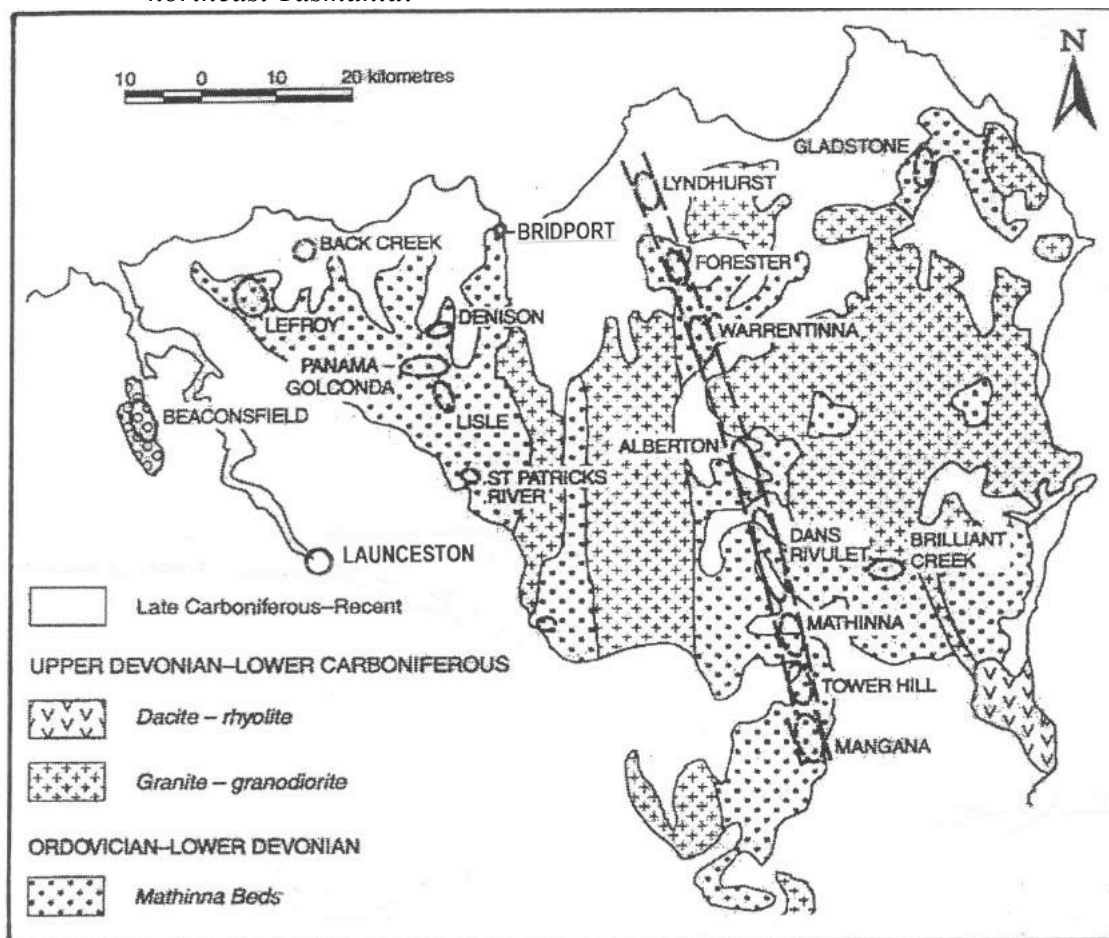


Golconda Goldfield, Tasmania: a source of wealth or despair?

By KEITH PRESTON

The Golconda goldfield lies approximately 30km north-northeast of Launceston in close proximity to further gold mining areas that include the Denison and Lisle goldfields (Fig. 1). It is located towards the northern end of an upland area surrounding Mt Arthur that attains a height of 1188m. A prominent ridge maintaining a height above 450m extends for about 5km northwards from Mt Arthur before splitting into two subsidiary ridges at the head of the Lone Star Creek catchment. The northwestern (Panama) ridge at a height of 300-350m extends for a further 6km before terminating at Mt. Wilson (Fig. 2). This ridge separates the narrow and steeply sided valley containing the Panama Creek [hereafter Panama Valley] to the northwest from the broad river valley occupied by the Lone Star and Golconda Creeks to the southeast. Gold mining proceeded in both of these valleys after 1877, being referred to separately as the Panama and Golconda goldfields by the Department of Mines, although it extended for less than 3km in an east-west direction across Panama Ridge.

Figure 1: *Location of the Panama – Golconda and neighbouring goldfields in northeast Tasmania.*

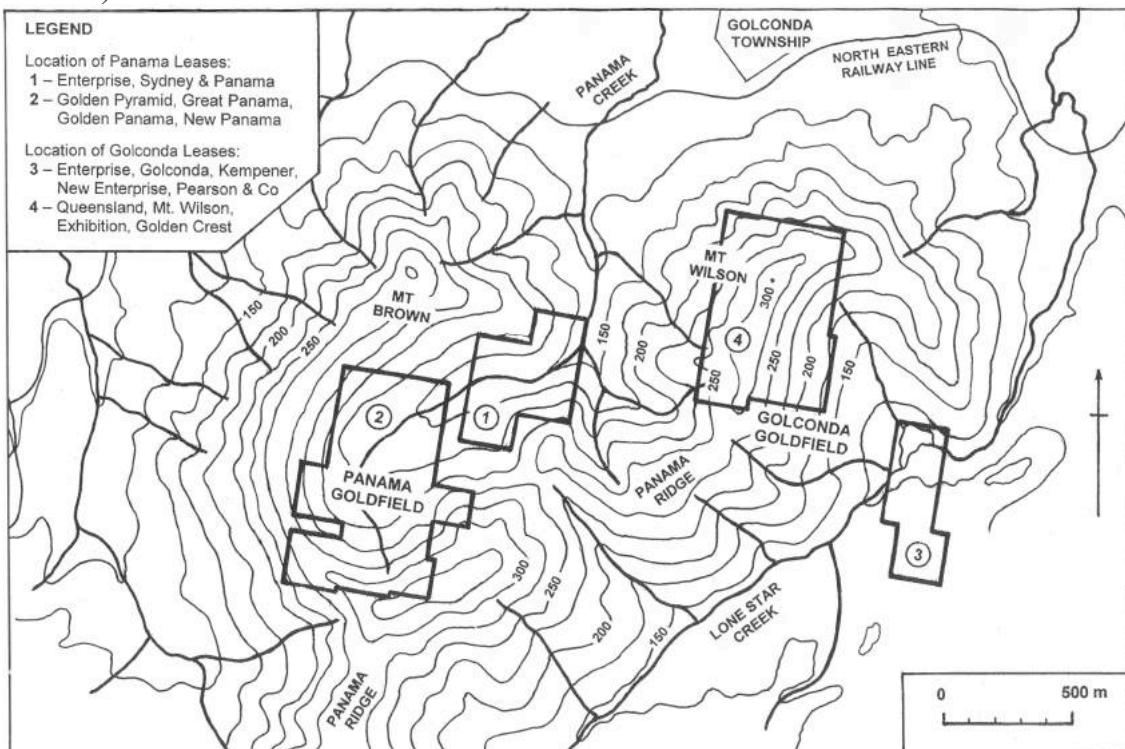


Source: Mineral Resources Tasmania, Report 1994/19, p. 2.

Geologically, the goldfield is underlain by intrusions associated with the Scottsdale granite-granodiorite batholith of Upper Devonian age. A metamorphic aureole within the overlying Mathinna Beds forms the host for gold-bearing quartz veins which also extend into the margins of the igneous intrusions. The veins were described as ‘typically erratic in size and grade’ having a width of less than 0.6m and maximum recorded length of about 60m.¹ Gold was found to be associated predominantly with sulphides although a zone of surface oxidation was generally encountered at shallow depth in the early workings.²

Golconda first appeared in print when prospector William Kennett applied for a 4ha lease in March 1878, the lode being anointed the Golconda Reef, the term applied to all claims in the vicinity by year’s end.³ As quartz mining commenced on most of the other goldfields in northeast Tasmania during the late 1870s, the competition for finance was fierce, determining that rich mines developed rapidly while others languished, especially if ventures acquired a poor reputation. Mining on the Golconda field continued for some 40 years but was its longevity a reliable measure of abundant wealth?

Figure 2: Panama and Golconda valleys separated by the steeply-sided Panama Ridge terminating at Mt Wilson, approximate extent of the main mining areas overlain. (25m contour intervals).



Source: TASMAM 1:25,000 Nabowla Sheet, 1981, with additions from Mineral Resources Tasmania, Mineral Chart 135, February 1917 - August 1918.

Early Developments 1877-78

As with many alluvial workings, the origins of the Golconda field are difficult to date precisely. Prospector Alfred Brewer and his brothers are associated with the earliest alluvial workings on the Panama Creek in April 1877, being credited with obtaining

21gm from 45kg of alluvial quartz samples. Lending some credence to this account is the naming of Mt Brewer (later Mt Brown).⁴ Another account claimed that:

Panama or Golden Valley ... was prospected during the Waterhouse rush [in August 1869]. A little gold was obtained at the lower end, but not in sufficient quantity to pay for working. During the last few months the Messrs Handly [Handley] have been engaged prospecting further up the gully with very good success ... there are about a dozen ten acre blocks marked out [by May 1877].⁵

A hastily released prospectus by Brewer for the Golden Valley Quartz & General Mining Co. sought to raise £1,200 working capital to undertake further prospecting of two 4ha sections towards the head of Panama Creek. Prospecting claims were now consolidated between two main groups, and an application to register the Enterprise Quartz Crushing Co. was prepared by the end of August 1877 to work three sections and the Brewer camp then released another prospectus for the Panama Creek GM Co. [Gold Mining Company] in September to work five sections totalling 18.2ha including J. Handley's 2.2ha section.⁶ Mine manager Arnold Sturm was the driving force behind the Enterprise mine, adding his 4ha claim to the Enterprise company holdings in return for 23 per cent of the share stock.⁷ A tender from foundry owners Salisbury & Armstrong for a ten head battery had been accepted by the registration date when the first 6d call on shareholders was also made. This was the first stamp battery fabricated in Tasmania, but producing the requisite patterns delayed completion.⁸ The machinery, including a 7.5kW Richard Garrett & Sons portable steam engine sourced from Melbourne, was ready for shipment via Bridport three months later. By this time the machinery site had been excavated, a tramway alignment to the adit portal had been prepared and a 6km access track formed to connect with the road to the Denison goldfield.⁹

The battery was commissioned in February 1878 to undertake a trial crushing for the Southern Cross claim on the Denison field, but the first 152t [tonnes] of surface 'mullock' from the Enterprise section crushed the following month yielded only 2g/t [grams per tonne]. As the following crushing was also unsatisfactory, operations were suspended in April and the battery kept working on ore from the Sir William Denison claim.¹⁰ As a further 20t crushing in July for 6.5g/t raised only £55 in gold sales, shareholder calls totalling £1 went unheeded and 20 per cent of shares were forfeited. Capital approaching £3,000 had been expended for little reward but fortuitously prospectors on the adjoining Golconda field who offered their prospecting claim on favourable terms, provided a lifeline.¹¹

Prospecting on Golconda Creek 1878-79

Golconda Creek had become the focus of activity by early 1878 following the activities of Edwin G. Kennett and Samuel McLean who were working a prospector's claim adjoining William Kennett's section. They had been the principal promoters of the Sir William and Lady Denison claims on the nearby goldfield during the first half of 1877. In May, sufficient exposures of a north-south trending quartz lode had been unearthed for Henry Meredith (mine manager of the John Dally claim at Denison) to proclaim it as

‘the best defined and most promising reef he has seen during his twenty years experience’. By August, 23t ore had been stockpiled for carting to the Enterprise battery at Panama which yielded 14g/t – a considerably better return than ore from the Panama claim, but not comparable to the fabled *Golconda* riches.¹² McLean & Kennett issued a prospectus in October for the Golconda GM Co. seeking to raise £1,750 through 70 promoters’ shares of £25 by highlighting the advantages of the claim location:

The claim is splendidly situated for water power – a large permanent creek intersecting the claim; a race of 40 chains long will give 50ft. of fall, and can be cut or flumed at very little expense ... the only appliance wanted on the ground is a battery and water-wheel.¹³

Sturm now attempted to rescue his failing Panama Creek venture by lodging an application in the Court of Mines for forfeiture of McLean & Kennett’s claim due to inactivity following the trial crushing. Goldfields Commissioner Bernard Shaw found that Sturm’s claim was valid within the framework of the 1870 Gold Fields Regulation Act but taking account of their previous prospecting efforts, fined them 1shilling and warned them to make a lease application or risk forfeiture. A claim had in fact been lodged at the beginning of October, but this remained to be processed.¹⁴ There was evidently insufficient interest in McLean & Kennett’s prospectus and Sturm was fortunate to be offered the claim in January for £100 cash and 600 paid up shares, wasting little time in commencing to sink a shaft by the end of the month.¹⁵ A month later an adit had been driven enabling ore to be stockpiled for transport to the Enterprise battery. Mining proceeded vigorously as a trial crushing of 274t at the beginning of April returned 11.5g/t worth £375 – Sturm had finally obtained a financial return for two years endeavour and a re-location of the battery to the Golconda claim could proceed.¹⁶

Enterprise GM Co. 1879-80

Steam power was retained at the new battery location, and the plant erected by the end of May included four hastily built kilns, indicating that pyritic ore was being mined.¹⁷ Because a trial crushing of the roasted ore proved unsatisfactory, ‘probably owing to the kilns not being of the right construction to thoroughly burn the ore’, the directors sought the advice of Thomas K. Simpson, resulting in the appointment of experienced mine manager Alex Heslop and battery manager Thomas Thorne. By the time a shareholders meeting convened at the end of July, 339t had been treated yielding 8g/t suggesting that Sturm’s management had not been at fault.¹⁸ A shaft encountered the water table at a depth of 25m, requiring the purchase of winding & pumping equipment from the Sir William Denison mine. Ironworks owner Ishmael E.E. Salisbury was engaged to prepare guidelines for erecting the plant and a boiler was hauled to the mine in January.¹⁹

A January shareholder’s meeting revealed a considerable profit from increased production, 1579t treated in four months to 22nd November at an improved yield of 15g/t enabling accumulating debts to be largely paid off. Operating costs of the steam-powered battery amounting to £25 a week, however, continued to be a drain on profits.

As a means of reducing costs, the directors engaged millwright John Jackson to report on the feasibility of converting the battery to water power but as ‘the yield of water from the creek [during the dry season] would only be equal to four or five horse-power’, he considered such flows inadequate.²⁰ Tenders for an additional five-head battery to be used for public crushing were called the following month, the supply of the parts only six weeks later suggesting that the Salisbury Foundry was again the supplier. A contract to crush 102t at 10s a tonne for the Gem GM Co., that held the adjoining lease to the north, now followed, in an attempt to provide additional income.²¹ The pumping plant was commissioned towards the end of March enabling a contract for deepening of the shaft by 15m to be awarded to a party of six Victorian miners. This required the use of lithofracteur to blast the ‘very hard granite’.²²

Falling output of 1,110t from the Enterprise workings was reported at the July shareholders meeting, this only partially offset by third party crushing of 732t, resulted in an operating loss of £1,261.²³ The battery continued to operate until August when wet weather caused problems for ‘carting firewood and underground timber, as the mud is knee-deep everywhere’. Tenders for disposal of the plant were called towards the end of October marking the demise of the company.²⁴ It was later claimed that about £2,000 was paid in dividends based on the published accounts that indicated a total income of about £7,800 (gold sales £4,400 and shareholder capital £3,430) and accumulated losses of over £5,880, but as no announcements of dividend payments were made while the company was operating, this is considered unlikely.²⁵

Queensland Quartz Mining Co. 1880-81

This company was registered in May 1880 to develop a lease held by Thomas Donovan and James Shannon towards the northern end of the Panama Ridge near Mt. Wilson (Fig. 2), the leaseholders taking 30 per cent of the shares.²⁶ Ore obtained by driving an exploratory adit enabled a trial crushing to proceed at the Enterprise battery in July which yielded 10.5g/t. Closure of the battery now restricted further development and tenders for the supply of a ten-head battery were called in December requiring additional finance to be raised by the shareholders. Costs must have been prohibitive, as the existing Enterprise battery was purchased in January and a battery manager engaged.²⁷ The battery was overhauled and a water supply race (partly flumed) constructed from Golconda Creek to replace the previously used pulsometer pump.²⁸ As a further 365t crushing in April yielded only 7g/t, work was suspended and all men discharged.²⁹ The Mount Wilson GM Co. working a neighbouring claim now took the opportunity to engage Government Geologist Gustav Thureau to report on their claim. His site inspection, which included the Enterprise mine battery, was critical of the battery’s performance after pyrite fragments were found in the creek bed 400m downstream, leading to a recommendation for alterations that included the adoption of electro-plated copper sheeting ‘so much in favour in California, Victoria and other mining countries’ for treating the ‘very fine’ gold. This prompted an acrimonious exchange of correspondence between the former Enterprise mine manager Alex Heslop and the Mount Wilson chairman William Garrard.³⁰

A decision to resume mining had been made the following month when another battery manager was engaged to ‘place the battery in really good working order’ and a tramway constructed from the mine to the battery. Crushing re-commenced in August but must have been unsatisfactory as the company was wound up four months later and the plant sold.³¹

Speculators and golden stock

The mining boom gained pace after 1877, the gold output in the state increasing ten-fold between 1877-1879, to 1705kg (60,155oz) with a value of almost £231,000.³² There was a noticeable time lag in company registrations caused by the rapid increase in gold mining companies, there being an increase from 11 companies in 1879 to 35 in 1880, and 43 during the first half of 1881. A stock exchange opened in Launceston on 12th April 1881 was soon handling a surge of mining flotations, largely to satisfy the demand of speculators.³³ Fuelled by reports in the press of a *lost reef*, the Panama Valley was a prime target for speculation. Such reports included the discovery of ‘the Panama reef’ by mine manager Heslop in April 1880, and another less than two years later which reported the ‘long-looked for Panama reef has at last been discovered’.³⁴ Three companies having a combined nominal capital of £60,000 were registered during a frenetic six week period between 8 September and 22 October 1881, and promoter’s shares were issued for a further three companies (Appendix 1). Prospecting was commenced by the registered companies but all folded within a year without any financial return.³⁵

In 1881, 97.5 per cent of the total state output of reef gold was produced from the Beaconsfield and Lefroy goldfields, primarily from three mines: the Tasmanian GM & Quartz Crushing Co. at Beaconsfield and the New Chum and West New Chum companies at Lefroy.³⁶ These mines generated huge profits and distributed inflated dividends thereby fuelling the speculating frenzy: the Tasmania Co. £22,500 dividends for six months ending December 1881, the New Chum a total of £44,750 over 24 months to the end of June 1881, the West New Chum £13,000 for 12 months to the end of September 1881 – all representing approximately 50 per cent of revenue.³⁷ The output from the Golconda goldfield by comparison (Appendix 2), was insignificant, but that did not deter the speculators.

Battery ownership a prized asset 1882-91

After being for sale for over a year, the Enterprise battery was purchased at auction in January 1882 for £500 by mining investor James Dee.³⁸ He had worked on the Reefton goldfield in New Zealand between 1873-1878 as mine manager of the Golden Fleece, Victoria and Hopeful ventures before re-locating to Tasmania.³⁹ After working briefly as mine manager of the East New Chum GM Co. on the Lefroy field at the beginning of 1880, he pursued returns from mining investments, having significant shareholdings in at least five ventures (two as a director) including the Queensland gold mine.⁴⁰ At first Dee was content to gain income by engaging battery manager John Deacon to undertake third party crushing for 10s a ton – half the rate of the former owner. Dee now had to

resolve two major problems, as he was not the registered lessee of the ground on which the battery stood, or of the water rights for its supply. As it would become crown property if not re-located within three months from the date of purchase, Dee promptly applied for a lease of the 0.8ha battery site, while his employees (Pickett and Thorne) applied for the forfeited former Enterprise leases on 6th April to demonstrate an intention to continue mining. However, Dee inexplicably failed to pay the fees for preparation of the leases and the application for the machinery site was duly cancelled in September – this having major repercussions.⁴¹

Dee had planned to convert the battery to water power but before this proceeded, ownership of the water rights and leases was challenged in the Goldfields Court at the end of December 1882. Mining Registrar Charles G.H. Furlong applied for forfeiture of two water rights from Golconda Creek originally applied for by the Enterprise Co. The first application for 16 sluice-heads had not been surveyed and was declared void; the second for five sluice-heads was only used by the Queensland Co. to supply the battery for processing and was cancelled with the change of ownership. The court ruling two weeks later in favour of Furlong was a major setback but the situation worsened.⁴² As Dee's first application for the lease to the battery site had been cancelled, he was required to peg the claim again and make another lease application. His application (No 1475) was made on the same day (9th October) as that of miner John Fahey for a 2ha lease (No 1474), which included Dee's 0.8ha, the court ruling on 23rd April in favour of Fahey, as his was the earlier application by a matter of hours. Dee had now lost both his entitlement to water and the ability to operate the battery, thereby bringing all mining activity on the goldfield to a standstill.⁴³ Financial hardship followed for Dee with calls on his shareholdings going unpaid. His death in May 1886 at the Maloney's Rose of Australia hotel in Launceston was reported as being 'probably of heart disease ... for a year or two he has been living a careless intemperate life, which no doubt hastened his end'.⁴⁴

The impasse was solved in July 1883 by Furlong, an opportunist who was well placed to take advantage of the situation, when he purchased the battery from Dee, as the court ruling had already handed him the water rights pending a formal application. In light of Dee's experience, two weeks later Furlong took the unusual step of gazetting his act of having 'marked off' the battery claim and Dee's forfeited lease.⁴⁵ Brothers James and John Fahey were unable to challenge Furlong due to other mining commitments, and by April 1886 they had been declared bankrupt, had moved away from the goldfields and were respectively occupied as bark contractor and labourer.⁴⁶

Furlong having applied for the 4ha claim to the southeast of the former Enterprise Co. ground, proposed tribute working, the royalty based on the ore grade: 5 per cent when below 5dwt per ton, 7.5 per cent for 5-7dwt per ton, and 10 per cent when over 7dwt per ton.⁴⁷ To enable water power to be adopted for ore processing to minimise costs, work commenced on constructing a 805m-long water race to supply a 9.2m diameter iron-framed, overshot waterwheel, the iron components supplied by W.H. Knight's Launceston foundry. (Fig. 3) Assembly of the waterwheel was proceeding at the beginning of October and a weir was under construction at the race

intake in November, enabling the battery to be commissioned a month later under manager Thomas Pickett.⁴⁸ Teething problems with water losses were experienced:

through leakages from the water race into old tunnels in the side of the hill over which it passes, these have now been all flumed across ... scarcely a third of the water in the creek is at present utilized and were it turned on so as to fill the buckets the wheel appears quite equal to working 25 heads.⁴⁹

Figure 3: *Battery on the Enterprise Co. claim driven by an iron-framed overshot waterwheel, photograph probably dating from the 1890s when disused.*



Source: Tasmanian Archive & Heritage Office, NS787/1/44.

Regular crushing of ore produced on tribute from the Enterprise and Queensland claims during the following six months yielded on average 6g/t, justifying Furlong's reduced charges (approximately 5s per ton), the ore being conveyed to the battery by tramway to eliminate costs of cartage.⁵⁰ An announcement that 10-20 men were to be engaged to open up abandoned workings in August, suggests that the battery was idle due to a shortage of ore. The developments must have proved unsuccessful for Furlong appeared in the Bankruptcy Court six months later when the battery was advertised for sale – the goldfield had claimed another victim. With no offers for the entire plant forthcoming, Furlong's administrator eventually agreed to the battery being leased by a syndicate headed by Henry Meredith, a high price being demanded, with the terms being 'half wages and half the gold'.⁵¹ By September mining was again underway in the Panama Valley (see below) and the battery reluctantly used for a trial crushing, 'the

battery not being in a fit state to crush, somehow the stone was put through ... the gold is very fine, indeed like flour'.⁵²

By the end of 1886 Furlong had found a wealthy partner – Hobart merchant John Baily who commenced investing in mining stocks in the late-1880s.⁵³ As his Lease 9-83 was cancelled in January 1886, an application was submitted for the claim to the north (former Enterprise Co. lease). Mining resumed on tribute by C. Rogers and the battery overhauled; enabling 102t to be crushed in November, yielding 7gm/t.⁵⁴ Periodic tribute working continued until Thomas L. Nichols purchased the battery (now equipped with only ten stamps) in May 1891. His Nichols Prospecting Association working a lode on the Platypus claim conducted a trial crushing which must have been unsatisfactory, as the following month the battery was offered to the Wilson GM Co.⁵⁵

Panama Valley: an impetuous act or folly?

John Brewer King (a publican) and Robert Eastman (prospector) were operating in partnership on the Beaconsfield goldfield by 1880, later finding a rich tin claim at Branxholm that was sold to a Sydney syndicate and floated as the Mount George TM Co. in 1886.⁵⁶ The energetic Eastman had also prospected the former Enterprise Co. ground by this time, undertaking a trial crushing at the battery in September that returned 28gm/t. They applied for four 4ha leases the following month (Fig. 4) but these were transferred to the Sydney & Panama GM Co. once it was floated in Sydney three months later with a nominal capital of £36,000.⁵⁷ Company directors included H.G. Moss, the head of a general merchants company M. Moss & Co.⁵⁸ The venture was to be project managed from the family's Sydney office guided by Eastman, who given his many commitments must have been a part-time site supervisor.

A little-used 15 head battery, 25hp steam engine and boiler was purchased from the Royal Tasman mine at Mt. Cameron (near Gladstone), and Salisbury & Co. engaged to supervise the transfer of the plant to the Panama Valley. Haulage contractor James Inglewood required nearly nine weeks to convey the machinery to site, the heavy components taken to Boobyalla for shipment to Bridport to minimise delays from hauling along poorly formed roads. For the final stage from Bridport to the mine site (about 20km) up to 50 bullocks were used, the 10t boiler conveyed 'on a sledge with twenty-four bullocks yoked to it and ten additional bullocks with block and tackle to keep it [from] sliding down for the last half mile' in the Panama Valley.⁵⁹ Working arrangements at the mine site were not, however, satisfactory, for 'men do not receive their pay regularly and cheques when issued are frequently dishonoured ... good men have left ... those that remain work in a half-hearted sort of way'.⁶⁰ Four months later the situation had not improved:

Battery ought to have been at work weeks ago, but is still unfinished, those employed in putting it up having knocked off for want of timber, those getting the timber having knocked off for want of pay, and so on. A battery manager has been sent over, but as there is no battery to manage ...⁶¹

By December all was ready for the battery commissioning – a 143m long adit had been driven and 102t of ore stockpiled. This was delayed until the New Year to enable the

directors to attend, bringing a plentiful supply of whisky that led to a tragic end to the chaotic manner of the mine development. An intoxicated William Airey mistakenly consumed a solution of mercury nitrate with inevitable consequences, he survived long enough to be admitted to Launceston hospital where he died of peritonitis 'set up by escape of fluid from the stomach into the abdominal cavity'.⁶² The trial crushing returned 4gm/t but no further accounts of production were reported. In December 1889, the City bank of Sydney enforced the sale of plant and leases, the former being acquired by the Great Caledonian GM Co. on the Middlesex goldfield, and the latter being purchased by John Bryant for £240.⁶³

Golconda Field: 1890s resurgence

Another attempt at re-working the old Enterprise claim commenced in April 1891 when leaseholders Louis S. Holmes and Jacob Kempener joined forces to issue a prospectus for the Kempener GM Co. to raise an initial working capital of £1,800. Kempener with the largest shareholding (13.5 per cent) at the time of registration, was joined by Holmes and three other Launceston general practitioners (19 per cent shareholding) as directors.⁶⁴ Kempener applied for two leases in May, a water right (32W-87G) for six sluice-heads from Lone Star Creek in June, and a further 4ha lease acquired for £150 in September.⁶⁵ As the Golconda battery was in no fit state to undertake a trial crushing, 60 bags of ore were despatched to Melbourne. In January a 0.6m wide lode was intersected and the battery overhauled under manager William McKenzie. The first crushing returned 8g/t in line with previous operations, which was reported as 'paying expenses'.⁶⁶ Heavier stamps were now installed in the battery to compensate for the low stream flows that could only power five stamps. Underground development extended into the workings on the former Gem claim in August with enough ore obtained to keep the battery working intermittently through to the end of the year when 218t had been crushed at 10gm/t and another 81t for a third party.⁶⁷ The company was operating at a loss however, and was let on tribute at the beginning of December. Kempener became the latest victim of the goldfield when he was listed as bankrupt the following October with estimated debts of £180, and two months later, the leases were again forfeited.⁶⁸ McKenzie & party continued tribute working until at least May 1895 but any output went unreported. A year later Edward Gaunt called tenders for dismantling the waterwheel for transport to the Star claim on the Mt. Victoria goldfield at Ringarooma, this the last reference to a water-powered battery.⁶⁹

New Enterprise GM Co. 1900-04

Silence did not last long in the Golconda workings, despite the succession of failed ventures extending over a 20-year period. The Enterprise Prospecting Association was formed towards the end of 1900 headed by William Titmus, a Golconda hotel owner, and an application made for a five sluice-head water right from Lone Star Creek.⁷⁰ A prospectus issued the following March detailed the results of trial crushings of 447t over an unspecified time period, returning an average of 14g/t, and a further trial crushing undertaken in Footscray for 27g/t 'of which nearly one half was saved from the

concentrates, only some 100dwt. being free gold'. As a further trial crushing at a 'local battery' returned 10g/t, consistent with all previous production on the field, this points to a principle cause of the repeated failures – that of adequate processing facilities nearby for refractory ores.⁷¹ Deeper mining below the water table was now proposed, and the New Enterprise GM Co. formed in February 1904 to raise a working capital of £1,050 to enable shaft sinking to a depth of 34m to proceed. The chairman William F. Petterd was also a director of the Magnet and Hercules silver mines on the West Coast but is not known to have had any previous experience of gold mining.⁷² The water right (58G-W) was transferred to the new company and the leases of the former Enterprise mine transferred from Robert P. Symmons (Fig. 5).⁷³

Site development commenced in March, the water race repaired by replacing a 100m section with timber fluming to enable a Pelton wheel to be used for shaft dewatering, as inflows had reached 1,365 litres per hour.⁷⁴ The first attempt at pumping using an improvised bucket pump proved unsatisfactory 'owing to large quantity of quartz grit pumped with the water'. A replacement Cornish-style plunger pump was installed in May but with inflows increasing below a depth of 20m, a more powerful pump was considered but would have required an increased pressure head to operate the Pelton wheel.⁷⁵ This did not proceed and three months later the mine was offered for sale in Melbourne. Renewed hope was raised by the *Examiner* a year later when negotiations were completed with a 'mining magnate from Johannesburg, South Africa'.⁷⁶ No international funding was forthcoming, and a further attempt to float the Golden Enterprise GM Association in November 1908 also failed. Further attempts at re-starting operations were stymied by a sale of the battery plant to the nearby Lebrina gold mine in mid-1912, steam power being used at the new site.⁷⁷

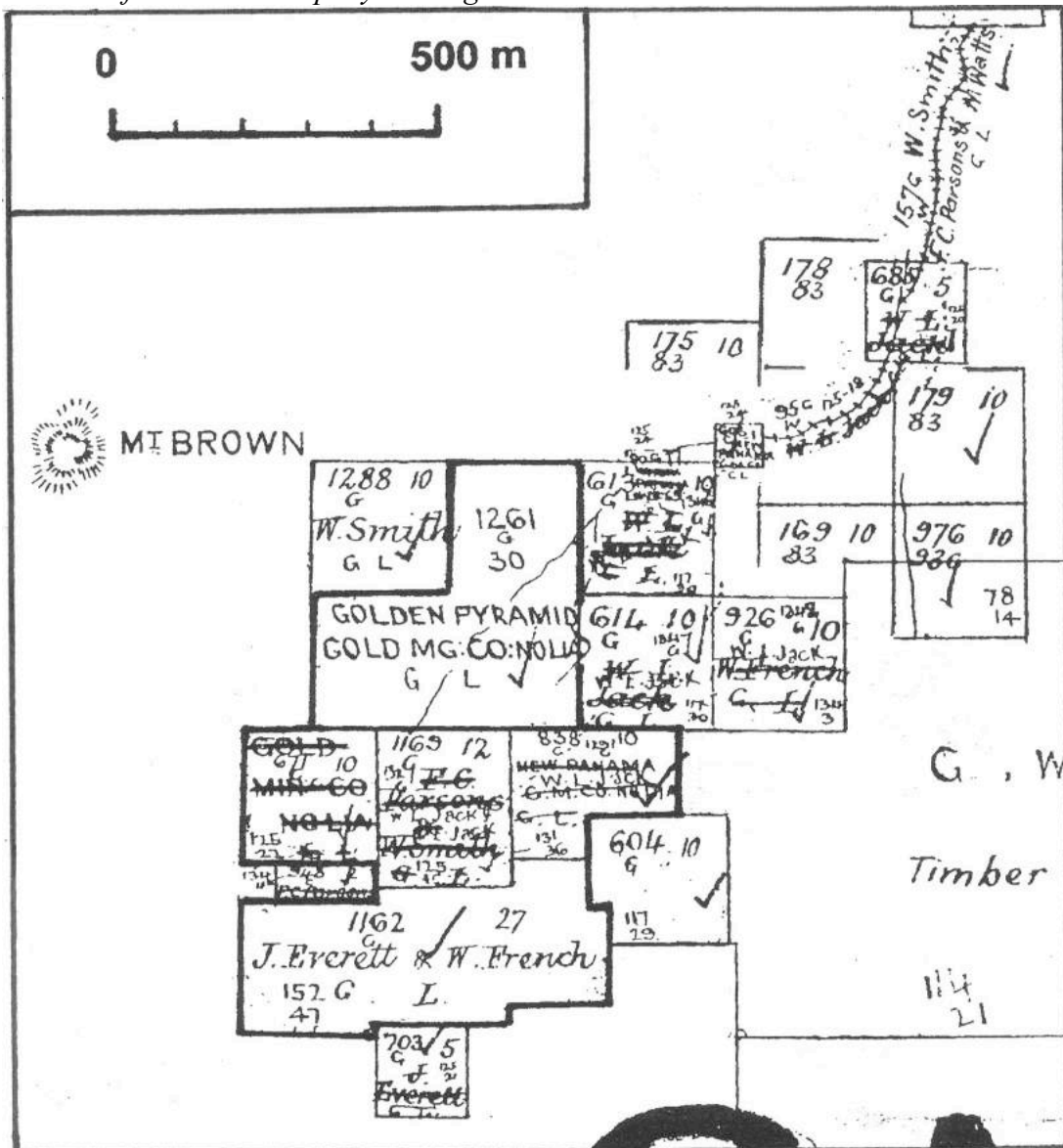
Panama Valley developments 1894-1914

After the demise of the Sydney & Panama GM Co., six years elapsed before significant prospecting resumed, the focus moving to the southern end of the valley including the steeply inclined valley sides (Fig. 2). A prospectus for the Panama Creek Prospecting Association was released in September 1894 to finance work on a large 128ha prospecting claim held by Fred Milne.⁷⁸ When this faltered Edward Gaunt registered the Great Panama GM Co. in March 1897, the shareholders besides the usual Launceston investors, included prospector Joseph Will, mine manager Thomas Bessell and four other local miners who together held 30 per cent of the stock. This level of inside knowledge suggests that they had a high regard for the potential of the mine but despite sinking a 15m shaft to intersect the granite contact and driving some 610m of tunnels, operations were suspended six-months later.⁷⁹ Gaunt's son (Frederick) also issued a prospectus in March for the Golden Panama Mining Co., and registration followed two months later, the largest holding (10 per cent) on the share register being that of prospector Fred W. Wilson. Again the ore recovered by extensive underground development contained 'no free gold by crushing'.⁸⁰

Ten years passed before the next wave of investment occurred, when the leases to the southern part of the goldfield had been consolidated between two parties, prospector Henry (John) Everett and Glenore farmer William French forming the

holdings of the New Panama GM Co. (see Fig. 4).⁸¹ The second party was headed by prospector Fred C. Parsons who transferred his leases totalling 12ha to the Golden Pyramid GM Co.⁸² These two groups gradually established an understanding of the complex structural geology, Everett regarded the valley floor as ‘merely a collection of slips from the hillsides’, while Parsons finally solved the mystery of the *lost reef* by explaining that ‘slips of granite as they came away from the side of the hill came into contact with the exposed lode, and carried portions of the lode down the creek’. Parsons intersected the base of the landslide debris in a prospecting shaft at a depth of 19.8m, and the original creek bed was eventually located and found to be infilled with 0.6m of sediment containing both free gold and gold-bearing quartz.⁸³

Figure 4: *Panama Goldfield: New Panama GM Co. consolidated lease holdings located to the south of the Golden Pyramid GM Co. consolidated Lease 1261G, the cancelled leases (175 & 178-83) of the Sydney & Panama GM Co. just visible to the northeast of the latter company holdings.*



Source: Mineral Resources Tasmania, Mineral Chart 135b, September 1899 - February 1917.

After a long period of underground development, the New Panama Co. was using the Golconda battery in 1911 for conventional mercury amalgam treatment of the refractory ores as they were of 'too low grade to admit of it being sent long distances to smelters', operations ceasing by year end.⁸⁴ The Golden Pyramid Co. was better-financed and more persistent, despite the hazardous tunnelling conditions. These were described by Parsons as the worst encountered in his 33-year mining career, the face having to be close boarded due to inrushes of groundwater, slurry and even slime from stagnant water-filled voids. A Tangye boiler and pump were installed in September 1909 as a horse whip proved inadequate for bailing.⁸⁵ The miners also had to contend with elevated carbon dioxide levels, which were reduced by raising the 'manway compartment' of the shaft 3.4m higher than the winding compartment.⁸⁶ Mine development at the Golden Pyramid continued until at least April 1913 requiring two increases in the nominal capital to £9,000. No gold output was reported at the time, which appears anomalous when mine development had been pursued continuously for over five years. Parsons continued prospecting for the *lost reef* until at least 1917 using his own resources, a sustained effort over ten years without apparent financial reward.⁸⁷

Government Geologist Alexander Reid provided a critical summary of these workings in 1926:

Many years ago loosened blocks of very rich quartz were unearthed near the outlet of the basin. Their source has been the chief object of search since that time ... neither this vein nor any of the others opened in the many adits and shafts is of economic importance, and it may be stated here that the field as a whole is poor and not likely to contain one ore-body of considerable value. One or two of these narrow veins, however, are sufficiently rich ore to allow of profitable operation on a very small scale.⁸⁸

Another revival on the Golconda field during WW1

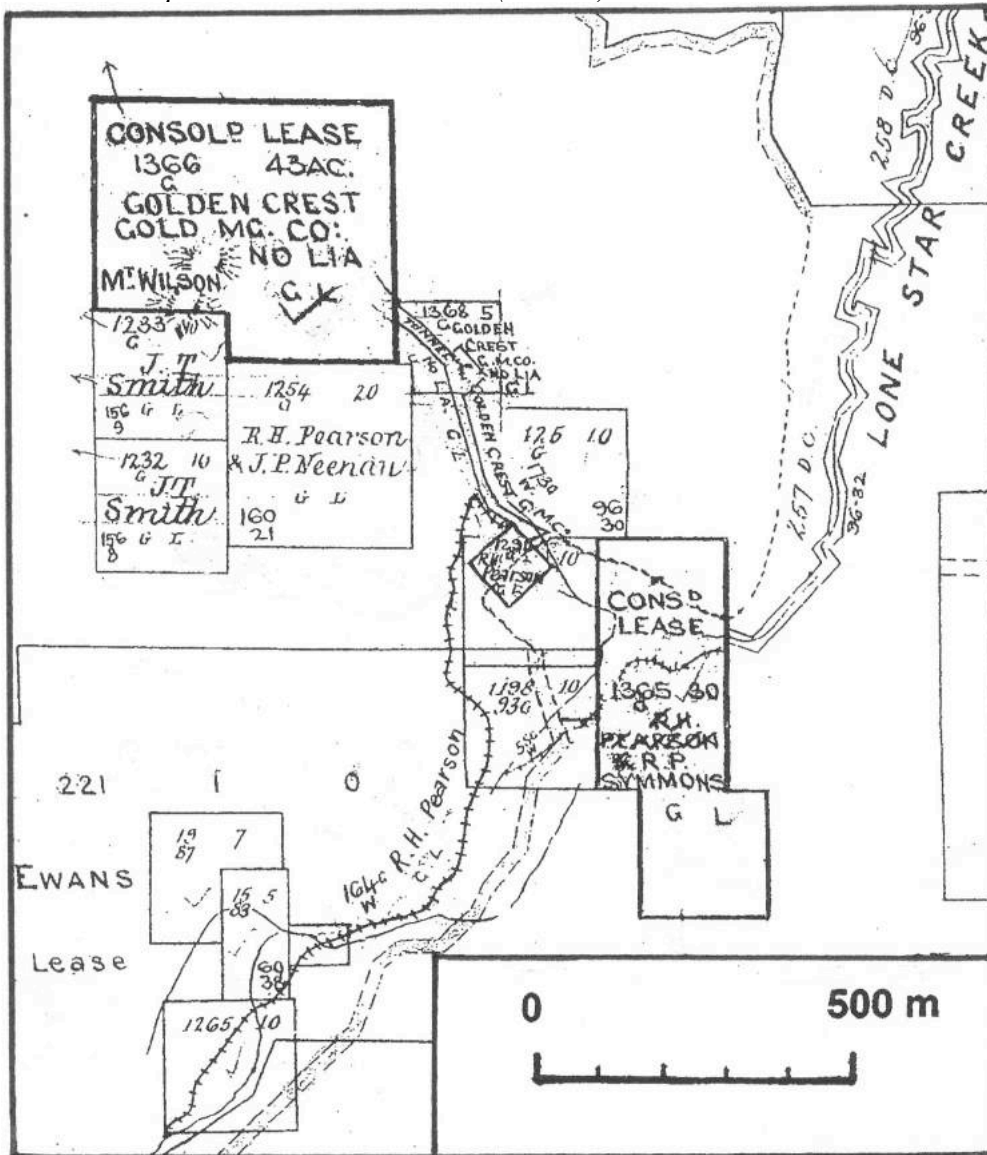
Resurgence on the Golconda goldfield between 1916-18 is difficult to explain based on prior gold output but may have been a response to a partial shutdown of other sections of the mining industry during the war. In June 1915, applications for the old Enterprise leases were lodged by a Tasmanian residing in St Kilda (Melbourne), Robert P. Symmons, who had formed a partnership with Reginald H. Pearson.⁸⁹ A new water right (164G-W) was sought eleven months later with the intake located a further 400m upstream to enable the race to deliver water to a new machinery site northwest of the previous one (see Fig. 5). Another lease application for the machinery site was also required.⁹⁰ A public company was floated in Melbourne, the Pearson GM Co., and the capital increased in September to £7,000 to fund the mine development.⁹¹

Pearson directed site operations, calling tenders for carting machinery from the Lebrina mine that included the former Enterprise battery having 430kg stamps of 'rather old design', that is, the original battery was returned to the goldfield.⁹² As the water race alignment to the new battery site was at a higher elevation on the west side of the creek, the local council was approached for permission to erect fluming over the Lone Star Road. The water was only required for ore processing as a 29kW L. Gardner & Sons (Manchester, England) gas suction engine was utilised to power the battery and a

dynamo for lighting, consuming five bags of charcoal for 24 hour working at a cost of £4.⁹³ A prospecting shaft had reached a depth of 18m by October 1917 when a drawlift pump was used for shaft de-watering. The battery commenced working the same month but was sold to another venture only three months later indicating that grades were poor, and mining ceased by mid-1918.⁹⁴ This was the final attempt of any significance to extract wealth from the Enterprise mine, Government Geologist Reid providing the following summary:

Not one of the several companies operating here was successful ... few of the ore shoots are longer than 100 feet ... the average gold content of the vein is at the rate of 6 dwt. per ton ... material of such low average grade that the value of the gold won was insufficient to defray the cost of treatment.⁹⁵

Figure 5: *Golconda Goldfield: Golden Crest GM Co. consolidated Lease 1366G and easement for self-acting incline 173G-W; Pearson & Co. consolidated Lease 1365G, battery site 1290G and water race from Lone Star Creek 164G-W; remains of the former New Enterprise GM Co. water race (58G-W) also visible within Lease 1365G.*



Source: Mineral Resources Tasmania, Mineral Chart 135, February 1917 – August 1918.

Mt. Wilson was also re-worked during a similar time period to that of the Pearson GM Co., an application for a consolidated lease of 17ha being made by the Golden Crest GM Co. in July 1917 (see Fig. 5).⁹⁶ The latter company was formed in October 1912 to work a claim near the highly productive Volunteer mine on the Lefroy goldfield. When this claim failed to live up to expectations, the nominal capital was increased by £3,000 to enable a move to Mt. Wilson towards the end of 1916.⁹⁷ Pearson's battery was initially used for a trial crushing but it was realised that the refractory ore required processing offsite, enough ore stockpiled six months later for trial shipments to be sent to the Sulphide Corporation in Newcastle (NSW).⁹⁸

An application for an easement for a self-acting tramway from the adit to the Pearson battery was made the following month (Fig. 5), and contractors commenced construction at the end of September.⁹⁹ Commissioned by the directors in November, by the end of the year 130t had been treated producing 13kg of gold (at 10gm/t) and 10t of concentrate. This result led to the purchase of the battery, further processing plant being ordered (settling tanks, classifiers and two card tables) and the introduction of 24 hour working.¹⁰⁰ This is the first reference found to improved treatment methods being adopted on the field, some 20-years after the use of classifiers in conjunction with vanners was recommended by Victorian Mines Department metallurgist James C. Newbery for the treatment of 'flour gold'.¹⁰¹ A visit by Government Geologist Reid coincided with the commissioning, his report suggesting the addition of roasting and chlorination plant – technology that had not been used previously on the goldfield.¹⁰²

This newfound optimism evaporated in a matter of months, however, as the treatment of 125t in June 1918 yielded only 3gm/t together with 4.5t of concentrate. Work was suspended due to a shortage of capital the following month without the new processing equipment having a satisfactory trial.¹⁰³ The battery building with a corrugated iron roof and weatherboarded walls was offered for sale in September but the plant remained on site until 1924 when the battery was moved to the Linton gold mine at Forester (northwest of Scottsdale). Here it reverted to steam power, its fifth site in a remarkable 45-year period of operation (see Appendix 3).¹⁰⁴ Reid calculated that the Golden Crest output of gold and concentrate produced from 819t of ore raised £745, a poor return when compared with a capital expenditure in excess of £3,000.¹⁰⁵

Veteran prospectors take the gold bug to the grave

Geologist Reid's damning assessment of the goldfield remained to be published (in 1926), but it is unlikely that it would have deterred further prospecting immediately following WW1 when unemployment among miners was high. In 1920 a 60-year old prospector Ben Searle, claimed that the long lost reef had been intersected by the original adit driven by the Brewer brothers some 40-years earlier. With financial support from Launceston's chief medical officer, Lavington G. Thompson, the Mt. Brown Mining Co. was registered in November. A water-bearing lode was intersected ten months later but no production was reported.¹⁰⁶ In September 1930 prospector E. Collins took up the claim adjoining that worked by the Mt. Brown Co. and engaged contractors to erect a small battery from the New Pinafore mine (Lefroy goldfield) having the 'usual gold-saving appliances' and driven by an oil engine. Again no output

was reported.¹⁰⁷ What is believed to be the final attempt to extract wealth from the goldfield was made in 1941, this by A. Blades and Joe Brimble, ‘veteran prospectors ... whose aggregate age is close on 160 years’. A 6m deep shaft ‘near the top of a hill at Mount Brown’ had cut a quartz lode assaying over 16g/t of gold and 60-200g/t of silver. Inevitably, nothing more was reported.¹⁰⁸

Conclusion

The Golconda goldfield was a most inappropriate name for one that, with the benefit of hindsight, should have remained undeveloped.¹⁰⁹ Yet, it was worked with few breaks for 40 years, the capital investment disproportionate to the amount of gold recovered – little more than 61kg (see Appendix 2). A review of the published accounts of publicly listed companies (Appendix 1) indicates a total expenditure exceeding £50,000 for a return of around £6,500 based on an average gold price of £3 per ounce. The combined output from the Golconda and Denison goldfields up to 1890 (that is, including the most productive period during the 1880s boom) accounted for less than 0.6 per cent of the total state output of reef gold.¹¹⁰

A detailed geological survey of the Golconda goldfield was not undertaken until 1926 when all active mining had ceased, this in itself a condemnation of its potential, although two reports on individual mines were prepared in 1881 and 1917. An assessment of the final (well financed) attempt by the Golden Crest Co. in 1918 was damning, in that none of the veins inspected were ‘sufficiently rich to justify the heavy expenditure necessary to provide milling and concentrating machinery and the material is too poor to allow of long transport’.¹¹¹ These mineral deposits had been re-worked many times without any transfer of knowledge or experience, particularly with respect to processing methods to assist enhanced recovery of the fine gold. Rudimentary mineral processing techniques had been retained for 30 years without significant modification leading to a succession of failed ventures, and accompanied by a great deal of despair.

Acknowledgements

The assistance of AMHA member Greg Dickens with drawing searches and the supply of plan copies by Mineral Resources Tasmania [MRT] is gratefully acknowledged. Interpretation of the MRT mineral charts was greatly assisted by Cosmos Coroneos, ‘A poor mans diggings: an archaeological survey of the Lisle-Denison Goldfields, North-east Tasmania, Pt 2: Results of the historical and archaeological research’, report prepared for the Forestry Commission, Hobart, July 1993.

Appendix 1: Summary of expenditure of publicly listed mining companies

Company	Registration Date	Nominal Capital (£)	Initial Working Capital (£)	Estimated Total Expenditure (£)	Comments
Golconda Goldfield					
Enterprise	8/1877	4,800	1,200	7,800	Includes Panama operations
Queensland	5/1880	10,000	7,500	7,500	
Gem	6/1880	10,000	5,000	5,000	
Mt. Wilson	10/1880	10,000	5,000	5,500	
Exhibition	1/1881	12,000	6,000	?	
Kempener	11/1891	9,000	1,800	2,500	
New Enterprise	2/1904	2,100	1,050	2,600	
Pearson	1916	4,000	?	7,000	Registered in Melbourne
Golden Crest	10/1912	3,000	3,000	7,000	Excludes Lefroy operations.
Panama Goldfield					
Long Tunnel	9/1881	20,000	10,000	?	Speculators venture
Hokitika	9/1881	20,000	10,000	?	Speculators venture
Panama & Nelson	10/1881	20,000	?	?	Speculators venture
Sydney & Panama	12/1886	36,000	?	?	Registered in Sydney
Great Panama	1/1897	500	?	300	
Golden Panama	5/1897	5,625	4,125	?	
New Panama	5/1907	6,250	3,125	?	
Golden Pyramid	12/1907	5,000	2,415	9,000	
Mt. Brown	11/1920	5,000	?	?	
Total				> 54,200	

Note: All companies registered in Launceston apart from those noted.

Appendix 2: Summary of estimated gold production from the Panama and Golconda Goldfields

Mine	Period	Ore Treated (t)	Production (kg)	Average Grade (g/t)
Panama Goldfield				
Enterprise	8/1877 – 1/1879	443	4.1	9
Panama & New Panama	7/1894 – c1911	15	0.5	33
Golconda Goldfield				
Golconda	7/1878 – 2/1879	23	0.4	17
Enterprise	10/1878 – c1908	3,573	50	14
Queensland	4/1880 – 1/1882	384	3.1	8
Mt. Wilson	1881	13	0.2	15
Golden Crest	9/1916 – c12/1918	773	2.9	4
Total		5,224	61.2	11.7

Source: R.S. Bottrill, 'The Lisle – Golconda - Denison goldfields', 1994/01, p. 5, *MRT*, with additions.

Appendix 3: Summary of Battery Operators

Mine	No. Stamps	Power ⁽¹⁾	Operating	Owners & Comments
Battery of Salisbury & Armstrong, Launceston				
Enterprise, Panama	10	S	2/1878-4/1879	Enterprise Quartz Crushing Co. Moved to Golconda
Enterprise, Golconda	10	S	5/1879-6/1880	Enterprise Quartz Crushing Co.
	15	S	6/1880-4/1883	Queensland Quartz Mining Co. (to 1/1882), James Dee (to 1/1883), John Fahey (to 7/1883)
	15 ⁽²⁾	W	12/1883- 6/1891	Charles Furlong
	10	W	6/1891-c1896 6/1901-6/1904	Nichols Prospecting Association (to 4/1892), Kempener GM Co. (to 12/1893), Robert Symmons (to 3/1904), New Enterprise GM Co. (to 6/1904). Moved to Lebrina GM 7/1912
		G	3/1917-7/1918	Returned from Lebrina GM to new site. Pearson & Co (to 1/1918), Golden Crest GM Co. Moved to Linton GM 4/1924
Battery of McCall, Anderson & Co, Melbourne				
Sydney & Panama	15	S	1/1888-mid 1888	From Royal Tasman GM. Moved to Great Caledonian GM 8/1890.

Notes:

- (1) G = gas engine, S = steam engine, W = waterwheel
- (2) The newer 5 head of stamps possibly removed about March 1885.
- (3) Small batteries of short duration on the Lone Star and Collins claims (Panama Goldfield) omitted from the table.

Endnotes

- ¹ R.S. Bottrill, 'The Lisle-Golconda-Denison Goldfields', *Mineral Resources Tasmania*, [hereafter *MRT*] 1994/01, p. 7.
- ² A. McOnie, 'A review of the gold potential of north eastern Tasmania', *MRT*.90-3140, August 1983, p. 34.
- ³ *Hobart Town Gazette*, 2 April 1878, p. 561; *Launceston Examiner*, 12 November 1878, p. 2.
- ⁴ *Cornwall Chronicle*, 16 April 1877, p. 6; *ibid.*, 2 May 1877, p. 3.
- ⁵ *Ibid.*, 16 May 1877, p. 3.
- ⁶ *Launceston Examiner*, 5 May 1877, p. 6; *ibid.*, 30 August 1877, p. 4; *Cornwall Chronicle*, 5 November 1877, p. 3.
- ⁷ *Ibid.*, 30 January 1877, p. 2; *ibid.*, 30 August 1877, p. 4; 'Registers of applications for gold mining leases, MIN73/1/1 - Sturm application for Lease 227 dated 15 May 1877, *Tasmanian Archives & Heritage Office* [hereafter *TAHO*].
- ⁸ *Launceston Examiner*, 30 August, pp. 2, 4; *ibid.*, 27 September 1877, p. 2; CHS35 Salisbury Foundry Collection, *Launceston Queen Victoria Museum*, battery probably of similar construction to that shown in a Salisbury & Armstrong drawing of a 10 head, timber-framed battery produced for the Port Phillip Cement Crushing claim at Beaconsfield, 11 February 1880.
- ⁹ *Launceston Examiner*, 6 October 1877, p. 5; *ibid.*, 27 November 1877, p. 5; *ibid.*, 13 December 1877, p. 2; *ibid.*, 31 December 1877, p. 2; *ibid.*, 30 January 1878, p. 2.
- ¹⁰ *Ibid.*, 5 February 1878, p. 2; *ibid.*, 19 March 1878, p. 2; *ibid.*, 24 April 1878, p. 2; *ibid.*, 23 July 1878, p. 2.
- ¹¹ *Ibid.*, 8 July 1878, p. 2; *ibid.*, 23 July 1878, p. 2; *ibid.*, 27 October 1878, p. 2; *ibid.*, 1 January 1879, p. 2.
- ¹² *Ibid.*, 3 May 1877, p. 4; *ibid.*, 16 January 1878, p. 3; *ibid.*, 24 May 1878, p. 3; *ibid.*, 3 August 1878, p. 2; *Hobart Town Gazette*, 2 April 1878, p. 561.
- ¹³ *Ibid.*, 3 October 1878, p. 3.
- ¹⁴ *Ibid.*, 16 November 1878, p. 3; *Hobart Town Gazette*, 19 November 1878, p. 1380 - application for 6ha dated 5 October 1878.
- ¹⁵ *Ibid.*, 18 January 1879, p. 2; *ibid.*, 31 January 1879, p. 2.
- ¹⁶ *The Mercury*, 25 February 1879, p. 3; *Cornwall Chronicle*, 5 April 1879, p. 2; *ibid.*, 12 April 1879, Supplement p. 1; *Launceston Examiner*, 30 July 1879, p. 2.
- ¹⁷ *Ibid.*, 4 February 1879, p. 2; *ibid.*, 30 July 1879, p. 2; *Cornwall Chronicle*, 28 May 1879, p. 3; Cosmos Coroneos 'A poor mans diggings: an archaeological survey of the Lisle-Denison Goldfields, North-east Tasmania, Pt 2: Results of the historical and archaeological research', report prepared for the Forestry Commission, Hobart, July 1993, p. 55: the battery site was located towards the eastern boundary of Lease 1365 on Fig. 5.
- ¹⁸ *Cornwall Chronicle*, 24 July 1878, p. 2 - Simpson the mine manager of the Florence Nightingale gold mine at Beaconsfield; *The Mercury*, 27/7/1876, p. 3 - previously battery manager at New Native Youth goldmine at Lefroy; *Launceston Examiner*, 30 July 1879, p. 2; see *Otago Witness*, 10 April 1880, p. 16; *Otago Daily Times*, 18 September 1909, p. 8, for Arnold Sturm - he moved to the Otago goldfields to continue his eventful mining career until his death aged 79 in 1909.
- ¹⁹ *Ibid.*, 29 October 1879, p. 3; *Launceston Examiner*, 7 November 1879, p. 2; *ibid.*, 24 December 1879, p. 2; *ibid.*, 27 January 1880, p. 2.
- ²⁰ *Launceston Examiner*, 31 January 1880, p. 2; *ibid.*, 8 December 1882, p. 3; *Cornwall Chronicle*, 31 January 1880, p. 3.
- ²¹ *Ibid.*, 20 February 1880, p. 1; *ibid.*, 31 March 1880, p. 2; *ibid.*, 27 April 1880, p. 2; *ibid.*, 4 May 1880, p. 2.
- ²² *Ibid.*, 31 March 1880, p. 2; *ibid.*, 7 April 1880, p. 2; *ibid.*, 4 May 1880, p. 2; *ibid.*, 31 July 1880, p. 2; www.austehc.unimelb.edu.au/tia/609.html - Lithofracteur: a dynamite variant patented by Friedrich Krebs in 1873 and manufactured in Melbourne by the Australian Lithofracteur Co. Ltd from 1874; *Cornwall Chronicle*, 16 February, 1877, p. 2 - first used in Tasmania by Launceston City Council at the Cataract Gorge quarry in early 1877.
- ²³ *Ibid.*, 31 July 1880, p. 2; *Cornwall Chronicle*, 31 July 1880, p. 3.
- ²⁴ *Ibid.*, 27 October 1880, p. 1.
- ²⁵ *Ibid.*, 30 January 1878, p. 2; *ibid.*, 23 July 1878, p. 2; *ibid.*, 18 January 1879, p. 2; *ibid.*, 30 July 1879, p. 2; *ibid.*, 31 January 1880, p. 2; *ibid.*, 31 July 1880, p. 2; *ibid.*, 28 April 1892, p. 4; *Cornwall Chronicle*, 31 July 1880, p. 3.

- ²⁶ *Cornwall Chronicle*, 16 April 1880, p. 3; 'Applications by mining companies for registration', MIN66/1/50, 14 May 1880, *TAHO*; *Hobart Town Gazette*, 18 May 1880, p. 536.
- ²⁷ *Launceston Examiner*, 13 July 1880, p. 2; *ibid.*, 22 December 1880, p. 1; *ibid.*, 31 January 1881, p. 3.
- ²⁸ *The Mercury*, 25 February 1879, p. 3; *Cornwall Chronicle*, 28 May 1879, p. 3; *Launceston Examiner*, 8 February 1881, p. 3.
- ²⁹ *Ibid.*, 5 April 1881, p. 2; *The Mercury*, 21 April 1881, p. 3.
- ³⁰ *Ibid.*, 20 April 1881, p. 3; *ibid.*, 2 May 1881, p. 3; *ibid.*, 4 May 1881, p. 3; *ibid.*, 16 May 1881, p. 3.
- ³¹ *Ibid.*, 20 May 1881, p. 3; *ibid.*, 23 May 1881, p. 4; *ibid.*, 9 August 1881, p. 3; *ibid.*, 23 August 1881, p. 3; *Ibid.*, 3 January 1882, p. 2; *ibid.*, 11 January 1882, p. 3.
- ³² *Journals of the House of Representatives, Tasmania*, [hereafter *TPP*], vol. 41, no. 82, 30 July 1881, p. 5; A. Montgomery, 'Mineral Resources of Tasmania', MININD1890, p. 10, *MRT*.
- ³³ *Launceston Examiner*, 12 April 1881, p. 3; *ibid.*, 1 June 1881, p. 3; *TPP*, vol. 41, no. 82, 30 July 1881, p. 5.
- ³⁴ *Ibid.*, 27 April 1880, p. 2; *The Mercury*, 6 March 1882, p. 3.
- ³⁵ Registered companies: Long Tunnel GM Co. – *Launceston Examiner*, 8 September 1881, p. 4, 'Hokitika GM Co.', *ibid.*, 21 September 1881, p. 4; 'Panama & Nelson Amalgamated', *ibid.*, 22 October 1881, p. 4; 'Prospectuses issued: Wellington GM Co.', *ibid.*, 15 September 1881, p. 3, 'Walhalla GM Co.', *ibid.*, 19 October 1881, p. 4, 'Pearl GM Co.', *The Mercury*, 9 March 1882, p. 1.
- ³⁶ 'Statistics of the Colony of Tasmania for 1881', p. 75.
- ³⁷ *Launceston Examiner*, 1 June 1881, p. 3; *ibid.*, 1 September 1881, p. 2; *ibid.*, 28 November 1881, p. 3; *ibid.*, 30 January 1882, p. 3.
- ³⁸ *Ibid.*, 27 October, 1880, p. 1; *ibid.*, 23 January 1882, p. 2.
- ³⁹ *West Coast Times*, 14 July 1874, p. 2; *ibid.*, 2 October 1874, p. 2; *Inangahua Times*, 5 March 1877, p. 2; *Grey River Argus*, 6 July 1878, p. 3.
- ⁴⁰ *Cornwall Chronicle*, 20 January 1880, p. 2; *Launceston Examiner*, 17 April 1880, p. 3; *ibid.*, 21 September 1881, p. 4; *ibid.*, 15 May 1884, p. 3; *Hobart Gazette*, 2 August 1881, p. 1305.
- ⁴¹ *Launceston Examiner*, 23 May 1882, p. 3; *ibid.*, 16 November 1882, Supplement p. 1; MIN73/1/2, 0.8ha Lease 1253, 6 February 1882, *TAHO*; *ibid.*, 4ha Lease 1265 & 2ha Lease 1266, 6 April 1882; *Hobart Gazette*, 14 February 1882, p. 372; *ibid.*, 11 April 1882, p. 825; *ibid.*, 3 October 1882, p. 1422.
- ⁴² *Ibid.*, 30 December 1882, p. 3; *The Mercury*, 16 January 1883, p. 4.
- ⁴³ *Ibid.*, 10 January 1883, p. 3; *ibid.*, 24 April 1883, p. 3; *The Mercury*, 24 April 1883, p. 3; MIN73/1/3, Leases 1474 & 1475, 9 October 1883, *TAHO*; *Hobart Gazette*, 31 October 1883, pp. 1514 & 1523.
- ⁴⁴ *Ibid.*, 8 July 1885, p. 3 - shares in East New Chum GM Co. forfeited; *The Mercury*, 4 May 1886, p. 2.
- ⁴⁵ *Ibid.*, 20 July 1883, p. 3; *Hobart Gazette*, 7 August 1883, p. 1129; *ibid.*, 28 August 1883, p. 1185.
- ⁴⁶ *Ibid.*, 28 January 1881, p. 4; *ibid.*, 18 March 1882, p. 2; *ibid.*, 1 April 1886, p. 2.
- ⁴⁷ *Ibid.*, 24 July 1883, p. 4; MIN73/1/3, Lease 9-83, 21 July 1883, *TAHO*.
- ⁴⁸ *Daily Telegraph*, 1 October 1883, p. 3; *ibid.*, 6 November 1883, p. 3; *The Mercury*, 28 July 1883, p. 3; *ibid.*, 7 November 1883, p. 3; *ibid.*, 29 December 1883, p. 3.
- ⁴⁹ *Launceston Examiner*, 27 November 1883, p. 3.
- ⁵⁰ *Ibid.*, 8 December 1883, p. 3; *ibid.*, 8 April 1884, p. 3; *ibid.*, 1 May 1884, p. 3; *Daily Telegraph*, 26 February 1884, p. 3; *The Mercury*, 29 December 1883, p. 3.
- ⁵¹ *Ibid.*, 19 August 1884, p. 2; *ibid.*, 6 March 1885, p. 3; *ibid.*, 10 March 1885, p. 1; *ibid.*, 14 March 1885, p. 1 – as this was the last reference to a 15 head battery it is possible that one 5 head unit was sold; *ibid.*, 16 September 1885, p. 3.
- ⁵² *The Mercury*, 20 September 1886, p. 4.
- ⁵³ *Launceston Examiner*, 5 December 1887, p. 1; *ibid.*, 14 March 1888, p. 4; *ibid.*, 12 October 1889, p. 4.
- ⁵⁴ *Ibid.*, 12 January 1886, p. 1; *ibid.*, 6 November 1886, Supplement p. 1; *ibid.*, 10 November 1886, p. 3; *The Mercury*, 1 November 1886, p. 4; MIN73/1/4, Lease 180-83, 11 October 1886, *TAHO*.
- ⁵⁵ *Ibid.*, 23 September 1890, p. 3; *ibid.*, 2 June 1891, p. 3; *ibid.*, 8 July 1891, Supplement p.1.
- ⁵⁶ *Ibid.*, 1 July 1880, p. 2; *ibid.*, 9 August 1886, p. 3.
- ⁵⁷ *Ibid.*, 17 September 1886, p. 3; *Sydney Morning Herald*, 5 January 1887, p. 10; MIN73/1/4, 4ha Leases 175-83 to 178-83, 17 September 1886, *TAHO*; *ibid.*, 1.2ha Lease 77-87G for a battery site, 2 February 1888.
- ⁵⁸ www.auspostalhistory.com/articles/1848.php - Maurice Miskhel: the founder of the company, Moses Moss, was a Jewish immigrant who resided in Launceston between 1844-53 before returning to Sydney to found the family business.
- ⁵⁹ *Launceston Examiner*, 3 February, p. 3; *ibid.*, 9 February 1887, p. 1; *The Mercury*, 23 March 1887, p. 3.
- ⁶⁰ *The Mercury*, 3 June 1887, p. 3.

-
- ⁶¹ *Ibid.*, 5 October 1887, p. 3.
- ⁶² *Launceston Examiner*, 20 December 1887, p. 3; *ibid.*, 18 January 1888, p. 3 - mercury nitrate was produced by reacting hot concentrated nitric acid with mercury.
- ⁶³ *The Mercury*, 21 December 1888, p. 4; *Launceston Examiner*, 30 July 1889, p. 2; *ibid.*, 5 December 1889, p. 4.
- ⁶⁴ *Ibid.*, 21 December 1888, p. 4; *ibid.*, 30 July 1889, p. 2; *ibid.*, 5 December 1889, p. 4; *ibid.*, 16 November 1891, p. 4.
- ⁶⁵ MIN73/1/5, 4ha Leases 527-87G & 528-87G, 1 May 1891, *TAHO*; *ibid.*, 4ha Lease 702-87G, 7 September 1891; *ibid.*, WR 32W-87G, 4 June 1891.
- ⁶⁶ *Launceston Examiner*, 21 August 1891, p. 3; *ibid.*, 1 January 1892, p. 3; *ibid.*, 15 April 1892, p. 3.
- ⁶⁷ *Ibid.*, 28 April 1892, p. 4; *ibid.*, 22 August 1892, p. 4; *ibid.*, 8 November 1892, p. 3; *The Mercury*, 11 May 1892, p. 4.
- ⁶⁸ *Ibid.*, 1 December 1892, p. 4; *ibid.*, 2 October 1893, p. 6; *ibid.*, 6 December 1893, p. 2.
- ⁶⁹ *Ibid.*, 30 April 1895, p. 6; *ibid.*, 24 May 1895, p. 6; *ibid.*, 14 April 1896, p. 2.
- ⁷⁰ *Launceston Examiner*, 30 April 1892, p. 7; *Examiner*, 3 December 1900, p. 6; 'Registers of applications for water rights for use in gold mining', MIN96/1/4, WR 130W-93G, 19 October 1900, *TAHO*.
- ⁷¹ *Examiner*, 22 March 1901, p. 2.
- ⁷² *The Mercury*, 27 February 1894, p. 1; *Examiner*, 11 February 1904, p. 1; *ibid.*, 29 February 1904, p. 8.
- ⁷³ MIN73/1/ 7 – 4ha Leases 974, 975 & 977-93G, transferred 7 March 1904, *TAHO*; *ibid.*, MIN96/1/4, 3 sluice-heads for Leases 974, 975 & 977-93G, 20 February 1904.
- ⁷⁴ *Examiner*, 22 March 1904, p. 2; *ibid.*, 29 March 1904, p. 2, *ibid.*, 7 April 1904, p. 2; *ibid.*, 12 April 1904, p. 2.
- ⁷⁵ *Ibid.*, 10 May 1904, p. 2; *ibid.*, 17 May 1904, p. 2; *ibid.*, 21 June 1904, p. 2; *ibid.*, 4 July 1904, p. 2.
- ⁷⁶ *Ibid.*, 17 October 1905, p. 2; *ibid.*, 6 December 1905, p. 2.
- ⁷⁷ *Ibid.*, 7 November 1908, p. 4; *ibid.*, 30 July 1912, p. 2; *ibid.*, 27 August 1912, p. 2; *ibid.*, 30 May 1913, p. 2.
- ⁷⁸ *Launceston Examiner*, 11 September 1894, p. 6; *ibid.*, 18 September 1894, p. 2; *The Mercury*, 26 October 1894, p. 7.
- ⁷⁹ *Ibid.*, 8 January 1897, p. 8; *ibid.*, 4 May 1897, p. 3; *ibid.*, 6 October 1897, p. 3.
- ⁸⁰ *Ibid.*, 27 March 1897, p. 12; *The Mercury*, 10 May 1897, p. 1; *ibid.*, 27 September 1897, p. 3.
- ⁸¹ MIN66/1/1622, 13 May 1907, *TAHO*; *ibid.*, MIN73/1/10, Consolidated 20ha Lease 813G formed by applications for 0.8ha Lease 686G (machinery site) on 29/5/1907, 5ha Lease 789G, 28 April 1908 and transfers of Leases 537G, 574G, 585G & 604G from H.J. Everett, 1 October 1908.
- ⁸² *Examiner*, 29 November 1907, p. 2; MIN73/1/10, Consolidated 16ha Lease 867G formed by applications for 0.8ha Leases 733G & 734G on 22 January 1908 and transfers of 0.8ha Leases 671G & 672G from F.C. Parsons on 20 February 1908, *TAHO*.
- ⁸³ *Ibid.*, 12 October 1907, p. 4; *ibid.*, 13 August, 1908, p. 3; *ibid.*, 29 August 1908, p. 3; *ibid.*, 4 September 1909, p. 4.
- ⁸⁴ *TPP*, vol. 61, no. 22, June 1909, p. 34; *ibid.*, vol. 63, no. 19, June 1910, p. 8.
- ⁸⁵ *Examiner*, 6 August 1909, p. 2; *ibid.*, 4 September, 1909, p. 4; *ibid.*, 23 September, p. 2; *ibid.*, 4 November 1909, p. 2; *ibid.*, 2 December 1909, p. 2.
- ⁸⁶ *Ibid.*, 10, 15 & 22 September, 1909, p. 2; *ibid.*, 31 October 1910, p. 3.
- ⁸⁷ *Ibid.*, 7 December 1909; *ibid.*, 23 January 1912; *ibid.*, 4 April 1913, p. 2; *ibid.*, 29 November 1917, p. 3.
- ⁸⁸ A.M. Reid, 'The Golconda Gold Mining District', *Geological Survey Bulletin*, no. 37, 1926, p. 44, *MRT*.
- ⁸⁹ MIN73/1/10, 8ha Lease 1228G, 14 June 1915, *TAHO*; *ibid.*, MIN73/1/7 – R.P. Symmons previously held the Enterprise Mine Leases 974, 975 & 977-93G from March 1897 until transferred to the New Enterprise GM Co. in March 1904 and it is possible that he held a financial interest in the latter company.
- ⁹⁰ *Ibid.*, MIN96/1/4, WR 164G-W, 9 May 1916; *ibid.*, MIN73/1/10, 0.8ha Lease 1290G for battery site, 15 May 1916.
- ⁹¹ *Examiner*, 20 September 1916, p. 2.
- ⁹² *Ibid.*, 26 May 1916, p. 8; *ibid.*, 17 March 1917, p. 4; *ibid.*, 19 November 1917, p. 7.
- ⁹³ *Ibid.*, 8 November 1916, p. 2; *ibid.*, 23 October 1917, p. 2; *ibid.*, 19/11/1917, p. 7.
- ⁹⁴ *Ibid.*, 23 October 1917, p. 2; *ibid.*, 22 January 1918, p. 2; *TPP*, vol. 79, no. 10, June 1918, p. 8.
- ⁹⁵ *Geological Survey Bulletin*, no. 37, 1926, p. 39, *MRT*.

⁹⁶ MIN73/1/11, application for 17ha consolidated Lease 1366 comprising 4ha Leases 1244G & 1245G of Thomas Crabtree, and an application for 8ha Lease 1362G west of Crabtree's claims, 16 June 1917, *TAHO*.

⁹⁷ *The Mercury*, 30 October 1912, p. 1; *Ibid.*, 16 September 1916, p. 12; *Examiner*, 14 March 1913, p. 2.

⁹⁸ *Ibid.*, 30 April 1917, p. 3; *Examiner*, 7 June 1917, p. 2; *ibid.*, 16 June 1917, p. 4.

⁹⁹ *Ibid.*, 27 September 1917, p. 2; MIN96/1/4, WR 173G-W 0.8ha easement 'for tunnel and tramway, mullock tip and dump site ... length tunnel approximately 350ft, tramway approximately 300 yards, mullock tip and dump site situate at entrance of tunnel', 3 July 1917, *TAHO*; *ibid.*, MIN73/1/11, application for 2ha Lease 1368, to accommodate the tunnel and headgear for the incline, 10 August 1917.

¹⁰⁰ *Ibid.*, 7 November 1917, p. 2; *ibid.*, 8 November 1917, p. 2; *ibid.*, 23 November 1917, p. 2; *ibid.*, 24 December 1917, p. 2; *ibid.*, 22 January 1918, p. 2.

¹⁰¹ *The Argus*, 31 October 1891, p. 6; *Australian Mining Standard*, 15 October 1896, p. 1389.

¹⁰² *Examiner*, 19 November 1917, p. 7 - a sample assayed at Mt. Lyell indicated 41gm/t gold, 92gm/t silver, 2.1% copper, arsenic 0.5%, iron 0.4%, bismuth 0.09%.

¹⁰³ *Ibid.*, 8 June 1918, p. 4; *The Mercury*, 27 July 1918, p. 4; *TPP*, vol. 81, no. 10, June 1919, p. 7.

¹⁰⁴ *Ibid.*, 14 September 1918, p. 12; *ibid.*, 16 April 1924, p. 3; *ibid.*, 25 June 1924, p. 2.

¹⁰⁵ *Geological Survey Bulletin*, no. 37, 1926, p. 38, *MRT*.

¹⁰⁶ *Examiner*, 30 October 1920, p. 10; *ibid.*, 31 January 1921, p. 6; *The Mercury*, 30 October 1920, p. 4; *ibid.*, 29 November 1920, p. 2; *ibid.*, 17 February 1921, p. 2.

¹⁰⁷ *The Mercury*, 5 September 1930, p. 4; *Examiner*, 22 November 1930, p. 4.

¹⁰⁸ *Examiner*, 29 September 1941, p. 2.

¹⁰⁹ See J. Taheri & R.S. Bottrill, 'Devonian granites and associated mineralisation in northeast and northwest Tasmania', *Tasmanian Geological Survey Record* 2005/03, May 2005, p. 49, *MRT*, for details of exploration of the Golconda goldfield undertaken between 1976-2005 by means of geochemical and geophysical surveys in conjunction with drilling: although mineralised veins were located in the vicinity of the Enterprise workings, no economic deposits were delineated.

¹¹⁰ A. Montgomery, 'Mineral Resources of Tasmania', 1890, p. 451, 1894, November 1894, p. 5, *MRT*.

¹¹¹ *Geological Survey Bulletin*, no. 37, 1926, p. 36, *MRT*.