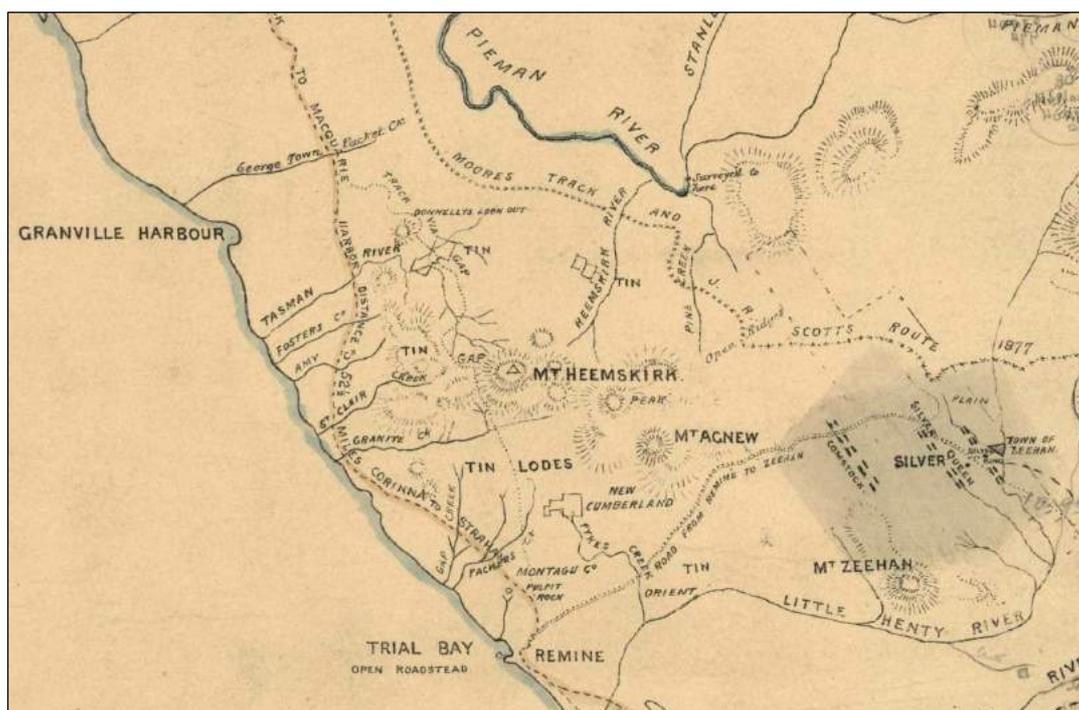


“Cornwall of the antipodes”: the ‘Cornish’ tin boom at Mount Heemskirk, Tasmania, 1881–84

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In 1878, after leading an exploratory party into the Mount Heemskirk region in western Tasmania, government surveyor Charles Sprent spruiked the future of tin mining in this district. He described ‘beds of iron conglomerate something resembling the famous “brown face” of Mount Bischoff’, the nearby large tin mine which had just paid its first few dividends.¹ There was a rush to exploit the supposed ‘second Mount Bischoff’, with 6,400 hectares being pegged and more than 50 companies formed, ‘some of whom were tricked into buying leases on the beach or under the sea!’²

Figure 1: *Heemskirk tin field, crop from Exploration Map 17 by George Lovett, c.1888.*



Source: Tasmanian Archive and Heritage Office, Hobart.

The Heemskirk alluvial tin boom soon collapsed. However, a Heemskirk lode tin mining boom followed Inspector of Mines Gustav Thureau’s poorly considered 1881 claim that the importance and permanence of the Heemskirk tin deposits had ‘already been proved ...’³

This paper discusses the rise and fall of the Heemskirk tin boom 1881–84 and the part played in that debacle by premature statements of this kind, including comparisons with Cornish tin mines made by Cornish miners anxious to secure work and financial backing. Tasmanians subscribed to the idea that Cornish miners were the model of practical, economical tin mining. Philip Payton and Ronald M. James have discussed

how emigrant Cornish miners ‘asserted an innate superiority as hard-rock miners’, exploiting their Cornish ethnicity as an economic strategy.⁴ While Ferd Kayser had been placed in charge of the Mount Bischoff Tin Mine as the first of Tasmania’s academy-educated mine managers, trained-on-the-job Cornish miners were in great demand at Heemskirk, and they encouraged their excited employers with ludicrous allusions to their homeland. In August 1881, for example, one of the Heemskirk mine managers, Robert Hope Carlisle, was said to be trying to trace the continuation of the famous Dolcoath tin lode from Cornwall across the oceans to Heemskirk.⁵ However, their assertions that Tasmanian tin deposits would continue at depth like Cornish ones proved disastrous on a field where the deposits were actually small and inconsistent. They failed to understand the local geological conditions and, in at least one case, failed to distinguish between cassiterite and tourmaline.⁶ Ironically, the fortunes of one novice Cornish miner, Josiah Thomas (J.T.) Rabling, in Tasmania suggest that Heemskirk was indeed the ‘Cornwall of the antipodes’, that is, it proved as hard to make a living on the Tasmanian tin fields as it was in the depressed Cornwall he had escaped.

Josiah Thomas Rabling

Rabling was the Cornishman chosen to work the Carn Brea Tin Mine at Heemskirk. There were many Cornish miners in Tasmania at the time, including on the Mount Bischoff tin field and at the Beaconsfield gold mines, yet Rabling appears to have been one of only two Cornish recruits to the field selected from within Tasmania. He was born into a well-known Camborne, Cornwall mining family in about 1843, the fourth of eight children.⁷ As the nephew of William Rabling senior, who had made his name and fortune in the Mexican silver mines, and also the nephew of Charles Thomas, manager of the famous Dolcoath Mine at Camborne, he was born with a mining pedigree.⁸ Josiah’s father, Henry Rabling, mined in Mexico, but does not appear to have succeeded there, leaving effects to the value of less than £450 when he died in 1875.⁹ The fact that Josiah Rabling was in the workforce at the age of seventeen suggests that his mining education was on the job, rather than in the class room—and there was no Camborne School of Mines until 1888. Rabling grew up at a time when England lagged behind countries like Germany and the United States of America in not having a mining academy system.¹⁰ In 1861 young Rabling was a smith, in 1871 he was a mining clerk at Camborne, near the Great Flat Lode of tin mines and the Dolcoath Mine, which had produced copper and tin for centuries.¹¹

The Great Flat Lode which was opened up in the 1860s became one of Cornwall’s greatest tin producers.¹² However, the crash of the copper price in the second half of the nineteenth century, the effect of the cost book system, and Cornwall’s lack of a coal resource on its industrial economy, and additional failures in agriculture and fishing, placed great stress on Cornish mine workers and labouring families. By 1873 the tin price was also falling, and 132 Cornish tin mines closed over the next three years.¹³

It is likely that the death of Rabling’s father in 1875 and the downturn in the local mining industry necessitated a search for work elsewhere. Competition to Cornwall from the Australian tin mines had begun with almost simultaneous discoveries on the New England tableland in northern New South Wales and at Mount Bischoff in

Tasmania. Rabling arrived in Tasmania on the *Argyle* in 1876, perhaps being sent by British capitalists interested in Tasmanian mines.¹⁴ During 1877 and 1878 he secured commissions to report on various mines, but by the following year was down on his luck. In August 1879, after making a little money by piling splitting, he forged a signature on a cheque which he presented in the town of Waratah (Mount Bischoff) to pay a small cartage fee incurred by a friend. He pleaded guilty to a crime committed in ‘such a childish manner’, according to a reporter for the *Mercury* (Hobart) newspaper, ‘with so little gain attached to it that it really looked as if he wanted to get into prison’.¹⁵ Despite this being a first offence, Rabling was sentenced to twelve months’ imprisonment.¹⁶ The effects of this experience are unknown, but one subsequent effort to make a living in Tasmania also landed him in trouble. In July 1881, along with three other men, he was tried in the Supreme Court, Hobart, on a charge of unlawfully conspiring to defraud Peter McIntyre to the tune of £400 by salting a mine. Rabling and one other were found not guilty.¹⁷

Despite these events, such was the allure of the Cornish ‘practical miner’ that only a month later Rabling was one of two men engaged by the British Lion Prospecting Association to prospect on the Heemskirk tin field.¹⁸ The Heemskirk tin deposits, like those of Mount Bischoff, occurred in granite—and who knew more about working tin in granite than Cornishmen?

Granite Creek was the site of one of three Heemskirk sections leased by Rabling before he reported back to the British Lion shareholders in April 1882. The creek, he said, would be sufficient to drive machinery.¹⁹ Even today the site, within a few hundred metres of the sea, is a remote one, requiring many hours’ walk from shack settlements at Trial Harbour and Granville Harbour. For perhaps 30,000 years the Tasmanian Aborigines had maintained a foot track along the coast as a seasonal migration route, and mineral prospectors had reopened it by burning off the scrub. This coastline is one of the world’s great untapped archaeological zones.²⁰ It is hard to imagine what a young man from Camborne made of the hut depressions and immense Aboriginal middens, representing seal bones, discarded shells and implements heaped up over thousands of years, along the coast—or what he thought of tent life exposed to the Southern Ocean.

As Thureau discovered, when he arrived on the Heemskirk field unwisely in winter, the difficulties of working the remote field were enormous. It was an exposed coastal area (see Fig. 1) characterised by cold winters, driving rain, dense vegetation and steep terrain. There were no roads, and no useful supply routes. The closest thing to a port was Trial Harbour, a shallow inlet open to the winds which crashed the Southern Ocean onto the coast. While the Pieman River at the northern end of the field was bountiful in food such as eels, crayfish, duck, swans and even platypus, the poor diet available elsewhere had induced scurvy in early prospectors such as Tom Moore.²¹

Even being delivered to the Heemskirk field was an endurance test. Rabling first ventured westward out of Launceston on the small steamer the ss *Amy*, which served Boat (later Trial) Harbour.²² Seventeen passengers plus stores for the Pieman River goldfield were crammed aboard the tiny vessel, which took on further stores at Latrobe on the Mersey River during a five-day stopover. When the *Amy* got underway again,

overloading had made it so unsteady that the bulk of the cargo had to be put ashore at the Mersey heads. Another layover occurred at the port of Stanley, in the far north-west, this time for bad weather. On the seventh day out of Launceston the steamer put in at the remote sheep and cattle station of Woolnorth, on the north-western tip, again delayed by buffeting winds, the passengers having enough time ashore to go rabbiting, inspect the bones of a stranded whale and hold a meeting in which they established their own west coast prospecting association! Reaching the Pieman River heads ten days out of Launceston brought good news — the dreaded bar was passable for the first time in many days. So many vessels had come to grief on the Pieman River bar that a successful crossing was invariably met with an address of thanks to the captain and his chief officer and a hearty round of cheers. Passengers had time to develop an opinion on nearby gold workings before re-embarking for Heemskirk.²³

Whether Trial Harbour or Macquarie Harbour should be the port for the tin field remained the subject of debate. In response to Gustav Thureau's comments on the need for improved transport facilities at Heemskirk, the government recommended the appropriation of £3,000 to survey and build a tramway from Trial Harbour to Mount Heemskirk, £300 each to build jetties at Trial and Macquarie Harbours and £5,000 to defray part of the cost of a marine survey of the west coast. None of this would be useful without a regular shipping service. The vested interests of politicians concerned such as Nicholas Brown, who was chairman of directors of the Orient Tin Mining Company, only complicated negotiations about an unproven field.²⁴

Meanwhile, directors of the Heemskirk tin mines had the luxury of choosing from the wide selection of Cornish miners available in the Australian colonies. The Prince George Mine appointed as its manager a supposed Cornish miner, John Addis (he was actually born in Gloucestershire). He promptly declared that 'with a careful and judicious outlay of capital, Heemskirk will be the Cornwall of the antipodes'.²⁵ The St. Clair Tin Mining Co. chose James Henry Nance, another Cornishman, from 24 applicants.²⁶ William Williams was appointed the third mining manager of the Cliff Company, bringing to the job experience as a mining manager and engineer in tin lode mines in Cornwall and Queensland.²⁷ John Williams, first manager of the Orient Mine, was a Cornishman, as was Thomas S. Williams, the mine's third successive manager, a pious man who conducted religious services on his claim.²⁸ Edwin Tremethick and Edward Perrow took their turn at the Heemskirk River and Cliff mines respectively. Cornish-born miner Abraham Shortland Rawlings (A.S.R.) Osborne, a native of Marazion, was already on hand at Mount Bischoff. In October 1881 he wrote from the West Cumberland Mine that the Heemskirk tin field displayed 'grand indications and already magnificent shows proved (partially, however) all are fully sanguine of a great future ...'. He stated that 'you would be perfectly safe in buying "Prince Georges" or "West Cumberland" [scrip]'.²⁹ Ten months later, W.G. Hensley, the Cornish manager of the Champion Company Mine, reported that his property 'equals, even if it does not outrival, the "Great Dolcoath"'.³⁰ Similar predictions and comparisons had been levelled at the Mount Bischoff Mine during its infancy—and since January 1878 it had been fulfilling them by paying monotonously regular dividends.³¹ Why should Heemskirk be any different?

Developing the Carn Brea Tin Mine

The pressure to join this Cornish chorus must have been strong. Shareholders in the British Lion Prospecting Association floated the Carn Brea Tin Mining Company, which in January 1883 appointed Rabling mine manager. He promptly adjourned to the west coast with eight assistants. While publicly, at least, Rabling made no grandiose comparisons with the Cornish tin field, he did name the mine Carn Brea, after the hill that stands over his home town, Camborne, in Cornwall, perhaps a reflection of homesickness as well as an assurance of worth to cheer the shareholders.

In February 1883 Carn Brea shareholders authorised a loan to pay for a battery and a 24-foot iron overshot waterwheel (see Figs 2 and 3) manufactured at W.H. Knight’s Phoenix Foundry in Launceston.³² A road had to be built to North Heemskirk before the equipment was delivered by steamer at the dangerously exposed port of Trial Harbour.³³ However, when the machinery came to be hauled up the road by horse team the carters ran out of horse feed, causing further delay.³⁴ When visiting the Carn Brea Mine, the *Mercury* newspaper’s ‘special’ reporter was only able to inspect the stone cutting and wheel pit prepared for its reception, Rabling’s 84-foot drive and 20-foot winze and a lode said to be four to five feet wide. He was reassured by the manager serving him steaming Royal Blend tea, preserved meat and ‘excellent’ bread and butter. Furthermore, Rabling had:

pitched his camp in a snug corner formed by the junction of two banks above a small creek. He has not wasted the shareholders’ money by erecting large and substantial houses, stable and blacksmith’s shops, with a store and a post office thrown into the bargain, but has contented himself with putting up tents, and cutting chimneys and fireplaces in the bank.³⁵

Figures 2 and 3: *The stamper battery and part of the waterwheel at the Carn Brea tin mine.*



Source: Photos by the author.

The most settled weather in western Tasmania is in February and March, but many water-powered mines found it too dry to operate in those months. April, May and the winter and spring months would normally provide abundant rainfall, but the west coast

weather would then be bracing, to say the least. Rabling would have had no choice but to stay put and do his shareholders' bidding by preparing the claim for crushing as soon as possible, much of his time being spent huddled in a sturdy tent.

A non-Cornish spruiker arrives

That *Mercury* 'special', Theophilus Paul Henry Jones, perhaps the most persuasive chronicler of the Heemskirk lode boom, arrived on the field with the party of Minister for Lands Nicholas Brown in May 1883. A vigorous freelance wordsmith with an eye for detail, Jones was also desperate to feed his large family. His poverty sometimes prompted him to ingratiate himself in print in hope of securing further income.³⁶ He was not a Cornishman, which makes his historical hyperbole about Heemskirk, the 'mountain of tin', the more extraordinary:

When the Phoenicians first commenced to sink shafts and drive tunnels to enrich themselves with the tin taken from the lodes in Cornwall, England, they had similar if not vastly great difficulties to overcome than have the pioneers of the West Coast, and yet doubtless they looked on their mountains just as much as we do on ours, as 'mountains of tin'. Cornwall was more desolate, more unknown, and more out of the beaten track in those days than Heemskirk is at the present. And what have the Cornish mines become in the course of development? Vast sources of wealth to lucky shareholders. May we not therefore expect in the course of a few years to have as rich mines on our own west coast as the Golconda and Devon Consols mines of Cornwall?³⁷

Jones' report depicted a rapidly developing mining field, and suggested that, compared to Rabling, the other managers on the field lived in luxury. Brown's party proceeded to what was regarded as the premier mine in the district, the Orient, where the minister and chairman of directors entered mine manager Thomas Williams' 'snug little' cottage. Here the Devonshire-born Fanny Williams served home-made cake and tea. The first church on the Heemskirk field, built by Williams and his sons Luke and Tom from sawn timber, with a split shingle roof, and a blackwood interior adorned with chandeliers, had recently been opened with a traditional Wesleyan Methodist tea meeting. Fanny Williams and other mining folk had provided sandwiches, sponge cakes and *blanc manges* for the occasion.³⁸ (Later, a collection of books would be obtained and, with Luke Williams acting as the librarian, during week days the church would act as a reading room, like a tiny mechanics' institute.)³⁹ A Robey and Co. steam engine imported from England had been installed as an auxiliary to the waterwheel which would drive the 10-head stamper battery. Five Munday's self-emptying concave buddles were ready for tin separation.⁴⁰ By the road was another Cornish legacy, a grave with a picket fence which represented the final resting place of the wife of the original Orient mining manager, John Williams.⁴¹

Jones' doublespeak was just as impressive as the facilities at the Montagu Mine, where Scotsman Alex Ingleton had a commodious house, vegetable garden, store, post office, stables and blacksmith's shop awaiting the implementation of the machinery landed on site. The reporter praised Rabling for his economy in saving money and

Ingleton for his enterprise in spending it. However, the most impressive feature of the Montagu and adjacent Cumberland claims was their huge cooperative dam at the head of Cumberland Creek designed to provide motive power all year round.⁴²

At the Empress Victoria Mine, Thomas Fowler had broken ranks by installing a 20-horsepower Johnson & Co., Melbourne, horizontal steam engine equipped with a 24-foot by 14-foot boiler—not as a back-up like Williams’, but as the primary motive power for the winding and pumping gear. The Cornwall Mine, situated on the slope of Packers Creek, with a romantic view of the ocean, was admirably suited to obtain motive power. Mark Gardiner had a 40-foot water wheel, mounted on a Huon pine base, 10 heads of stampers, a stone crusher, a Frue Vanner—the latest in ore dressing technology—and two Borlase buddles poised awaiting a ceremonial flourish of Brown’s hand. Backslapping ensued over toasts drunk in the manager’s residence.⁴³

Jones also managed to squeeze in an inspection of the Cliff Mine, where the management seemed to be on the revolving door policy. P.T. Young was preparing processing sites for uninstalled machinery from the Langlands Foundry, Melbourne, a waterwheel and battery. Borlase’s Cornish buddles were at the ready.⁴⁴

Inevitably, mine managers took the opportunity to buttonhole the minister about the decision of his predecessor, Christopher O’Reilly, to declare a Huon pine reserve on the west coast, thereby depriving the miners (except Gardiner and Young, apparently) of pine timber for props and a shipping service.⁴⁵ The alluvial phase of the nearby Pieman River goldfield depended on a symbiosis between piners and miners, since only by backloading with Huon pine timber could supply vessels make a profit.⁴⁶ Heemskirk also needed shipping, but was it government’s role to prop up a private speculation by allowing ancient pine forests to be decimated? The minister was not drawn on the short-sighted suggestion that ‘if the pine forests of Tasmania were cut down new ones would spring up, and become of use for future generations’.⁴⁷ Quite justly, the government had left the task of tramway construction at Heemskirk in the hands of a private company, which failed to deliver. Whether the Heemskirk tin lodes were worthy of future consideration—government or private—remained to be seen.

The fatal first crushing

The first half-yearly meeting of the Carn Brea Tin Mining Company in July 1883 glowed with a happy anticipation. Neither the £1,800 advance on machinery, nor the six calls on shares, had disturbed the shareholders’ equanimity. Ore assaying a payable 7.5 to 14 per cent had been paddocked awaiting the crusher, demonstrating the admirable ‘energy and skill’ of the company’s mining manager.⁴⁸

The Carn Brea was one of nine mines on the Heemskirk field to erect a battery during the boom period. In all, 75 or 80 head of stampers were erected.⁴⁹ By October 1883 Thomas Williams was ready to crush at the Orient.⁵⁰ The Cliff and Carn Brea were almost ready to crush, the Montagu and the Cumberland were erecting machinery and mine manager George Lightly of the West Cumberland was preparing to receive machinery.⁵¹

However, the low yield from the Orient crushing one month later threw ‘a great damper ... on lode tin mining at Mount Heemskirk ...’⁵² Confidence in the field evaporated. The Carn Brea Tin Mining Company kept going until at its second half-yearly meeting in March 1884 it was revealed that, although assay results from the first shipment of 30 bags of crushed ore were not yet available, directors regarded mining operations as a failure. Not surprisingly, expenditure due to work delays and heavy freight costs had far exceeded Rabling’s estimates. Work had been suspended, and many shares in the company had been forfeited. One of the directors, Grubb, condemned Rabling’s management, and several disputed that he had secured *any* tin from the mine. Eventually, shareholders voted to accept Rabling’s offer to take the mine on tribute (that is, working the company’s lease for a percentage of the value of ore won, so at no cost to the shareholders), the unknown value of the 30 bags of tin being taken as part payment for the wages the company owed him.⁵³ All work seems to have been abandoned soon after. No further substantial work appears to have taken place at the Carn Brea Mine.

Thureau presides over the field’s demise

Gustav Thureau stood by his 1881 statements when he made his third visit to the field three years later, claiming the dispensation that the ‘proven’ tin lodes had not yet been ‘properly and systematically mined at lower levels’. In 1884 only the Cumberland, West Cumberland, Champion and Peripatetic Companies were pursuing underground operations, some of the leases having been abandoned in the wake of the Orient crushing. Thureau blamed speculators for depressing a field that he had helped to inflate, claiming with justification that Cornish miners had followed the lessons of the deep tin fields they were familiar with rather than studying local geological conditions.⁵⁴ While more than 150 miners and prospectors had been at work on the field in 1881, now there were only about 50 miners, engineers, caretakers, ore dressers, carpenters and battery feeders spread across seven companies. The most interesting technological development reported by Thureau was the use of a turbine to operate the crushing and dressing machinery of the Cumberland and Montagu Tin Mines. The engineer John Lewis was responsible not only for the turbine but for the buddles used by the Cumberland Company, while the Montagu set-up included Sterry Hunt’s American double-acting jiggers.⁵⁵ Although Cornish miners dominated the Heemskirk field, and Cornish patented appliances such as Borlase’s buddles were in common use, the international flavour of the technology used suggests that protecting their Cornish ‘brand’ was not a consideration when they chose metallurgical solutions. As at Mount Bischoff (see the paper *Shearing the Waratah: ‘Cornish’ tin recovery on the Arthur River system 1878–1903*, in this volume), there is also no evidence of Cornish miners working together to exploit their Cornish ethnicity as an economic strategy. In fact, in the case of Robert Hope Carlisle, who openly disparaged the work of his predecessor at the Mount Heemskirk mine, A.S.R. Osborne, the opposite appears to have applied.⁵⁶ Osborne claimed to have been driven out of Mount Bischoff by Cornish miners, and at

Heemskirk, just as at Bischoff, the Cornish miners probably regarded each other as rivals and competitors for work.⁵⁷

Figure 4: Trial Harbour, port for the Heemskirk tin field, c1890, with the hotel at right.



Source: Photo by J.W. Beattie.

Thureau’s faith in the field would prove unjustified. Recriminations had already begun at abandoned mines such as the Carn Brea. Based on an early assay of 11 per cent tin and regular gushing reports from mine managers, about £11,000 had been spent on the Orient Mine by the time manager Thomas Williams fell on his sword in January 1884.⁵⁸ The *Mercury*’s ‘regular’ Heemskirk correspondent James Fitzhenry recalled one mine manager telling a politician that Heemskirk ‘would be the greatest mining centre in the world’.⁵⁹ In May 1884 a *Launceston Examiner* correspondent reflected on the ‘grand place’ that was to have been built at the port of Trial Harbour (see Figure 4). Now, however,

the principal hotel [was] in the hands of mortgagees; the other hotelkeeper in a chronic state of complaint about the dullness of trade; seaweed and pigface reclaiming the sandy avenue called the main street; a jetty and crane, which cost £1500 looking woefully [sic] to seaward in sympathy with the general complaint of commercial atrophy; and the Commissioner’s residence stuck on a sand terrace overlooking the town with a half-mast-high aspect.⁶⁰

Although Trial Harbour would enjoy a brief resurgence as the port for the Zeehan–Dundas silver-lead field, before being replaced by Strahan, the Heemskirk tin field would never fulfil early expectations. The lode boom disaster appears to have been the result of rich patches of detrital cassiterite being mistaken for large ore bodies like those which were then paying dividends at Mount Bischoff.⁶¹ Speculation was fed by premature judgement of the field, both by Inspector of Mines Thureau and by mostly Cornish miners eager to find a billet in the antipodes. Reporting on the tin field in 1902, Assistant Government Geologist George A. Waller commented that ‘in some cases it is

impossible to avoid the conclusion that the managers did not know tin ore when they saw it'. One battery was erected to work what turned out to be not cassiterite, but black tourmaline.⁶²

Former Peripatetic Tin Mine manager Con Curtain estimated that at least £100,000 were spent at Heemskirk 1880–84 for a return of about 70 to 100 tons of dressed tin.⁶³ By 1962 total production on the field had not progressed substantially, amounting to about 668 tons of metallic tin.⁶⁴ The Federation Mine, which incorporated the old West Cumberland, Cumberland and East Cumberland workings, produced about 194 tons of metallic tin in the years up to 1916 and 1927–53.⁶⁵ Mayne's Tin Mine (see Fig. 5), situated near where the Orient Mine conducted its disastrous crushing in 1883, accounted for a further 140 tons of metallic tin in the years up to 1916.⁶⁶ Perhaps the Orient should have been the premier mine on the field after all.

Figure 5: *Diversion tunnel at Mayne's tin mine Heemskirk tin field*



Source: Photo by the author.

POSTSCRIPT

Subsequent careers and history of the Cornish miners

In contrast to many Cornish miners, who are traceable from mining field to mining field across the world, Josiah Thomas Rabling disappeared from the official record in 1885, at the age of about 42. It is possible that the shame of imprisonment prompted him to change his name when he left Tasmania, or that he sought a living abroad in another ‘little Cornwall’ where the records are not very accessible. Similarly, there were so many Cornish miners in Australia called John Williams and William Williams that it has been impossible to identify which of them were the managers of the Orient and the Cliff Mines respectively.

The careers of most Heemskirk’s Cornish mining managers are easy to follow. Some, like Rabling, battled their way through hard times. Before arriving at Heemskirk, **John Addis** (1833–1908), born at Olverston, Gloucestershire, worked for the Albion Co, Sebastopol, and at Ballarat, Daylesford and Melbourne in Victoria, twice being declared insolvent and fathering sixteen children through three marriages.⁶⁷ He later operated tin mines at Ringarooma (north-eastern Tasmania), Tingha (northern New South Wales) and in Malaya, dying at the Ipok Perak Straits Settlement in Malaya, where he was managing director of the Sungei Rai Tin Company. He was credited as being the first to use puddling machines ‘and other modern mining plant’ in the Straits.⁶⁸

James Henry Nance (1839–99) was born at Breage, near Helston, Cornwall, his father being a mining agent.⁶⁹ In 1861 he was still living at home at St. Cleer, Cornwall, as a 22-year-old copper miner.⁷⁰ He managed the Excelsior Mine at Stanhope, Queensland, in 1873 and the City of Sandhurst Mine at Bendigo in 1877–78, applying to patent a safety cage while in the latter position.⁷¹ In 1882 he was variously reported to have come to Heemskirk from Ballarat or Sydney, being chosen for the position of mine manager for the St. Clair Tin Mine out of 24 applicants.⁷² Nance appears to have been in Bendigo by 1884, managed the South Nil Company at Raywood, near Bendigo, in 1886, and in 1894 he was at Mount Morgan, Queensland.⁷³ He died in the nearby Rockhampton district in 1899, his estate being valued at £270.⁷⁴

Thomas Stephens Williams (c1826–1901), born at St. Austell or Drake Walls, Cornwall, married Fanny Collings at Calstock, Devon, in 1850, emigrated to the Victorian gold rushes and became well known in the Bendigo district.⁷⁵ In 1867 he was manager of the Alabama Gold Mine at McIvor.⁷⁶ In later years he operated a farm at Derrimal, Victoria, growing crops and raising dairy cattle and sheep, and he died at Long Gully, Bendigo.⁷⁷ The Williams had at least nine children, and at least two of their sons later worked in Tasmania. **Luke Williams** (c1859–1931) became a well-known Tasmanian mine manager, operating, among others, the Copper Reward Mine at Balfour for Robert Sticht. The village of Williamsford was named after him. He died in comfortable retirement in Hobart.⁷⁸ **Richard Williams** (c1866–1919) managed the Colebrook Mine on the west coast of Tasmania, copper mines at Chillagoe and Cloncurry in Queensland, the Byron Reef Gold Mine in Victoria and died at Southern Cross, Western Australia.⁷⁹

Abraham Shortland Rawlings Osborne (1836–1919), was born at Marazion, Cornwall, as the son of a copper miner.⁸⁰ A.S.R. Osborne's turbulent mining career was very diverse.⁸¹ Grey tin oxide reportedly thrown on a dump during his time as manager of the Mount Heemskirk Mine became known as 'Osbornite' under the management of his successor, Robert Hope Carlisle, who recovered it.⁸² Osborne left Tasmania and was in Queensland, including work on the Kangaroo Hills field, until about 1894, when he headed west to the Champion Gold Mine and then the Whim Well Copper Mine near Roebourne, Western Australia. He then returned to Queensland. In the period 1897–1900 he worked at Mount Chalmers and Mount Warminster, then a copper proposition at Stanage Bay near Rockhampton; while 1902–04 he was on the Norton goldfield near Gladstone. From 1904 to 1907 he opened up the Great Fitzroy Mine near Rockhampton, and in later years explored Great Fitzroy Mines' option over the Laioki Mine in Papua. Osborne died in Brisbane in 1919, at 83 years of age, survived by a widow, three daughters and a son.⁸³

Robert Hope Carlisle (?–1906) may have been the Ballarat miner in the Insolvency Court in 1868.⁸⁴ He married Mary Ann Swan in Victoria in 1875, was at the Mount Balfour (Tasmania) tin diggings in 1878 and at Heemskirk by 1879, replacing mine manager A.S.R. Osborne as manager of the Mount Heemskirk Mine and managing the Montagu Extended Mine from 1881.⁸⁵ Mary Ann Carlisle gave birth to a son at that mine in October 1882.⁸⁶ In 1883 her husband was a road contractor in the Heemskirk–Zeehan district, one of his efforts, Carlisle's Track, serving as a connector to the new township of Zeehan.⁸⁷ Two years later he managed the Pioneer Hydraulic Mine at Mitta Mitta, Victoria.⁸⁸ By 1892 he was in Perth, Western Australia, and he was in the Kalgoorlie district 1895–98, initially managing the Croesus North No. 1 Mine.⁸⁹ In 1899 he claimed to have 43 years' experience as a mine manager.⁹⁰ In 1901 he was appointed to the committee of school management at Ravensthorpe on the Phillips River field where he managed a mine.⁹¹ Robert Hope and Mary Carlisle remained on the electoral roll for Perth, he as a 'mine manager', in 1906, in which year he died.⁹²

William (W.G.) Hensley (1838–?) appears to have been born at Illogan, Cornwall, the son of an engine driver. By 1861 he was a tin miner in that parish.⁹³ Later in the 1860s and into the 1870s he was a farmer and tin miner at Reids Creek, Victoria.⁹⁴ In 1873 he won a prize for his display of two ingots of tin at the Sydney Intercolonial Exhibition.⁹⁵ In 1887 he was living in Gippsland, and in 1892 he was on the Crossover gold diggings in Victoria.⁹⁶ Hensley's brother Joe, who was listed as a 21-year-old blacksmith on the 1861 British census, may also have worked on the west coast of Tasmania.⁹⁷

Edwin Tremethick (1821–88) was born at Marazion, Cornwall, married Elizabeth Truscott in 1841, but by 1847 was in South Australia. They had at least nine children. By 1856 the couple and their children were at Creswick, by 1865 they were at Clunes, suggesting a switch from copper, tin or silver mining to Victorian gold. Tremethick died at Sandhurst, Victoria.⁹⁸

Edward Perrow (c1835–1925) and his wife Mary came to Australia from Plymouth on the *Norfolk* in 1865, he being 30 years old, she 27.⁹⁹ They lost a fourteen-month-old daughter at Bendigo in 1875.¹⁰⁰ Edward Perrow succeeded W. Thomas at the

Cliff Mine in 1883. In 1888 he was appointed manager of the Day Dream Silver Mine in South Australia.¹⁰¹ Edward and Mary died at Hastings, Victoria, in 1925 and 1923 respectively.¹⁰²

George A. Lightly (1836–1915) appears to have been born in Brixton, London, as the fourth child of William and Harriet Lightly.¹⁰³ He was possibly married at Redruth, Cornwall, in 1864 and managed the West Bassett Mines in that county.¹⁰⁴ In 1871 he was a mining engineer living, presumably unemployed, in the household of his mother in Kensington, London.¹⁰⁵ He emigrated from England to New Zealand, from whence he came to the west coast of Tasmania.¹⁰⁶ In 1884 Lightly left the failed West Cumberland Mine for a Malayan tin mine.¹⁰⁷ However, he was back in Tasmania at the time of the Mount Lyell gold bonanza of 1886, and by 1890 he managed the Mount Lyell Gold Mining Company. In 1892 he was a storekeeper at Corinna, and by 1894 he had joined the Pieman River hydraulic gold boom.¹⁰⁸ Unusually for a Cornish mine manager (and he was not a Cornishman by birth), while at the Pieman Lightly also wrote serialised romances for the *Tasmanian Mail* newspaper.¹⁰⁹ He later became Inspector of Mines for the East Coolgardie Goldfields in Western Australia, and died at Subiaco, Western Australia.¹¹⁰

Endnotes

¹ Charles Sprent, *West Coast: Mr Sprent’s Report on its Mineral Resources*, House of Assembly Paper 51/1878, p. 5.

² Glyn Roberts, *Metal Mining in Tasmania 1804 to 1914*, Bokprint and Fullers Bookshop, Launceston, 2007, p. 113. One such conman was Albert (or Arthur) Frederick Augustus Plantagenet Messiah, a former missionary and ship’s cook who, after various disagreements with the law in Tasmania and Queensland ended his days still dressed in silk hat and coat but cutting people’s corns and bunions on the streets of Sydney at the beginning of World War I. See ‘H.F.W.’, ‘Blackbirding’, *Warwick Examiner and Times* (Warwick, Qld), 18 May 1914, p. 7.

³ Gustav Thureau, *West Coast*, Legislative Council Paper 77/1882, p. 27.

⁴ Philip Payton, *Cornwall: a History*, Cornwall Editions Limited, Fowey, Cornwall, 2004 (originally published 1996), p. 234; Ronald M. James, ‘Defining the Group: Nineteenth-Century Cornish on the North American Mining Frontier’, in *Cornish Studies: Two* (ed. Philip Payton), University of Exeter Press, Exeter, 1994, cited by Payton, *Cornwall: a history*, p. 234.

⁵ ‘Mt Heemskirk’, *Mercury* (Hobart), 5 October 1881, supplement, p. 1.

⁶ George A. Waller, *Report on the Tin Ore Deposits of Mount Heemskirk*, Old Series no. 195, Department of Mines, Hobart, 1902, p. 12.

⁷ English Census for 1861, enumeration district 5, ecclesiastical district of St Martins, Camborne, civil parish of Camborne, piece RG9/1583 (part 3), folio 130, p. 9, Cornwall Online Census Project site, <http://freepages.genealogy.rootsweb.ancestry.com/~kayhin/61583b.html>, accessed 6 June 2017.

⁸ ‘Miss Eliza Rabling’, *Cornishman*, 19 January 1889, p. 2; Sharron P. Schwartz, *Mining a Shared Heritage: Mexico’s ‘Little Cornwall’*, Cornish–Mexican Cultural Society, England, 2011, pp. 51–52.

⁹ *England and Wales Probate Calendar*, 1858–1966.

¹⁰ Rod Home, ‘Science as a German Export to Nineteenth Century Australia’, *Working Papers in Australian Studies*, no. 104, London, 1995, pp. 7–11, 17.

¹¹ English Census for 1861, enumeration district 5, ecclesiastical district of St Martins, Camborne, civil parish of Camborne, piece RG9/1583 (part 3), folio 130, p. 9, Cornwall Online Census Project site, <http://freepages.genealogy.rootsweb.ancestry.com/~kayhin/61583b.html>, accessed 6 June 2017; English Census for 1871, enumeration district 10, ecclesiastical district of All Saints, civil parish of Camborne, piece RG10/2325 (part 2), folio 63, p. 4, Cornwall Online Census Project site, http://dustydocs.com.au/frontend_dev.php/link/6/25141/151096/census-1871.html, accessed 6 June 2017.

- ¹² Allen Buckley, *The Story of Mining in Cornwall*, Cornwall Editions Limited, Fowey, Cornwall, 2005, p. 140.
- ¹³ Payton, *Cornwall: a History*, pp. 215–20; Allen Buckley, *The Story of Mining in Cornwall*, p. 140.
- ¹⁴ ‘Gold News’, *Launceston Examiner*, 3 March 1877, p. 5.
- ¹⁵ ‘Our Launceston Letter’, *Mercury*, 4 October 1879, p. 3.
- ¹⁶ Conduct record, CON37/1/11, p. 6063, Tasmanian Archive and Heritage Office, Hobart [hereafter TAHO].
- ¹⁷ ‘Second Court’, *Mercury*, 28 July 1881, p. 3.
- ¹⁸ ‘Mining’, *Mercury*, 30 August 1881, p. 3; ‘Tin’, *Launceston Examiner*, 31 August 1881, p. 3.
- ¹⁹ ‘Mining’, *Mercury*, 27 April 1882, p. 3.
- ²⁰ The Western Tasmania Aboriginal Cultural Landscape was registered on the National Heritage List on 8 February 2013. The northern part of the Heemskirk tin field is included in the registered area, but not the Granite Creek area further south. See the Department of the Environment website, <https://www.environment.gov.au/heritage/places/national/western-tasmania>, accessed 26 November 2016.
- ²¹ T.B. Moore diary 21 April 1878, ZM5616, Tasmanian Museum and Art Gallery, Hobart [hereafter TMAG]. See also Nic Haygarth, ‘An “Island” within an Island: the Maritime/Riverine Culture of Tasmania’s Pieman River Goldfield 1877–85’, *Journal of Australasian Mining History*, vol. 10, October 2012, pp. 55–71.
- ²² ‘Tin’, *Launceston Examiner*, 31 August 1881, p. 3.
- ²³ ‘The West Coast Goldfields’, *Mercury*, 17 September 1881, p. 2.
- ²⁴ Roberts, *Metal Mining in Tasmania 1804 to 1914*, pp. 124–31, 319.
- ²⁵ ‘Mount Heemskirk’, *Mercury*, 7 December 1881, p. 3; ‘Mount Heemskirk’, *Mercury*, 14 February 1882, supplement, p. 1.
- ²⁶ ‘Tin’, *Launceston Examiner*, 28 January 1882, p. 3; ‘Mining’, *Mercury*, 11 February 1882, p. 3.
- ²⁷ ‘Tin’, *Launceston Examiner*, 23 August 1882, p. 2.
- ²⁸ Editorial, *Zeehan and Dundas Herald*, 30 April 1902, p. 2; ‘Church held in a stable’, *Examiner*, 17 February 1937, p. 16. These stories suggest that religious services at the Orient mine were conducted in a stable. This may be true, but Williams’ sons also built a church on the claim.
- ²⁹ A.S.R. Osborne to James Smith, 18 October 1881, NS234/3/1/10, TAHO.
- ³⁰ ‘Enquirer’, ‘Notes from North Heemskirk’, *Mercury*, 17 June 1882, supplement, p. 2.
- ³¹ Even the Mount Bischoff mine’s cautious discoverer, James ‘Philosopher’ Smith, had predicted that the mine would be worked for centuries. See James Smith to Charles Sprent, 24 July 1876, no. 202, NS234/2/1/3, TAHO.
- ³² ‘Heemskirk’, *Mercury*, 23 October 1883, p. 3; ‘Tin’, *Launceston Examiner*, 9 March 1883, p. 3.
- ³³ ‘Mount Heemskirk’, *Mercury*, 8 May 1883, p. 3.
- ³⁴ ‘Managers’ reports’, *Mercury*, 30 June 1883, p. 2.
- ³⁵ ‘Our Special Reporter’ (Theophilus Jones), ‘The West Coast Tin Mines’, *Mercury*, 31 May 1883, p. 3.
- ³⁶ See Nic Haygarth, ‘Theophilus Jones: Tasmania Through Anglo-Indian Eyes in the 1880s’, *Proceedings of the Launceston Historical Society Symposium, 2011: the Indian Connection with Tasmania*, Launceston, 2011, pp. 51–74.
- ³⁷ ‘Our Special Reporter’ (Theophilus Jones), ‘The West Coast Tin Mines’ *Mercury*, 28 May 1883, p. 3.
- ³⁸ *Ibid.*
- ³⁹ (Theophilus Jones), ‘West Coast History’, *Zeehan and Dundas Herald*, 25 December 1896, p. 1; Luke Williams, ‘The Orient Library, Heemskirk’, *Mercury*, 27 September 1883, p. 3.
- ⁴⁰ Gustav Thureau, *Report on the Present Condition of the Western Mining Districts*, Parliamentary Paper 89/1884, p. 1.
- ⁴¹ (Theophilus Jones), ‘West Coast History’, *Zeehan and Dundas Herald*, 25 December 1896, p. 1. She died in June 1882, see ‘Mount Heemskirk’, *Mercury*, 14 June 1882, p. 3.
- ⁴² ‘Our Special Reporter’ (Theophilus Jones), ‘The West Coast Tin Mines’ *Mercury*, 28 May 1883, p. 3.
- ⁴³ *Ibid.*, *Mercury*, 29 May 1883, p. 3.
- ⁴⁴ *Ibid.*, 31 May 1883, p. 3.
- ⁴⁵ ‘Our Special Reporter’ (Theophilus Jones), ‘Deputation to the Minister of Lands at Trial Harbour’ *Mercury*, 26 May 1883, p. 3.
- ⁴⁶ See Haygarth, ‘An “Island” within an Island...’.
- ⁴⁷ ‘Our Special Reporter’ (Theophilus Jones), ‘Deputation to the Minister of Lands at Trial Harbour’ *Mercury*, 26 May 1883, p. 3.
- ⁴⁸ ‘Mining’, *Mercury*, 1 August 1883, p. 3.
- ⁴⁹ According to Con Curtain and L.J. Smith, companies which installed batteries included the Carn Brae (J.T. Rabling; 10 heads, from W.H. Knight’s Phoenix Foundry, Launceston), Orient (John Williams;

Thomas S. Williams; 10, Salisbury Foundry, Launceston), Cliff (John Hancock; William Williams; W Thomas; PT Young; Edward Perrow, 5), the West Cumberland (George Lightly; 5), the Wakefield (5), Cumberland (A.B. Gallacher; 10), the Montagu (Alex Ingleton; 15), the Victorian-registered Cornwall Tin Mining Co (Mark Gardiner; 10, W.H. Knight), and Peripatetic (Con Curtain; 10). Companies which did not install machinery included the Montagu Extended (Robert Hope Carlisle), Prince George (John Addis), St. Clair (James Henry Nance), Champion (W.G. Hensley), Mount Heemskirk and Agnew (John Greenwood), Heemskirk River (Edwin Tremethick) and the St. Dizier (Nicholas St. Dizier). The Empress Victoria (Thomas Fowler) had a steam hoisting plant but no treatment plant. See Con Henry Curtain, ‘Old Times: Heemskirk Mines and Mining’, *Examiner*, 27 February 1928, p. 5; and L.J. Smith, ‘South Heemskirk Tin Mine’, *Advocate*, 11 August 1928, p. 14. Curtain claimed there were 75 heads of stampers on the field, but Smith’s list of batteries added up to 80 heads.

⁵⁰ Con Henry Curtain, ‘Old Times: Heemskirk Mines and Mining’, *Examiner*, 27 February 1928, p. 5.

⁵¹ ‘Heemskirk’, *Mercury*, 23 October 1883, p. 3.

⁵² Editorial review of 1883, *Launceston Examiner*, 1 January 1884, p. 2.

⁵³ ‘Mining’, *Mercury*, 3 April 1884, p. 3.

⁵⁴ Gustav Thureau, *Report on the Present Condition of the Western Mining Districts*, Parliamentary Paper 89/1884, p. 1.

⁵⁵ *Ibid.*, pp. 1–13.

⁵⁶ ‘Mining’, *Zeehan and Dundas Herald*, 17 March 1902, p. 4.

⁵⁷ A.S.R. Osborne to James Smith, 18 October 1881, NS234/3/1/10, TAHO.

⁵⁸ ‘Mining’, *Tasmanian News* (Hobart), 4 January 1884, p. 2.

⁵⁹ ‘The Orient Tin Mine’, *Mercury*, 6 February 1884, p. 1.

⁶⁰ ‘Shaugraun’, Notes Off and On’, *Launceston Examiner*, 17 May 1884, p. 1.

⁶¹ Blissett, *Geological Survey Explanatory Report*, p. 93.

⁶² Waller, *Report on the Tin Ore Deposits of Mount Heemskirk*, p. 12.

⁶³ Con Henry Curtain, ‘Old Times: Heemskirk Mines and Mining’, *Examiner*, 27 February 1928.

⁶⁴ A.H. Blissett, *Geological Survey Explanatory Report, One Mile Geological Map Series, Zeehan*, Department of Mines, Hobart, 1962, p. 112.

⁶⁵ *Ibid.*, p. 104.

⁶⁶ *Ibid.*, p. 106.

⁶⁷ ‘Victoria’, *Mercury*, 12 October 1872, p. 3; ‘New Insolvents’, *Argus* (Melbourne), 2 February 1870, p. 5; ‘New Insolvents’, *Argus*, 22 February 1878, p. 6.

⁶⁸ John Addis, ‘Earthquakes in Tasmania’, *Australasian*, 1 March 1884, supplement p. 5; ‘The Miner’, *Australian Town and Country Journal*, 22 November 1884, p. 24; ‘Our Deptford Letter’, *Bairnsdale Advertiser and Tambo and Omeo Chronicle*, 9 April 1895, p. 2; ‘Mining’, *Punch* (Melbourne), 16 July 1908, p. 9–10; ‘Personal’, *Daily Telegraph* (Launceston), 3 August 1908, p. 5.

⁶⁹ English Census for 1851, registration district of Liskeard, sub-registration district of Liskeard, piece 1902, folio, 381, p. 20; England & Wales Civil Registration Birth Index 1837–1915.

⁷⁰ English Census for 1861, registration district of Liskeard, sub-registration district of Liskeard, piece 1529, folio 9, p. 13.

⁷¹ ‘Stanthorpe’, *Queenslander* (Brisbane), 18 January 1873, p. 10; ‘Signals and Safety Cages’, *Bendigo Advertiser*, 5 January 1878, p. 3; ‘New Safety Cage’, *Brisbane Courier*, 29 December 1877, p. 6.

⁷² ‘Tin’, *Launceston Examiner*, 28 January 1882, p. 3; ‘Mining’, *Mercury*, 11 February 1882, p. 3.

⁷³ ‘Australian Natives Association’, *Bendigo Advertiser*, 4 June 1884, p. 2; ‘Eaglehawk’, *Bendigo Advertiser*, 11 October 1886, p. 2; ‘Mount Morgan’, *Morning Bulletin* (Rockhampton), 2 August 1894, p. 6.

⁷⁴ ‘Supreme Court’, *Morning Bulletin*, 26 August 1899, p. 4.

⁷⁵ ‘Death of Mr T.S. Williams’, *McIvor Times and Rodney Advertiser* (Heathcote, Vic.), 20 June 1901, p. 2.

⁷⁶ ‘Alabama Company, McIvor’, *Bendigo Advertiser*, 2 August 1867, p. 2.

⁷⁷ ‘Death of Mr T.S. Williams’, *McIvor Times and Rodney Advertiser*, 20 June 1901, p. 2.

⁷⁸ ‘Mr Luke Williams’, *Advocate* (Burnie, Tas.), 29 July 1931, p. 2.

⁷⁹ ‘About People’, *Examiner*, 1 October 1919, p. 6.

⁸⁰ The 1841 English Census records him as five years old, the son of William and Susan Osborne, living at Mount Pleasant, Marazion, registration district of Penzance, sub-registration district of Marazion, civil parish of St Hilary, piece 144, book 2, folio 1, p. 1.

⁸¹ A.S.R. Osborne to James Smith, 18 October 1881, NS234/3/1/10, TAHO.

⁸² ‘Mining’, *Zeehan and Dundas Herald*, 17 March 1902, p. 4.

⁸³ ‘Death of Captain A.S.R. Osborne’, *Evening Telegraph* (Charters Towers), 8 January 1920, p. 2.

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- ⁸⁴ ‘Law Report’, *Argus*, 4 June 1868, p. 1.
- ⁸⁵ Victorian marriage record 2370/1875; ‘Circular Head’, *Launceston Examiner*, 21 October 1878, p. 3; R.H. Carlisle, ‘Mount Heemskirk Company’, *Mercury*, 1 April 1879, p. 3; ‘Tin’, *Launceston Examiner*, 29 November 1881, p. 3.
- ⁸⁶ ‘Births’, *Mercury*, 21 October 1882, p. 1.
- ⁸⁷ ‘The Gazette’, *Mercury*, 23 January 1883, p. 3.
- ⁸⁸ ‘Mining notes’, *Ovens and Murray Advertiser* (Beechworth, Vic.), 10 March 1885, p. 1.
- ⁸⁹ Perth Rate Book for 1892, North Ward, p. 19, assessment no. 292; ‘The Maritana’, *Kalgoorlie Western Argus*, 5 December 1895, p. 2; ‘Fatal Accident at a Mine’, *Kalgoorlie Western Argus*, 8 October 1896, p. 18.
- ⁹⁰ ‘No. 2 Court’, *Inquirer and Commercial News* (Perth), 9 June 1899, p. 13.
- ⁹¹ ‘Appointments’, *Western Mail* (Perth), 17 August 1901, p. 65; ‘The Phillips River Field’, *Albany Advertiser*, 22 October 1901, p. 3.
- ⁹² Australian Electoral Roll for 1906, Western Australia, Division of Perth, Polling place James Street, p. 8; ‘Funeral Notices’, *West Australian* (Perth), 3 October 1906, p. 1.
- ⁹³ English Census for 1861, Registration district of Redruth, sub-registration district of Illogan, piece 1581, folio 78, p. 8.
- ⁹⁴ See, for example, ‘Beechworth Police Court’, *Ovens and Murray Advertiser*, 2 April 1863, p. 4; W.G. Hensley, ‘The Tin Lode Discovery’, *Ovens and Murray Advertiser*, 17 March 1870, p. 3.
- ⁹⁵ ‘The Sydney Intercolonial Exhibition’, *Ovens and Murray Advertiser*, 13 May 1873, p. 2.
- ⁹⁶ ‘Gazette Notices’, *Traralgon Record*, 14 June 1892, p. 3.
- ⁹⁷ Con Henry Curtain, ‘Old Times: West Coast Mining: Middleton’s [sic] Creek’, *Examiner*, 5 January 1928, p. 3.
- ⁹⁸ Death registration no. 3753/1888, Victoria.
- ⁹⁹ Assisted and Unassisted Passenger Lists, 1839–1923, Victoria.
- ¹⁰⁰ ‘Deaths’, *Bendigo Advertiser*, 3 April 1875, p. 2.
- ¹⁰¹ ‘Day Dream S.M. Co’, *South Australian Register*, 8 August 1888, p. 3.
- ¹⁰² Death certificates 15088/1923 and 13743/1925, Victoria, respectively.
- ¹⁰³ England, Selected Births and Christenings, 1538–1975, film no. 0375289–0375291, born 11 July 1836 and baptised 3 May 1837; English Census 1841, registration district of St Martin in the Fields, sub-registration district of Charing Cross, piece 739, book 4, folio 26, p. 6; English Census 1871, registration district of Kensington, sub-registration district of Kensington Town, piece 29, folio 88, p. 98.
- ¹⁰⁴ England & Wales, Civil Registration Marriage Index, 1837–1915, vol. 5C, p. 390; ‘Mining Companies’, *Launceston Examiner*, 18 May 1885, p. 1.
- ¹⁰⁵ English Census for 1871, registration district of Kensington, sub-registration district of Kensington Town, piece 29, folio 88, p. 98.
- ¹⁰⁶ ‘Personal’, *Kalgoorlie Western Argus*, 14 August 1906, p. 18.
- ¹⁰⁷ ‘Tasmanian Intelligence’, *Launceston Examiner*, 1 November 1884, p. 3.
- ¹⁰⁸ ‘Mining’, *Mercury*, 29 October 1886, p. 3; *Wise’s Tasmanian Post Office Directory*, 1890–91, p. 117; *ibid.*, 1894–95, p. 179.
- ¹⁰⁹ See Geo. Lightly, ‘Willy’s Wife and Mine’, *Tasmanian Mail*, 13, 20, 27 July, 3 and 10 August 1895, p. 3; Geo. Lightly, ‘Hetherington’s [sic] Flat: a Tale of the Diggings’, *Tasmanian Mail*, 28 March, 4 and 11 April 1896, p. 3.
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