⁹ Parcell, *Heart of the Desert*, p. 55.

⁸⁰ *Otago Witness*, 20 November, 1869; *Dunstan Times*, 4 September 1868.

⁸¹ *Dunstan Times*, 4 September 1868.

⁸² This is a ledger, Ref. no. AG-099, in the Archives of the Hocken Library. Library description: 'The volume was originally used as a record by the Cromwell Quartz Mining Company (1868 - ca1888). It was later used by Bendigo farmer William Cameron for his farm accounts (ca1909 - 1922)'. Cameron was a miner and resident at Bendigo 1880-1904.

⁸³ *Dunstan Times*, 4 September 1868.

⁸⁴ *Ibid.*, 21 May 1869.

⁸⁵ *Otago Daily Times*, 7 July 1869.

⁸⁶ *Otago Witness*, 10 July 1869.

⁸⁷ *Ibid.* 18 September 1869, p. 14; *Dunstan Times*, 25 September 1869.

⁸⁸ *Otago Witness*, 18 September 1869; *Tuapeka Times*, 13 November 1869; *Dunstan Times*, 4 December 1869.

⁸⁹ The Initial report was from the *Dunstan Times* in early October 1869, and in editions published around 16 October 1869. It was repeated by the *Otago Daily Times*, *Otago Witness*, *Grey River Argus*, *Tuapeka Times* and the *Bruce Herald* and by several papers in Australia, most notably the *Melbourne Argus*, 20 October 1869, p. 7 and the *Brisbane Courier* of the same date.

⁹⁰ *Otago Witness*, 4 December 1869.

⁹¹ *Ibid.*, 13 November 1869.

⁹² *Cromwell Argus*, 24 December 1869.

⁹³ *Dunstan Times*, 29 December 1869.

⁹⁴ *Cromwell Argus*, 5 January 1870, for the death notice and subsequent inquest by Dr Corse.

⁹⁵ *Dunstan Times*, 18 March 1870; Dating detail from Matilda's gravestone, Old Cromwell Cemetery.

⁹⁶ Detail supplied by John Hebden, Lead Historian of Ripon Local Studies, Yorkshire. URL: <http://www.riponlocalstudies.org/>.

⁹⁷ *Cromwell Argus*, 29 September 1875.

⁹⁸ *Ibid.*, 26 January 1876.

⁹⁹ This detail is supplied by a letter from one of Thomas Logan's descendants to Ron Murray, who was completing the entry for Logan to be published in *Southern People. A dictionary of Otago Southland biography*, Hocken Library Reference: Thomson, Jane: Papers relating particularly to 'Southern People. A dictionary of Otago Southland biography / edited by Jane Thomson' (MS-1926) MS-1926/1034.

¹⁰⁰ I interviewed Duff at his home in 1999 and in 2002; Murray talked on the telephone about my research frequently and we met in his home often, most recently in February 2011.