

The Iron Cliff Mines
Including Thoresby's Tunnel

Ferndene
Penguin

Peter MacFie, 1991, 2017

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Acknowledgements

Sue McDonald, Hellyer Regional Library.

Ted Field, Devonport Regional Library.

Staff, Tasmaniana Library, Hobart .

Gary Sutton, Ranger, Environment and Planning.

Mrs Phyllis Plapp, Penguin Council.

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Illustrations

1. Entrance to Thoresby's Tunnel. (MacFie 1991)
2. General Plan, Iron Cliffs Area. (Burns 1960)
3. "The Victoria League Entertains New Settlers at Cliff Grounds". *Weekly Courier*, 7/12/1927, P. 32 (T. S. L.)
4. Penguin W/15, Mineral Leases 1891 -1911 (M. D. L.)
5. Mineral Lease Devon, Vol.8 Folio 10. 28/6/1897, showing Laman, Thoresby, Ellis Lease. (M. D. L.)
6. Mineral Lease Devon Vol. 15 Folio 47, 30/8/1901, showing Lady Braddon and Badger Mines. (M. D. L.)
7. LOCATION OF THE IRON CLIFF MINES: extract from Ulverstone Geological Survey, Mines Department. (Map Series 8115 (iii) - 8115 (iv) (Original in colour)
8. BURNS SEVEN TUNNEL "Synthesis" IRON CLIFF MINES (from Burns, 1960)

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Introduction

Ferndene Reserve at Penguin today is the site of some of the Iron Cliff Mines, the name given to iron-bearing outcrops around the Dial Range which attracted the early miners. The name of 'Ferndene' was not used until the area was developed as a picnic area in 1935

The two leases covering this area contain a series of mines. Seven tunnels have been identified by a geologist in 1960. These occur on the sections which were known as the *Lady Braddon Mine* and *Badger Mine*. Over the period 1891-1908, the two mines were worked by over ten leasees each, with other operators working the sections until at least 1927.

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Dial Range Mining History

Iron ore was first found on the Dial Range, 9 miles from Penguin, by James (Philosopher) Smith in 1861 and a syndicate consisting of Lt. Col. Crawford of Upper Castra and other retired Indian Army officers. Despite the favourable assays and the opening of a Penguin Mining Institute, no work was accomplished and the lease expired in 1889.¹

Tasmanian Iron Company Mine

Ferndene's mining history is linked to the workings of the Tasmanian Iron Mine, which operated further downhill on Penguin Creek from 1897 to 1910.² This company had been formed by James Cole Ellis, a Newcastle-based shipping operator and timber merchant. A civil engineer, Ellis was born in Jersey in 1843 and, emigrated to Australia in the 1850s and became a member of the NSW upper and lower houses of parliament until defeated in 1885.³

S. F. H. Thoresby - Mine Manager

Under the ownership of James Coles Ellis, over 2, 380 tons of iron ore were extracted in 1902 from the Tasmanian Iron Mine, peaking at 6, 840 in 1905 to 2, 000 tons in 1907.⁴ The company extracted hematite iron ore.⁵

The manager of the Ellis' Tasmanian Iron Mine, and other ventures in the Iron Cliffs was Sidney Francis Harrison Thoresby. Of unknown origins, Thoresby had arrived in Penguin by 1885 where he married Margaret June Grice at Penguin⁶. He described himself as a "master mariner". However in 1896 (on his daughter's birth certificate) Thoresby describes himself as a "civil engineer".⁷

¹ Parnell, P. 2

² Parnell, p. 46

³ Connolly, P. 98

⁴ Parnell p. 39

⁵ Cyclopedia of Tasmania, Vol. 2, 1901, p. 285

⁶ R. G. D. 33/75, No. 1018 (R.G.D. = Registrar Generals Department, TSA)

⁷ R. G. D. 33/75, No. 1933

Thoresby was employed as manager of the Tasmanian Iron Mines from c. 1896 to 1907⁸. He was also (briefly) leasee of the Badger Mine which covers part of what is now the Ferndene Reserve. Other links exist between companies and leasees (see below).⁹

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⁸ Parnell, P. 24

⁹ Note: spelling of the name Thoresby also occurs as "Thorsby." As the former spelling is that used on his marriage certificate, this form is preferred.

The Iron Cliffs

A number of reports by visiting geologists cover the Penguin area, beginning with Montgomery's 1895 reports on the Penguin and Dial Range District¹⁰. Unfortunately, this, and those of Smith (1899) and Twelvetrees (1903), do not provide detailed maps of the Lady Braddon and Badger Mines. Burns' 1960 study makes a calculated "synthesis" (sic) of these earlier written works, and describes 7 adits from these earlier reports.¹¹

First Workings

The outcrop of iron-bearing ore gave the name to the rugged hills below Mt Montgomery. J. C. Ellis and other syndicates, including Thoresby, explored for iron, gold, silver-lead and copper, but with limited success. The area retained the original name of Iron Cliff, as does the road leading to the Reserve.

In 1895, geologist Montgomery was the first to record the "immense outcrop of iron ore forming notable rugged outstanding rocks" was observed in 1895 in the area SW of Lings Farm and towards McBride's Creek.¹²

The brown hematite ore (limonite) varied in formation, but Montgomery believed the outcrop to be part of a large lode.¹³ He advised putting in tunnels north and south of McBride's Creek, and believed that as the beach mine at Penguin had shown valuable silver deposits, and other mines showed traces of silver and gold "the lode under the cliffs may contain valuable ore"¹⁴. He considered the brown hematite ore only suitable as flux for silver-lead smelting.

By 1898, J.H. Smith reported that two mineral sections (No's. 1785/93M and 1661/93M) had been taken up by the one syndicate but were later divided in two. In 1897 these section were registered in the name of A.C. Laman on behalf of J.C. Ellis of Penguin. Shortly after, they were transferred to S.F.H. Thoresby (Ellis' mine-manager) before becoming void in April 1899. The leasees sought iron, copper and silver-bearing ores.¹⁵ By 1900 the two sections were leased by

¹⁰ Mines Dept. Report No. 133

¹¹ Burns, 1960, P. 120

¹² Montgomery 1895

¹³ *ibid*, P. ix

¹⁴ *ibid*, p. ix

¹⁵ Mining leases as above, Mines Department

separate parties and worked independently from then on, the northern section, (No.175/93M) becoming known as the Lady Braddon Mine and the southern (No.1661/93M), the Badger Mine (after the name of the leasee, Walter Badger).

The tunnel workings and minerals found are further detailed:¹⁶

The current Ferndene Reserve consists of a number of old mining leases. These are in an area known as the Iron Cliffs, the two largest mines in the area covering the reserve being the Lady Braddon and the Badger (see survey lease). These 2 leases were surveyed in September 1901 and 4 horizontal shafts and iron outcrops, a tramway and a hut are marked. Burn's 1964 geological study identifies 7 tunnels in the area of the two leases.

Mining Leasees

Two types of operators worked the mines. Typical of the period, the first were speculators/bankers, based in Launceston and Hobart and appear to have backed J. C. Ellis, developer of the Tasmanian Iron Mine located below the Iron Cliffs on Penguin Creek. These entrepreneurs operated through mining agents or bankers such as Henry Law, ("Financier, Metal and Mining Agent. Arbitrator, Colliery and Shipping Agent" of St. John Street, Launceston)¹⁷, or J. J. Clumpff, (Accountant and Trade Trustee, of Paterson Street, Launceston).¹⁸ The first operators were gone by 1897, replaced by the second smaller type of owner-operated venture, locally owned.

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¹⁶ Smith, p. x

¹⁷ Handbook of Tasmanian Mines and Mining, 1885 and 1888 T. L.

¹⁸ Handbook of Tasmanian Mines and Mining, 1885 and 1888 T. L.

Thoresby's Tunnel

The tunnel bearing Thoresby's name was driven before the extensive work had begun on the Lady Braddon and Badger mines. However these workings had to be understood before Thoresby's Tunnel could be put in context.

In 1898, geologist Smith also describes "an old prospecting tunnel about 300 ft long, which was driven some years ago, and is now partly fallen in" 10 chains south east of the former track. Further north, the geologist also noted "another small tunnel about 50 ft long". In 1903, Twelvetrees observed that "Mr Ellis did some work in a tunnel driven into the lode, which failed to bear out the promise of the first assays, from which a high gold return had been obtained."¹⁹ This exploratory tunnel was probably driven by Ellis' mining team, during 1897, as the lease ran from 15/6/97 to the transfer on 25/8/98, as mentioned.

In Burns 1960 "synthesis" he describes the adit as "Ellis' Tunnel", driven between 1896 and 1898.²⁰ "Since then", he continues, "the tunnel has been extended a further 12 feet, and a shaft dug 25 feet on the edge of the iron ore. Twelvetrees says this tunnel was driven following high gold assays of the outcrop. Harcourt Smith says the load is friable porous gossan with quartz veins and not much copper, silver or gold."²¹

In naming the adit "Ellis' Tunnel" however, Burns may have confused J. C. Ellis (of the Tas Iron Ore Co), with W. J. Ellis who was in partnership with Thoresby at the same time as he was working for J. C.! The W. J. Ellis may have been one of two brothers working for C. J. Ellis, (including John, a metallurgist.)²²

An Exploratory Tunnel

The curved shape of the surviving adit, cut flush with a myriad of pick marks, and its low height (about 5 feet approximately) indicates the exploratory nature of the adit chasing high grade ore. The dry condition of the tunnel today is possibly explained by drainage caused by other adits in an area of high rainfall.

¹⁹ Twelvetrees, 1903 P. 15

²⁰ Burns 1960, P. 120

²¹ Burns, *ibid*, P. 120

²² Parnell, P. 24

Identifying Thoresby's Tunnel

The surviving adit - Thoresby's Tunnel, (labelled as Ellis' Tunnel by Burns in 1960) - is on the boundary of the two leases. Identification was hampered by this, plus the absence of Burns' ground plan in the library copy and the apparently early date of the tunnel (which even by 1898 was described as "old") and was not being referred to on the lease for the Lady Braddon Mine in 1900. In addition, a W. J. Ellis was also leasee of the Iron Cliff mines with Thoresby at the same time as he was manager for J. C. Ellis!

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Lady Braddon Mine

Although worked earlier, the iron lode to the north of the Badger Mine was being explored by the Lady Braddon Mining Company in 1898.²³

Formed in 1897, the company aimed to test recommendations of geologist Montgomery in 1895.²⁴ The new lode was north of the existing tunnel and as yet unworked. Smith recommended the tunnel be driven under the outcrop and the creek via an adit and winze.

Twelvetree's 1903 report gives the best description of the Lady Braddon Mine (but no map). By then, the Braddon Company had ceased to exist and the mine was being worked by Hutton and Revell.

Twelvetrees claims (with rather confused wording) that "Mr Ellis did some work in a tunnel driven into the lode, which failed to bear out the promise of the first assay (of gold)"²⁵. He then goes on to describe the Braddon Mine tunnel which had been extended by the new owner.

"A new low tunnel was started by the Lady Braddon Company, who ceased work a couple of years ago. Messrs Hutton and Revell have now taken it up, and extended the Lady Braddon tunnel 90 feet. This tunnel is now in 290 feet from the creek and has cut into the lode for 37 feet, which leaves about 100 feet more to drive across it. The tunnel has been driven north east at as low a level as could be got (about 450 feet below the blow), and passes first through soft slates, followed by sandstone and clay, with a band of dark quartzite and clay, or slaty country, dipping north east into the hill. Some bands of ironstone cross the level before the lode is reached. The last 37 feet of driving is in a clay ironstone gossan with blebs and veinlets of silica. I was told that Mr Ward's assay of it returned 16 grs. gold per ton, with good traces of silver and copper. Samplings which I took on two visits were assayed in the Government laboratories, as follows:- (1) no gold, traces of silver; (2) 57 per cent iron, 7.2 per cent, silica, traces of phosphorus and sulphur.

To all appearances the end of the tunnel is now below the outcrop on the slope of the hill, without allowing for any underlay. The lode must be wider than shown in the

²³ Smith, p. x

²⁴ Smith p. x

²⁵ *ibid.* p. 15

outcrop or the formation struck in the tunnel must be a parallel band of ore. I should recommend" so he added, "..... a good deal of speculation is rife as to what kind of a lode this is likely to be in depth. The sulphides have disappeared. It would seem that there was never much gold or silver in the ore but it is quite certain that sinking will have to be resorted to prove the lode."²⁶

Lady Braddon Leasees

1. No. 211/91M. Henry Law and Co, Bank Chambers, Launceston. Taken out 27/4/91 for iron. Transferred to J. Seymour. 1/10/91; Transferred to J. J. Climpff (Launceston) 14/6/92.
2. No. 724/93M. Henry Law, Sydney Thorsby, William Bethel Sharp, G. Brown (Hobart) Iron, Made out 23/1/1896, Void 1/4/1897.
3. No. 1785/93M. A. C. Laman, for J. C. Ellis, Taken out 1897 for iron, copper and other ores. Transferred to S. F. H. Thoresby (sic) 25/8/1898 (Penguin), Transf. to P. Barrett (Launceston) same date.
4. No. 4842/93M. Revell and Hutton. Made out 19/3/1900 for minerals. Void 16/12/1902.
5. No. 340/M. Revell and Hutton. Made out 20/8/1902, Void 1907. Smith, Made out 17/1/1907, Void 14/12/09.
6. No. 4458/M. Alexander Fife Stenhouse, Made out 14/12/09. Transf., to T. R. Pullen (Bank manager) 21/7/1911, Void 31/8/1926.

²⁶ Twelvetrees, P. 15

The Badger Mine

The first lease seeking iron was taken by Henry Law and Co, of Bank Chambers Launceston (No. 211/91 MDM) on 27 April 1891. Later that year it was transferred to J. Seymour (probably a shareholder) and the next year to Clumpff.

In 1896 the licence was registered by Henry Law and Sydney Thorsby (sic) and others, of Hobart and again sought iron.²⁷ A. C. Laman C/- J. C. Ellis (of the Tasmanian Iron Mines) held the licence in 1897, seeking iron, copper and other ores and this was transferred to Ellis' manager Thoresby on 25 August 1898²⁸ only to be transferred again to D. Barnett (of Launceston) on the same day and held by him until April 1899.

The mine was held variously by Walter Badger (1900-1902), then John Stanton (1906-08 - copper and assoc.) J. A. Payton (1918-1920 - iron), and S. A. Mainwaring (1925-1927 - silver lead).

Although worked first in the 1890's, serious work in this mine began with the separation from the northern leases in 1900, when Walter Badger became the leasee.²⁹ This was transferred to McKenna and Rogers in 1903 (at the time of Twelvetrees visit) and held until 1905.³⁰ Badger sought unspecified minerals. John Stanton (1906-08), sought copper and associated minerals. Apparently void from 1908 to 1918, J. A. Paynton of the Penguin Hotel then sought iron. In 1925-27, S. A. Mainwaring, of South Road, Penguin, leased a subdivided section of the old Badger section (No. 9530/M), while the remainder, plus part of the western side of the old Lady Braddon section was taken out by W. J. and A. J. Ellis in 1925-26. These were the last registerants prior to the area becoming a reserve.

The plan of Mainwaring's lease shows an adit being worked in the 1920's.

The lease diagram³¹ shows two adits on the workings of August 1891 (see illustrations).

²⁷ No. 724/93 MDM

²⁸ No. 1785/93M, MD

²⁹ No. 4850/93M, M.D.

³⁰ No. 707/M, M.D.

³¹ No. 4849/93M

Detailed Description: In 1903, Geologist Twelvetrees described a tunnel (driven in a southeast direction) on Badgers Mine apparently different to the earlier drive.³² This produced small amounts of lead and silver. He reported:

“Badgers Mine — This is on Section 707-M (formerly 4849-93M), just outside the south boundary of A. Hutton’s and J. Revell’s Section 340-M. Mr Hall was the discoverer of the lode and Messrs Badger and Hall worked it. It is now charted in the names of Messrs McKenna and Rogers. The country-rock is difficult of identification but the level which is driven south-east begins in a decomposed quartz-felspar porphyry, not easy to distinguish from sandstone, and cuts a small vein (1/2 inch to 2 inches) of bright galena, dipping south-west. This vein is seen a few yards further in the tunnel, on the southwest side, widening and contracting in short bulges, only the facing, however, left now on the hanging wall; then slate country comes in, and the lode is in the slate. At 55 feet, short crosscuts were put in both ways; a little native copper was found in the north cuddy. There are three small slopes over the back of the level and from first to last about 3 tons of galena were, I am told, sent away, containing 1/2 oz of silver to the unit of lead. A small shaft is being sunk on ore, now down 24 feet, and carrying small veins of galena. A tunnel, 50 or 60 feet lower down, has been driven about 400 feet and drains the creek but has not cut the lode. The ore in this lode has some admixture of zinc blends, with a little copper pyrites in addition to iron pyrites, and will require careful dressing. A sample assayed by Mr Ward returned 44 per cent lead, and 13 ozs silver per ton.

Not much is known of the extension of the lode, as it has not been trenched upon north or south. It ought to be traced at surface, as it may widen out at some part of its course, when a profitable mine might result. It owes its existence to the intrusion of the quartz porphyry, and is a contact result. There is some probability of it becoming a copper lode in depth. The width is not very encouraging, but the shaft will give the means of proving it below the level and its outcrop line at surface should indicate any improvement on its course.”³³

³² Twelvetrees, p. 13

³³ Twelvetrees, P.13-14

The Badger Mine Leasees

1. No. 1237/91M. G. P. Fitzgerald and Hall (Apparently no workings).
2. No. 781/93M. Thoresby, Hewison, Sharp and W. J. Ellis. Iron and argentiferous metals.
3. No. 1661/93M. M. A. C. Laman, (C/- Sidney Thoresby, Penguin, C/- J. Ellis, Penguin (sic); Transferred to Sidney Francis Harrison Thoresby, Penguin, 25/8/1898, again to Peter Barrett, Launceston, 25/8/1898. Void 18/4/1899
4. No. 4849/93M. Walter Badger. Made out 19/3/1900 for minerals. Void 16/12/1902.
5. No. 4850/93M. Walter Badger. Made out 29/3/1900.
6. No. 707/M. Mc Kenna and Rogers (Penguin).
7. No. 2191/M. J. Stanton made out 6/4/1906, for copper and assoc. metals.
8. No. 7848/M. Jos. Alex. Paynton (Penguin Hotel), Made out 14/2/1918 for iron. Transf. to T. B. Mitchell and P. A. O'Byrne and J. Paynton, 25/9/1918. Void 21/12/20.
9. No. 9530/M. Syndey Augustus Mainwaring (South Road, Penguin). Made out 30/9/1925 for silver-lead. Void 13/12/1927.
10. No. 9530/M. (Re-surveyed) W. J. and A. J. Ellis (Penguin).

N.B. Only lease plans listed in the illustrations are reproduced in the report. A full set can be found in the Parks, Wildlife and Heritage files.

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Ferndene Reserve

Background

Establishment of a reserve was formalised on 21 December 1935, upon the instigation of the Penguin Tourist and Progress Association. On that day, J. A. Lyons, then Australian Prime Minister, was guest at the official opening of the Ferndene Reserve. The Reserve was “handed over” apparently under the jurisdiction of the Scenery and Preservation Board ³⁴

In December 1935, “a programme of sporting events was held on ‘Badger’s Flats’, the adjacent property of the late Herbert Badger who donated the piece of land that provided the entrance to Ferndene”³⁵. The Penguin Municipal Band provided music and afternoon tea was served.

Bushland and Glow-worms: The 1920’s Picnic Spot.

Before the formal recognition of the Reserve, Ferndene was already an early tourist attraction. The reserve was a popular picnic venue. In 1927, the Victoria League played host to new settlers at the reserve³⁶. Bus-loads of visitors came at night “armed with hurricane lanterns” to observe the myriad of glow-worms in the banks of the creek”³⁷.

In 1935, the reserve provided refreshments from a kiosk run by Mrs E Crawford. She recalled that overseas and Australian tourist ships called at Burnie - including the *Orion* and her sister-ships, the *Moreton Bay* and the *Australian Ormiston*. Visitors from these ships visited Ferndene, and their signatures in the visitors’ book come from throughout the British Commonwealth and the USA. The greatest number in one day who received Mrs Crawford’s homemade tea and scones was 110. The daughter of the bus driver Mr Hill acted as guide through the reserve.³⁸

The post-war history of the Reserve is not documented as yet.

³⁴ Undated newspaper article, Hellyer Regional Library.

³⁵ *ibid*

³⁶ *Weekly Courier*, 7 Dec 19L p. 32, TSA

³⁷ newspaper cutting, *op. cit*

³⁸ *ibid*

Recent and Current Management

Care of the reserve was transferred to the local Lions Club during the 1950s, but because of the lack of maintenance, responsibility for the area was reclaimed by the Scenery and Preservation Board, the government body then responsible. The reserve is currently managed by the Department of Environment and Planning. The Reserve, including *Thoresby's Tunnel*, is listed by the Australian Heritage Commission.

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Maps and Leases

1. General Plan, Iron Cliffs Area. K. L. Burns, 1960, Plan No. 1824/29. Mines Department.
2. Ulverstone Geological Map (M. D.)
3. Penguin 1/7 Mineral Chart (25/10/1911), Showing plan of titles, Stowport area. (M. D.)
4. Devon Vol. 9 Folio 15, Parish of Ashwater, 22/9/1891. Lease No. 211/91M. H. Law and Co., Transf. to J. Seymour; transf. to J. J. Climpff. (M. D.)
5. Devon Vol. 9 Folio 16, Parish of Ashwater, 11/4/1892. Lease No. 1237/91M, to G. P. Fitzgerald and W. Hart. (M. D.)
6. Devon Vol. 8 Folio 4, P of Ash. 2/6/1886. Lease No. 781/93M. S. Thoresby, Hewison, (sic) Sharpe and W. J. Ellis (sic).
7. Devon Vol. 8 Folio 8, Lease No. 724/93M. Law, Thoresby and Sharpe.
8. Devon Vol. 8 Folio 10, P. of Ash. 28/6/1897. Lease No. 1785/93M. 71661/93M. Both leases to A. C. Laman (C/- Thoresby, C/- Ellis, Penguin). Then to Sidney Francis Harrison Thoresby, then to Peter Barrett, both on 25/8/1898.
9. Devon Vol. 15 Folio 47, P. of Ash. 30/8/1901. Lease No. 4842/93M. (J. Revell,) and 4849/93M (W. Badger).
10. Devon Vol. 18 Folio 26, P. of Ash. 8/12/1925. Lease No's. 4458/M99 (T. R. Pullen), and 9530/M (S.A. Mainwaring), and 9545/M (W. J. and A. J. Ellis).

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- "-and Reid, A. M. 1919 - "The iron ore deposits of Tasmania" Miner. Resourc. Geol.Surv. Tas., 6.

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