

EL 2/2015 Dans Rivulet

Annual Report on Exploration

28th May 2015 to 27th May 2016

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Executive Summary

EL 2/2015 "Dans Rivulet" lies ~60 kilometres east of Launceston and runs in a north-northwesterly direction up the Dans Rivulet valley capturing the hills on both sides.

Webb Mining Pty Ltd are experienced Tasmanian underground gold miners who own and operate a mine and mill at Mangana 15-25 kilometres south (30-40 kilometres by road). The presence of this mill and associated tailings dam nearby means any near surface or underground moderate-high grade reef become payable with only the road transport the an additional cost.

Work in the reporting year was largely desktop with some field reconnaissance of the O'Briens and Chinamen's Hill prospects.

Desktop work initially consisted of a historical review which prioritised work on the

- O'Briens mine,
- Havelock mine,
- Starlight-Carnegie-King Edward ares and
- Chinamen's Hill soil anomaly.

Unfortunately modelling the O'Brien's mine downgraded the potential with holes GS5 and GS6 reducing the chances of a strong reef at depth.

The **Havelock mine** produced 541 ounces of gold at 19.1g/t Au from a reef which average 0.45m thick and which was payable over 54m on the 30m level, 45m of strike on the 42m level and not developed on the 60m level due to pumping difficulties.

This mine presents the best historical mine warranting further detailed investigation.

At **Chinamen's Hill** colour images of gold and arsenic in soils on Chinamen's Hill clearly show a strong north-south linear anomaly extending 1.2 kilometres with only two trenches (17m @ 0.97g/t Au inc. 3m @ 2.8g/t Au) and 1 RC hole to date.

Sampling by Mitchell (1980) in the **Starlight area** returned high grades up to 24.7g/t). The area is one of some structural complexity and warrants further attention. .

Work to be carried out in the second year of the licence will include;

- Trenching and possible subsequent shallow drilling as proposed for Chinamen's Hill.
- Field investigations and underground sampling as well as further historical research of the Havelock mine with possible drilling.
- Field investigations and possible rock and/or soil sampling programme in the Starlight-Carnegie-King Edward area.

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Dans Rivulet, Mathinna; EL 2/2015 Chinamens Hill Target Area Desktop Survey of Natural Values for Webb Mining Services. 10th August 2015 – Phil Milner (2015)

1.0 Introduction

1.1 Location and access

EL 2/2015 “Dans Rivulet” lies ~60 kilometres east of Launceston and runs in a north-northwesterly direction up the Dans Rivulet valley capturing the hills on both sides.

Access to the licence is by bitumen road via the Fingal Valley. Access within the licence is by the Mathinna Plains Road, Dans Valley Road as well as a number of logging tracks. Access to the hills on the eastern side, and particularly the northeastern corner, is more difficult than on the much better accessed western side.

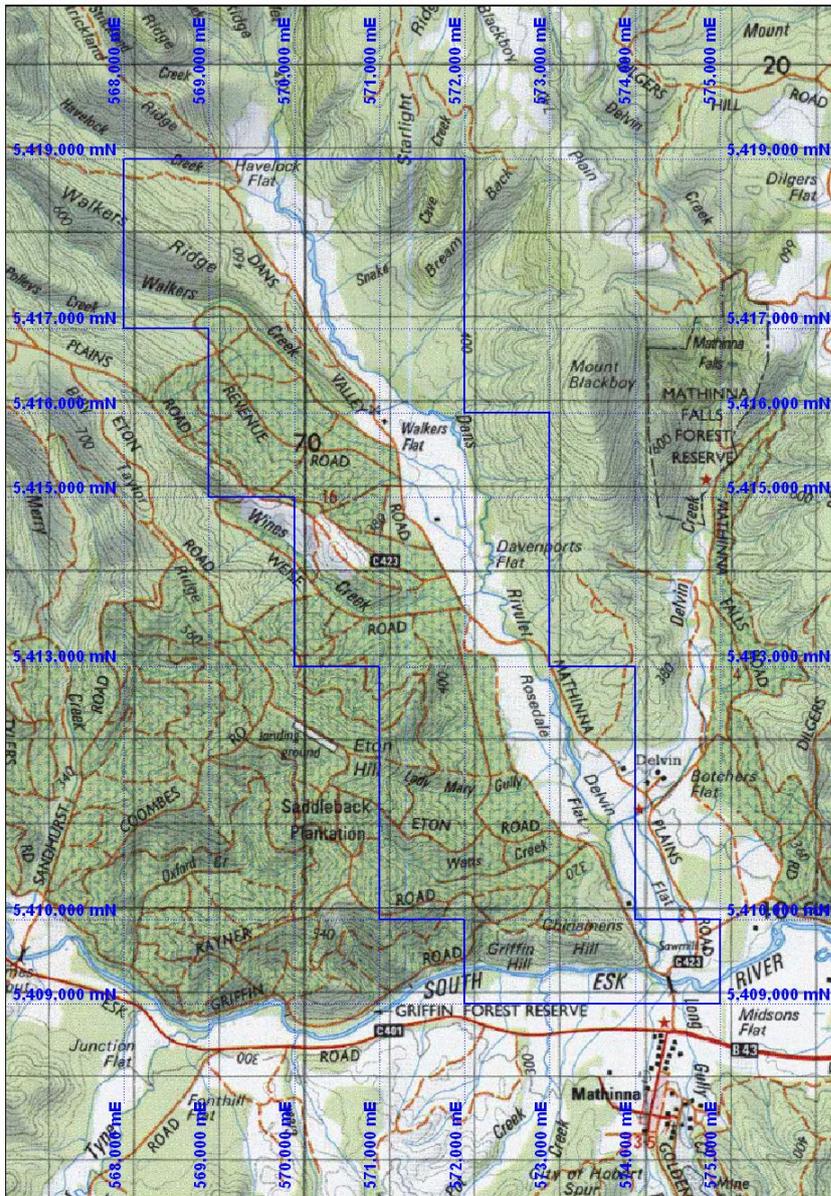


Figure 1.1: EL 2/2015 “Dans Rivulet” licence outline in blue. MGA94 grid in blue on background topographical map with AGD66 graticules.

1.2 Land status and usage

The bulk of the land is State Forest with only the valley floor privately owned and it too is largely covered in timber plantation.

1.3 Tenure

The licence was granted to Webb Mining Pty Ltd on 27th May 2015 and is at its 1st year renewal.

1.4 Geology

The licence covers a 10 kilometre long, north-northwest trending, portion of the Mangana-Mathinna-Dans Rivulet-Alberton-Warrentinna-Forester-Lyndhurst linear belt of gold deposits.

In the Dans Rivulet portion the gold is in quartz veins hosted in siltstones and slated of the Mathinna Beds. Here alluvium obscures the main structural corridor of this trend, the regional “main slide”.

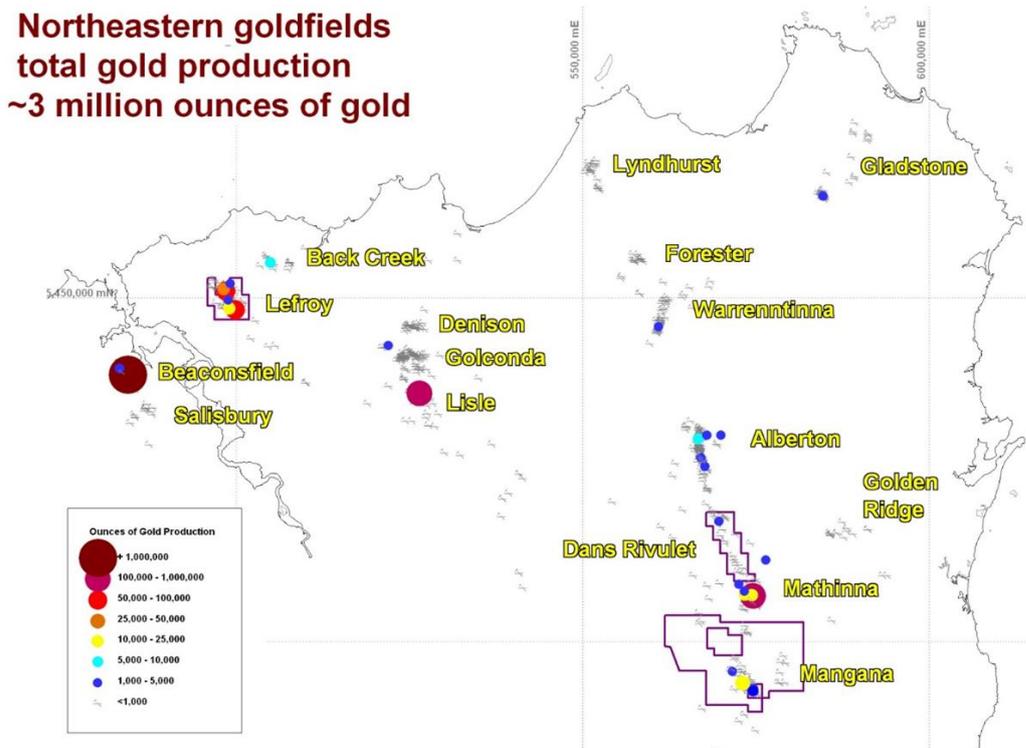


Figure 1.2: Location Dans Rivulet goldfields in Tasmania’s northeastern gold province.

Goldfield	Production - ounces of gold
Beaconsfield (inc Salisbury)	2,000,000
Lisle (inc. Denison & Golconda)	320,000
Mathinna	280,000
Lefroy	174,000
Alberton	22,000
Mangana	16,000
Back Creek	10,000
Gladstone	6,500
Dans Rivulet	3,000
Warrentinna (inc. Mt Horror)	3,000
Lyndhurst	800
Golden Ridge	300

1.5 Exploration Rationale

Webb Mining Pty Ltd are experienced Tasmanian underground gold miners who own and operate a mine and mill at Mangana 15-25 kilometres south (30-40 kilometres by road). The presence of this mill and associated tailings dam nearby means any near surface or underground moderate-high grade reef become payable with only the road transport the an additional cost.

Webb Mining Pty Ltd intend using historical research and field mapping/sampling followed by drilling at selected prospects in order to prioritise for mine development.



Figure 1.3: Webb Mining Pty Ltd Sailors Gully millsite, Mangana.

2.0 Review of Previous Work

2.1 Early Mining and Prospecting

Without having thoroughly researched the history of the Dans Rivulet goldfield through the newspapers of the day which would add considerable detail, the earliest discovery of gold in the Dans Rivulet valley appears to be the City of Melbourne mine in 1872.

The late 1980's were a period of major activity with the Havelock and Revenue discovered in 1887, O'Briens and Lady Mary in 1888 and Carnegie and Starlight in 1889. The field appears to have fallen quiet in the very early 1890's with resurgences in the mid to late 1890's and the mid 1930's when most old mines would have seen unreported activity.

Hughes (1947) is the best summary of this early mining history and Taheri (1992) for a more recent compilation from which much of the following is drawn.

Mine	production tons ore	production gold oz	average grade g/t
Golden Horseshoe	1836	204	3.5
City of Melbourne	?	55	
	13	20	47.9
	25	6	7.4
New Golden King	1904	1212	19.8
Mabel	120	69	18.0
Revenue	418	95	7.1
O'Briens	1341	1273	29.5
Starlight	?		
King Edward	235	294	39.0
Carnegie	102	50	15.2
Havelock	885	541	19.0
Strickland	7	17	74.6

2.2.1 O'Brien's mine

The O'Brien's mine was worked over two periods, 1888 to 1890 and 1901 to 1911. There is also likely to have been unreported activity in the depression of the mid to late 1930's

From 1888 to 1890 the O'Brien Prospecting Association NL (O'Briens PA) drove adits on reefs and sunk two shallow winzes on the reef, crushing a total of 900 to 1,200 tons ore at ~30g/t Au total of which 700 to 900 tons came from the from #1 reef.

From 1910 to 1911 the New Golden Gate Company (NGG) sunk the Main Shaft to 160' and drove cross-cuts at 145' level to intersect the #1 reef. They also and extended one of the shallow winzes from 16' to 60'.

2.2.2 Havelock mine

The Havelock mine area was first leased prior to 1887 and was held by various individuals and companies until the 1940s with workings including a 52 m adit, a prospecting shaft, and a 61 m deep main shaft with levels at 12m, 15m, 30m, 40m and 60m. The average width of the formation was estimated by Twelvetreets (1904) to be around 0.45 m.

At the 30 m level the reef was driven for 54 m and about 250 tons of quartz at a gold grade of 23 g/t was obtained. At the 42 m level the reef was followed for some 60 m, of which 45 m was payable. The main shaft was sunk to a depth of 60 m, but the pumping plant was not efficient and no development took place at this level.

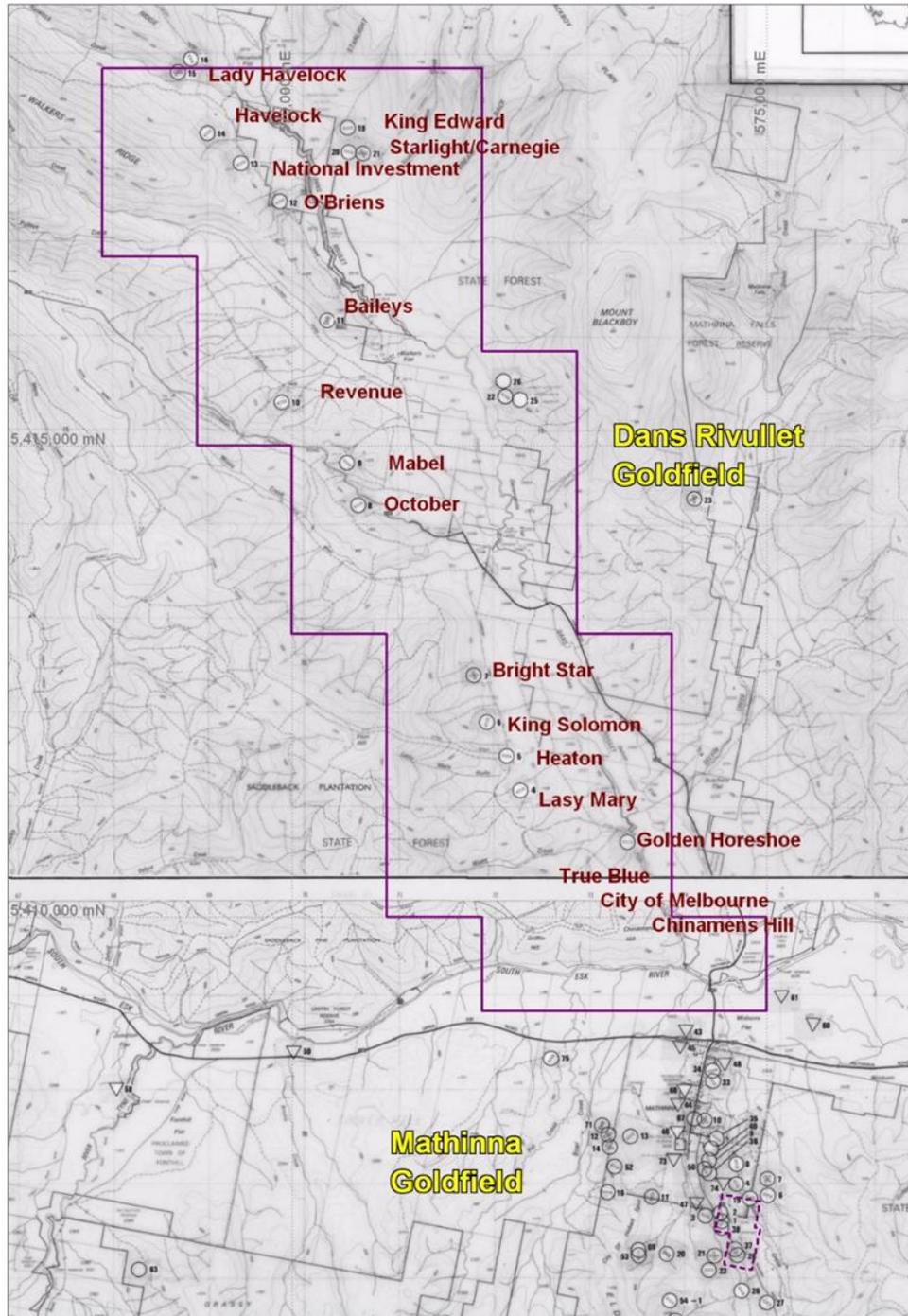


Figure 2.1: Dans Rivulet Goldfield with labels superimposed on Mineral Resources plan (Taheri, 1992).

It is not known whether one or two reefs were worked on the different levels. The reef(s) appear to continue to depth, but because of the lack of sufficient capital or efficient machinery the workings were abandoned.

Production figures for 1900, 1901 and 1903 report a total production of 16.66 kg (588 oz) of gold which was obtained from crushing of 621 tons of quartz i.e 29g/t Au. About 170 g of gold was also obtained from 51 kg of pyrite which is 100 oz/t in the concentrate indicating that the gold is at least a large part refractory.

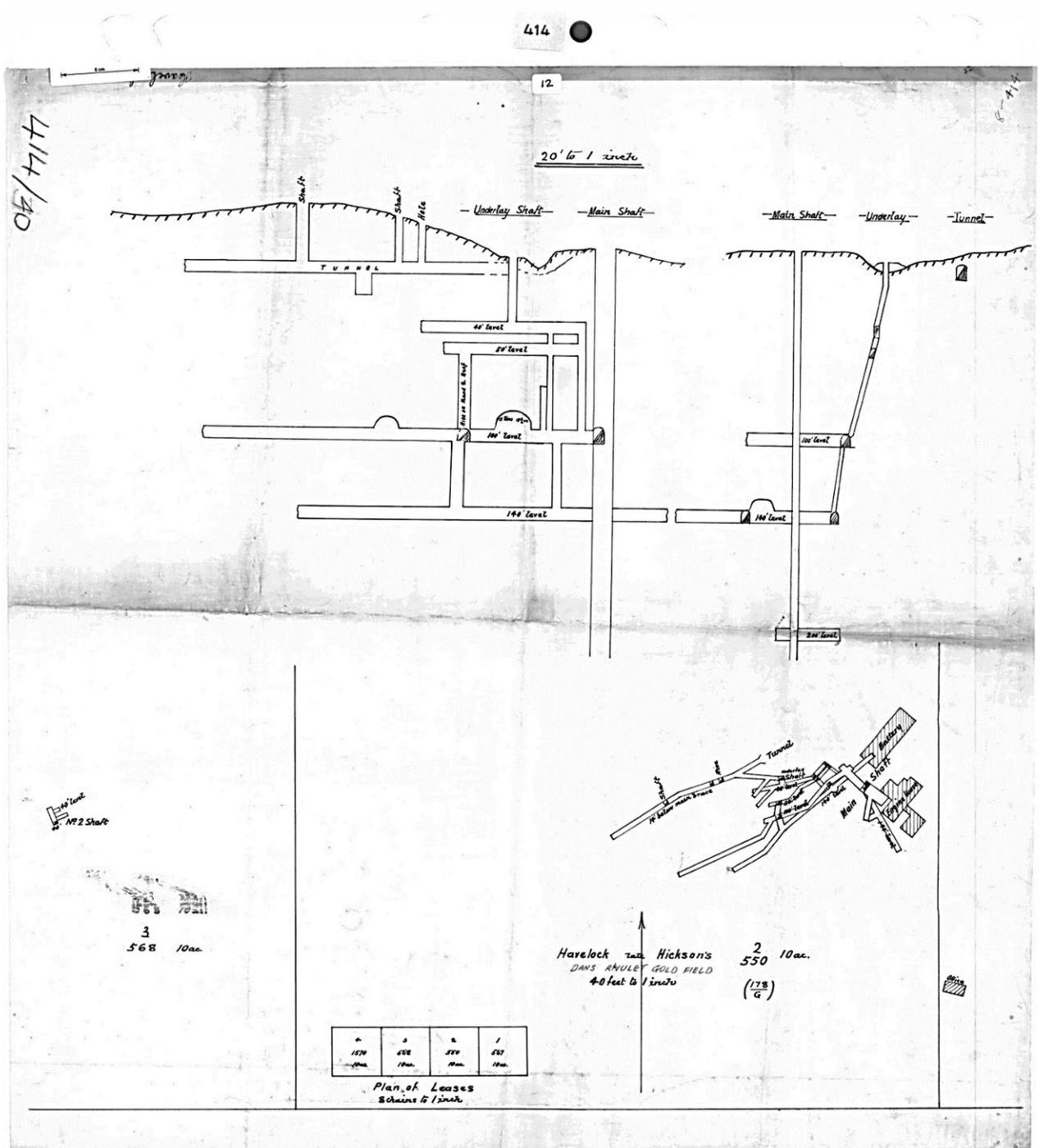


Figure 2.2: Havelock mine long section and plan

2.2.3 Starlight mine

At the Starlight mine the main mining activity appears to have taken place between 1889 and 1904 and in the depression between 1935 and 1942. Workings included a 152 m long adit, a shaft, and some surface workings. The quartz vein was mostly about 0.9 m wide but up to 3.6 m wide in places (Twelvetrees. 1904). Total gold production has been estimated to be between 17.01 to 22.68 kg (600 to 800 oz). Small tonnages (-10 tonnes) with high gold grades up to 85 g/t were reported (Twelvetrees. 1904).

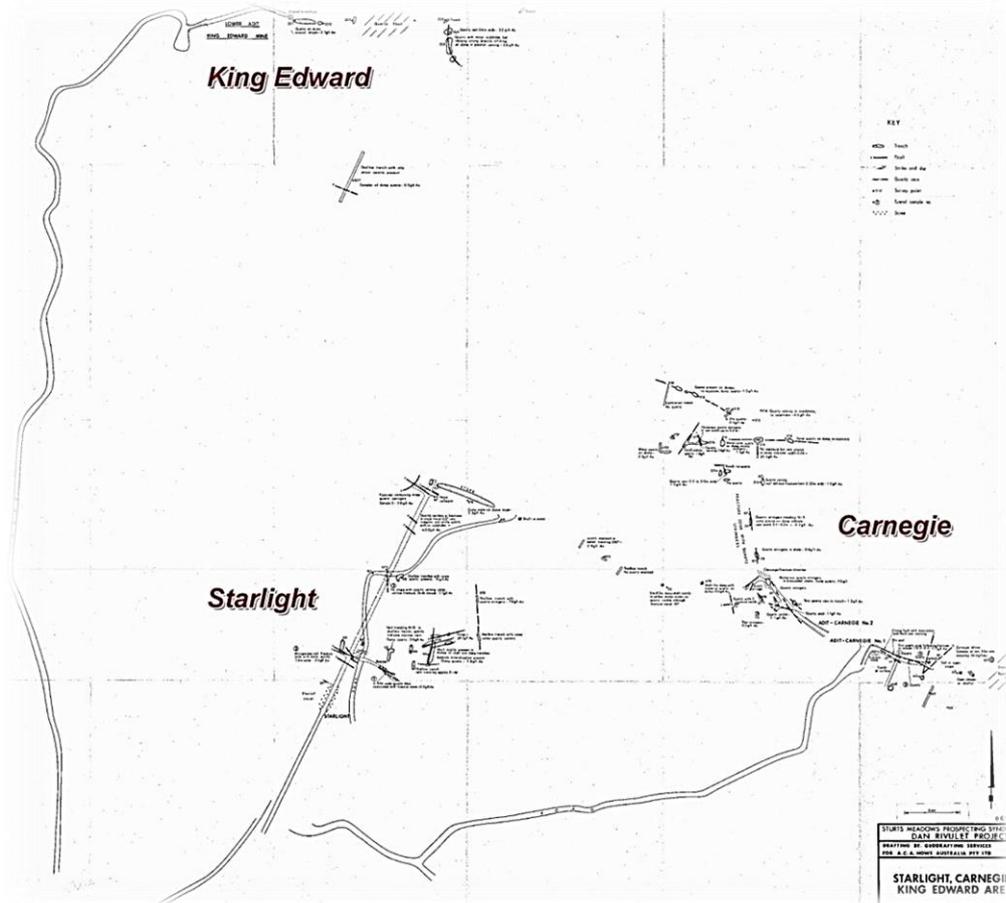


Figure 2.3: Starlight, Carnegie and King Edward mines location plan

2.2.4 King Edward mine

The King Edward mine lease was first taken up in 1902 and cancelled in 1904. A second phase of mining activity was between 1935 and 1942.

Mine workings consisted of two adits and some surface workings. The Lower adit was driven for 35 m and a few centimetres of pebbly quartz was intersected. The Upper adit was driven on a small vein which widened to 60 cm at 20 m from the adit entrance. Sections with high gold contents appear to have been intersected in the adit.

Total reported production is 9.157 kg (323 oz) between 1904 and 1906.

2.2.5 Carnegie mine

The main periods of mining activity were 1889 to 1904 and 1935 to 1942.

Workings consisted of two adits and some surface stopes. Adit No. 1 was driven on a 90 cm thick quartz vein and was stoped from 12 m to the surface. A crushing of 100 tons of quartz from adit No.1

is said to have averaged 15.5 g/t of gold though other reported gold values from underground sampling are relatively high, ranging from 15 to 71 g/t.

Adit No.2 was driven for 32 m and intersected a one metre thick quartz formation containing fine, disseminated sulphides, mainly arsenopyrite. The vein appears to occur in a 7 m wide, NW -trending shear zone which can be traced over 80 metres. There are also narrow quartz stringers and pods with lower gold values (0.8 to 6.8 g/t). It is interpreted that the main lode in the Starlight Mine was intersected by this adit, and was around 10 cm wide and carrying 1.1 g/t gold.

2.2.6 Revenue mine

The Revenue mine area was first leased in 1897 with mining activity continuing at different intensities until 1904. Workings consist of some shallow shafts, a 114 m long adit, and surface stoping.

A total of 2.962 kg gold was reportedly obtained from crushing of 411 tons of quartz giving an average yield of 7.3 g/t. A trial crushing of 18 tons of quartz from a second reef 1.2 to 1.5 m wide yielded 670 g of gold at an average gold content of 37 g/t (Hughes. 1947).

2.2.7 City of Melbourne mine

Mining apparently commenced in 1872 and continued intermittently until 1906. Main workings included two inclined shafts (43 m and 27 m deep) and a vertical main shaft 30 m deep. Recorded gold production to 1900 was 1.701 kg. In 1905. 623 grams of gold were produced from 13 tons of quartz (47 g/t). and in 1906 the production was 184 g from 25 tons of quartz (7.4 g/t).

Gold values up to 58 g/t were obtained from relatively narrow (-15 cm) quartz veins (Nye. 1941).

2.2.8 Other mines and prospects

The **Horseshoe Mine** lease was first taken in 1895 but there are no records of production until 1907. Extensive surface prospecting without any significant development at depth. Main shaft was sunk to a depth of 33 m without intersecting a quartz vein. A prospecting shaft, 24 m deep, was also sunk SW of the main shaft (Hughes, 1947..

Underground workings also failed to locate the ore shoots. The total recorded gold production from the surface workings is 6.357 kg (224 oz) which was obtained from 1807 tons of quartz (-3.5 g/t).

At the **Lady Mary Mine** work started in 1888 by sinking shallow shafts and surface trenching. A main shaft was sunk to a depth of at least 32 m to intersect the veins at depth. However it is not certain whether the main shaft intersected the veins and there is no record of any gold production. (Montgomery. 1892; Hughes. 1947.

True Blue (The Bell) workings include two shallow shafts sunk on the reef.

At the **National Investment** mine an adit was driven for 30 m some time between 1888 and 1908.

At the **King Solomon mine** workings consisted of four shallow shafts (<10 m deep) and a number of stopes and trenches. Prospecting started in 1896 and the field appears to have been abandoned in the same year.

The **Bright Star** lease was initially taken up in 1888. Workings included a short adit, some surface trenches and a shallow shaft (Hughes, 1947)

The **Heaton Mine** lease was first taken up in 1895 and the mining activities continued until 1908. The workings consisted of a main shaft, several shallow shafts, and surface stopes. Quartz veins are about 10 m wide and there is no record of gold production. (Hughes, 1947.

The **Baileys Mine** area was worked sporadically from 1899 to 1942 by an adit and two shallow shafts.

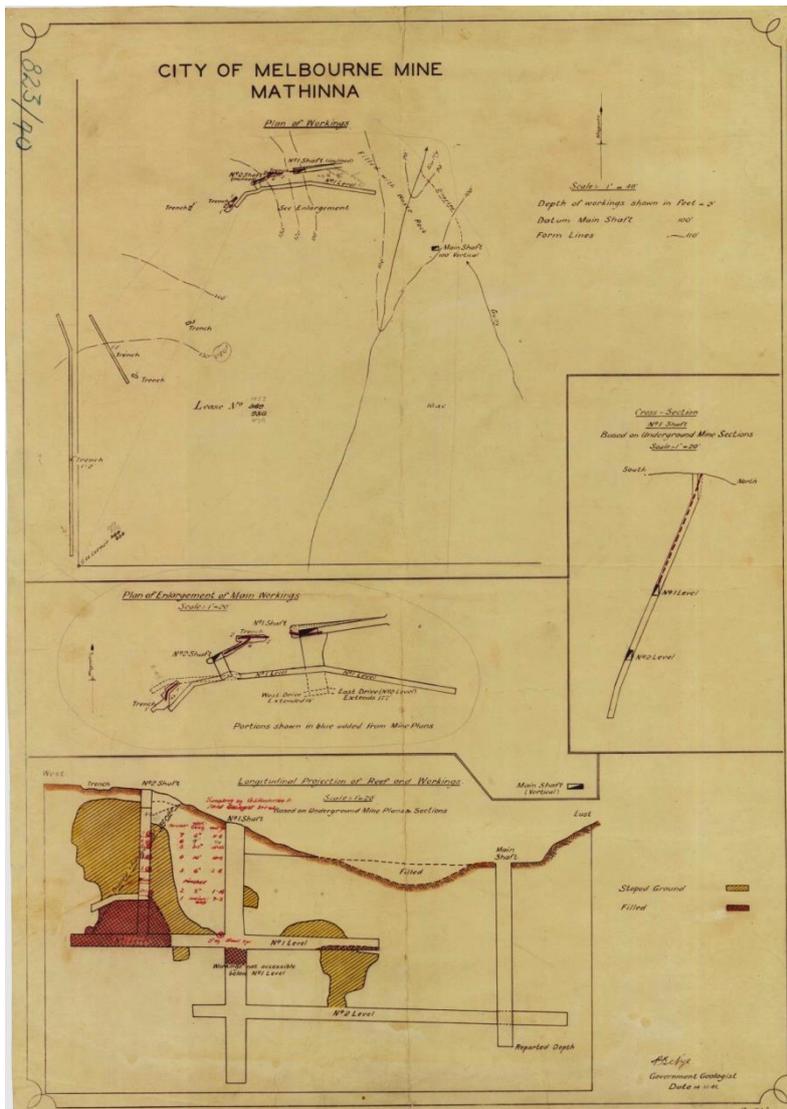


Figure 2.4: City of Melbourne mine plan and section

October mine mining activity began in 1897 and continued until 1901. Workings included three shafts with a level at 24 m in the main shaft. The lode was driven on the 24m level for 24 m with a gold grade of around 30 g/t. It is not known if further development was attempted below 24 m level. No production records are available.

Mabel Mine lease was first held in 1896 with mining continuing intermittently until 1900. The workings consisted of a shaft at least 30 m deep and some surface cuts. In 1898 a trial crushing of 96 tons of quartz yielded 1.077 kg (38 oz) of gold (11.2 g/t), and the result was considered to be disappointing. In 1900 another 1.077 kg of gold was also obtained from the crushing of 22 tons of quartz at a grade of 49g/t Au

2.2 Modern Exploration

2.2.1 Introduction

There has been little systematic exploration of the Dans Riivulet goldfields.

The main work has been that of Sturts Meadows (Martin, 1980) who mapped and sampled a number of old workings, as detailed below, and the efforts at re-establishing the O'Briens mine by Cuttack and Montroyal (Newnham 1993a, Newnham 1993b, Anon 2001).

Post WW2 the Department of Mines drilled 5 drillholes at the O'Brien's mine intersecting 3m @ 11.1g/t Au. Since the 1990's considerable effort has been made in attempting to re-establish the O'Brien's mine with the drilling in total of 13 drillholes and the mining of a 75m long access decline from surface but with no production.

2.2.2 O'Briens mine

The O'Briens's mine's exploration history is as follows.

- 1954 – 1955 Department of Mines (DOM) drilled 5 holes md1 to md5 beneath #1 reef
 - MD1 (57m) - hit old workings.
 - MD2 (83.5m) - no significant intersection.
 - MD3 (49.4m) - two quartz+arsenopyrite veins within 3.0m wide (horizontal) reef structure with a HW vein 0.35m @ 47g/t Au, and FW vein 1.45m @ 11.4g/t Au within an overall reef structure 3.0m @ 11.1g/t Au.
 - MD4 (81.7m) - three quartz+arsenopyrite veins within a 1.55m (horizontal) width reef structure, HW vein 0.2m nil (looked good though), middle 0.24m @ 6.4g/t Au and FW vein 0.22m at 4.08g/t Au within overall reef structure of 1.55m @ 1.6g/t Au.
 - MD5 (78.6m) - minor quartz veins not assayed.
- In 1980 Sturts Meadow Prospecting (Martin, 1980) carried out sampling of the adits (Mitchell, 1980) and revealed that most of the quartz veins were auriferous. with the best value being 17.8 g/t gold over a length of 73 centimetres. Sampling of the dump material indicated values up to 26 g/t gold.
- 1992 – 1993 Montroyal Mining N.L (Newnham, 1993a and Newnham, 1993b) drilled 6 holes (gs1, gs2 & gs4 to gs7) beneath #1 reef, 1 hole (gs3) beneath #2 reef
 - GS1 tested #1 reef approximately 75m below the adit and 50m below MD3. The hole intersected 0.3m @ 2.58 Au and 1.35% As but not in the reef.
 - GS2 intersected a zone fractured and quartz veined zone with 2.75m (horizontal) @ 3.7g/t Au inc a HW vein 0.7m @ 9.0g/t Au.
 - GS4 intersected a 4.0m (hori.) reef @ 0.69g/t Au with a HW vein 0.55m @ 1.45g/t Au and FW vein 1.05m @ 1.6g/t Au.
 - GS3 tested beneath the #2 reef with no significant intersections.
 - GS5 intersected no clear reef structure but a concentration of quartz veins at is associated with a narrow fault zone at 126.7m but gold values are low.
 - GS6 did not intersect a clear reef structure but did intersect a zone of quartz veinlets with elevated arsenic from 81m to 85m.
 - GS7 intersected a zone of quartz veinlets between 130m and 139m associated with a narrow fault and anomalous gold and arsenic
- 1997 – 2001 – Cuttack Mining (Anon. 2001)
 - Mined box-cut portal and 75.5m decline to intersect O'Briens #1 Reef.
 - Stopped short of reef due to ground conditions
 - Drilled two holes (cm1 and cm2) from end of decline.
 - Holes appear poorly placed

Twelvetrees, 1904; Nye, 1941; Hughes, 1947; 1954; Mitchell, 1980; Newnham 1993a and 1993b.

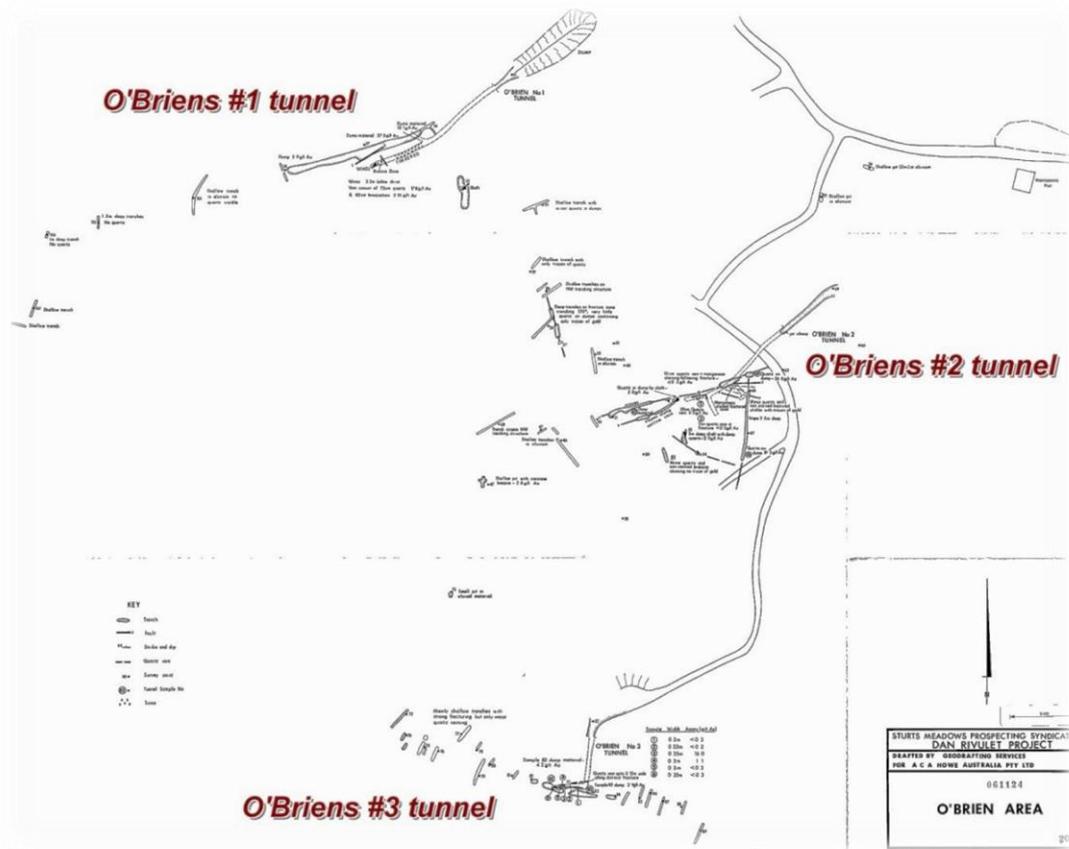


Figure 2.5: O'Briens area plan (after Mitchell, 1980)

2.2.3 Carnegie mine

At the Carnegie mine two diamond drill holes were drilled in the area in 1962 by the Department of Mines (Threader, 1963a). Numerous barren quartz veins were intersected, although no gold or silver assays were reported.

It has been suggested that the main reef between the Starlight and Carnegie Mines could carry higher gold contents at depth.

2.2.4 Havelock Mine

Mitchell (1980) undertook some systematic sampling across the reef with grades 0.45m @ 4.7, 0.5m @ 9.3, 0.25m @ 5.8, 0.4m @ 2.7, 0.2m @ 0.07 and 0.3m @ 0.66g/t Au. The reef in the adit occurs as numerous lenses occurring in brecciated slate zones

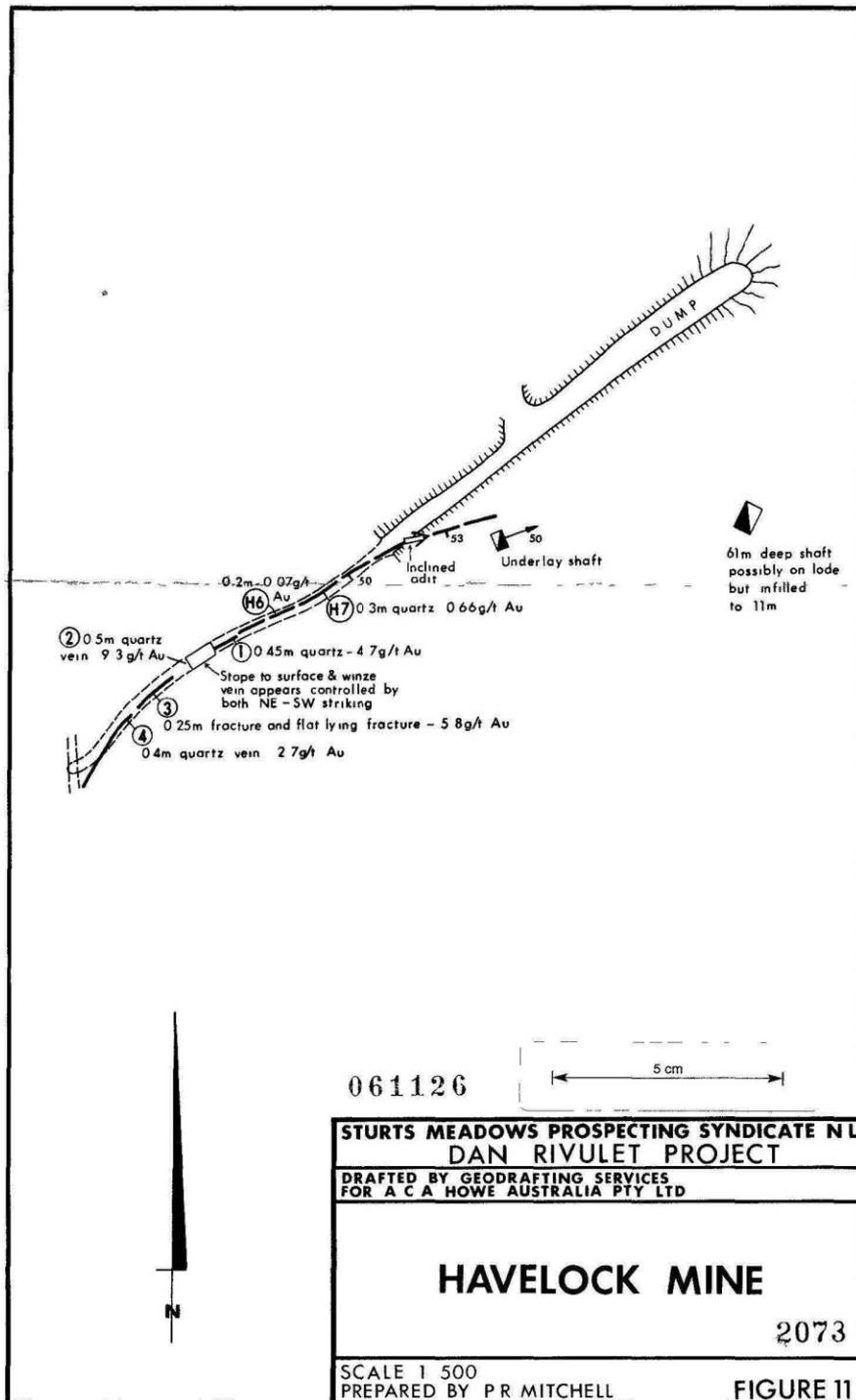


Figure 2.6: Havelock mine plan showing sample locations and assays from Mitchell (1980)

2.2.5 Starlight mine

At the Starlight mine grab and dump sampling by Mitchell (1980) returned assays of up to 24.7 g/t Au. A major 5 m wide fracture system containing quartz veins assays up to 2.0g/t Au (Mitchell (1980) though reported gold contents of these veins appears to have been low (up to 2 g/t).

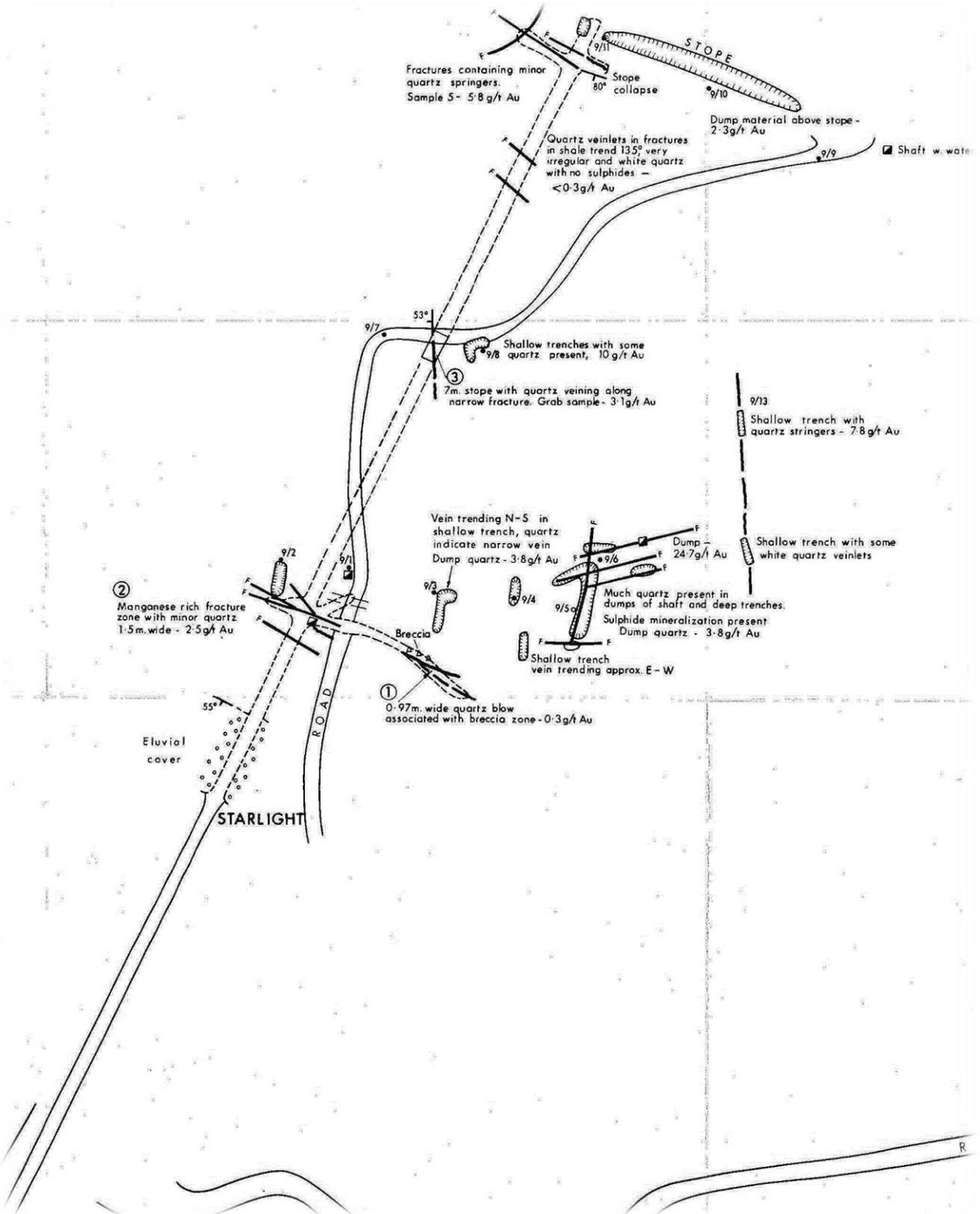


Figure 2.7: Starlight mine sampling (Mitchell, 1980)

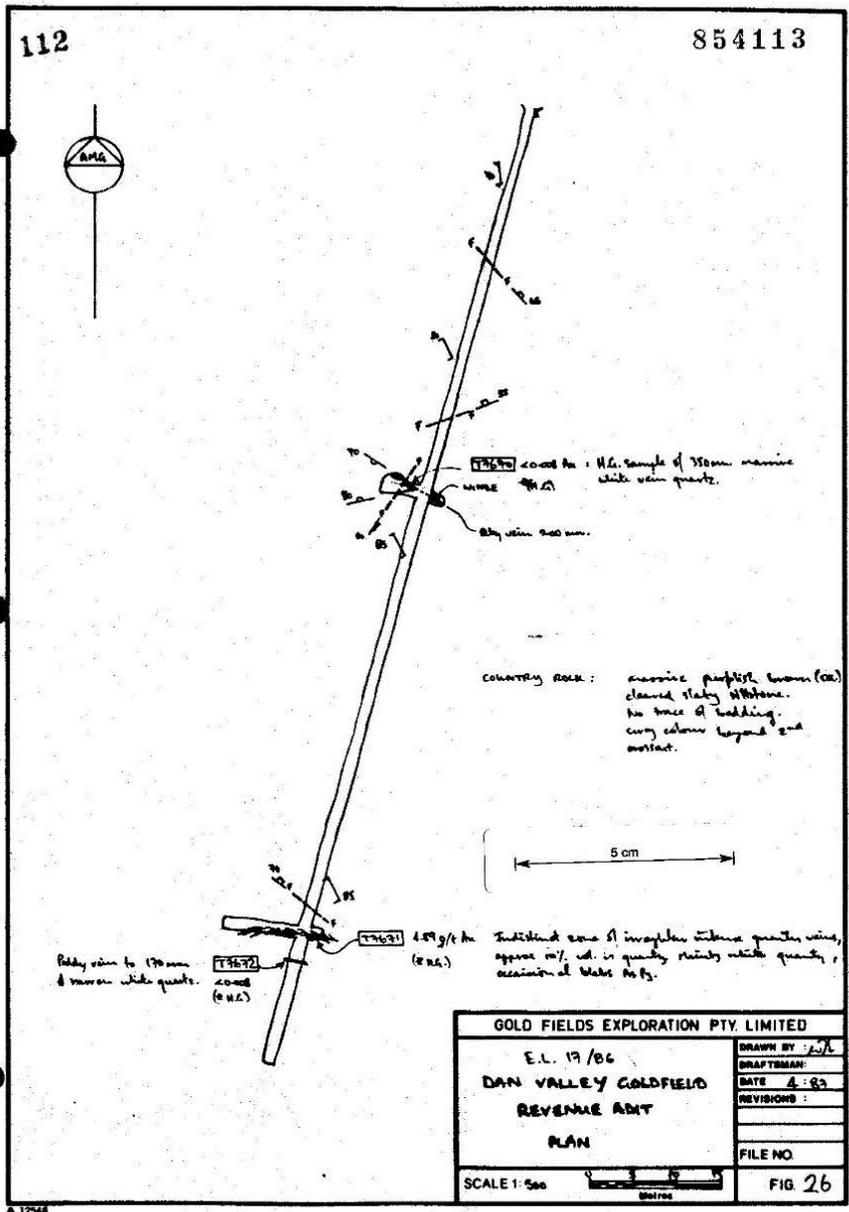


Figure 2.9: Revenue mine plan from Herrmann (1987)

2.2.7 Chinamens Hill Prospect

The Chinamen's Hill prospect is a virgin discovery made by Resolute Limited in 1995 using soil geochemistry.

The coincident gold and arsenic anomaly extends in a due north-south orientation for a distance of 1.4 km's with part of the northern section obscured by a perched river channel known to have sourced 1oz nuggets to Chinese miners.

To date only 2 excavator trenches and 1 RC drillhole have tested a 50m section near the middle of the anomalous trend.

Northern trench (#1) cut across a zone assaying 17m @ 1g/t Au inc. 3m @ 3.28g/t Au with a 0.2m rock assaying 20.8g/t Au. Ore is in a stockwork style with potential for larger tonnages.

In Southern trench (#2) 50m south the zone assayed 4m @ 1.55g/t Au with small individual veins assaying 7.35, 4.92 and 4.06g/t Au.

The one RC hole MT026 drilled beneath trench #1 intersected 1m @ 0.71g/t Au.

The three intersections already define a small sub-economic resource of 1,000 ounces at 2g/t Au), however, this anomalous trend must represent a highly prospective continuously mineralized structure, and there is every chance that the 1.4km long structure contains a number of high grade pods with potential of 50,000 ounces each to a depth of 200m.

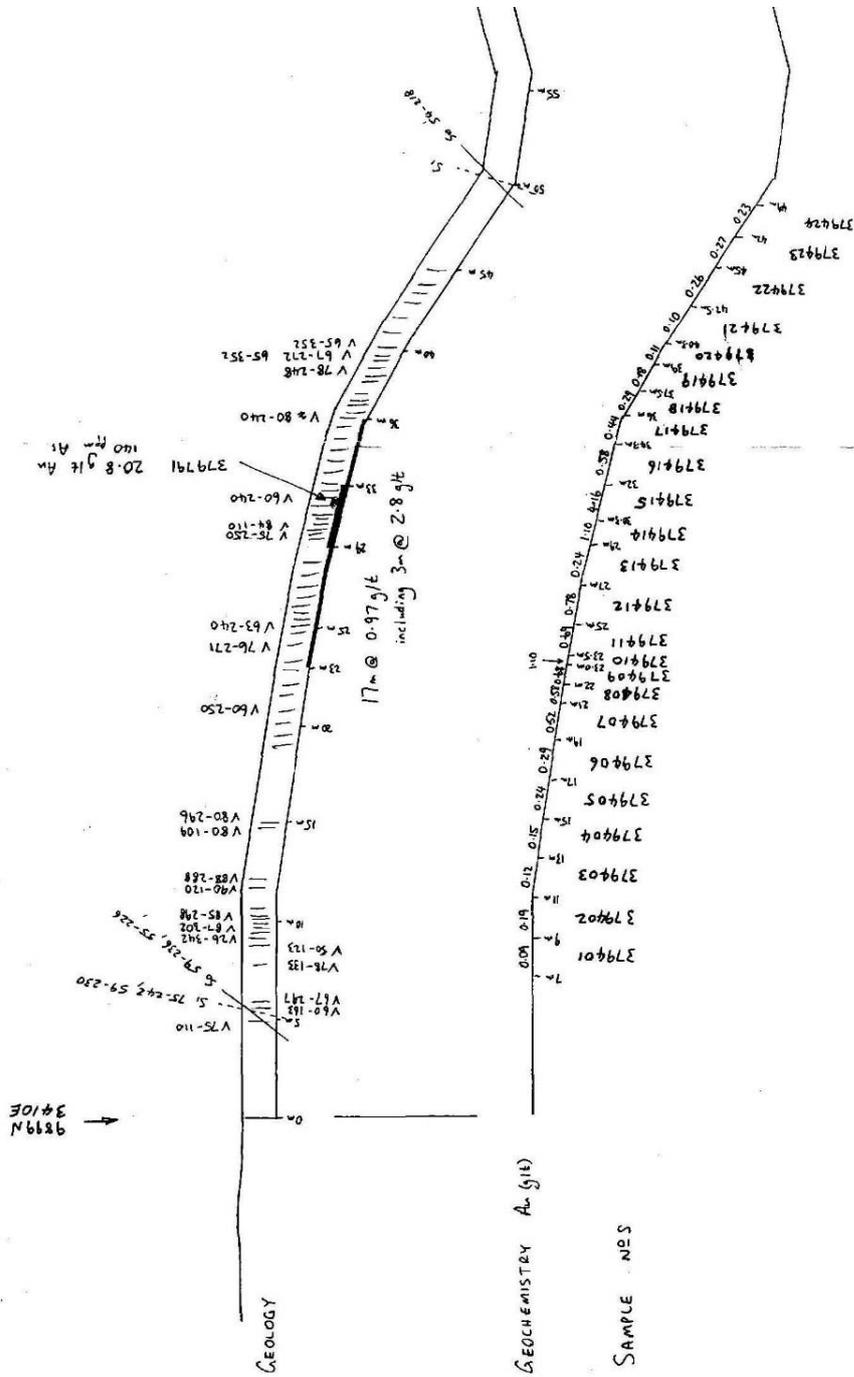


Figure 2.10 Chinamens Hill costean #1 (from MacDonald, 1995)

3.0 Exploration completed during the reporting period

3.1 Introduction

Work in the reporting year was largely desktop with some field reconnaissance of the O'Briens and Chinamen's Hill prospects.

Desktop work consisted of

- literature review of previous mining and exploration with prospect prioritisation
- modelling the O'Brien's mine,
- digital enhancement of Chinamen's Hill soils resulting in a proposed trenching and drilling programme (not completed)

3.2 Historical compilation old mine plans and sections

Available literature in the form of government and company reports (held by Mineral Resources Tasmania) was collected and a search made of all old mine plans and sections held digitally with all those considered relevant downloaded and compiled.

No attempt was made to study the newspaper records of the time though this would be of benefit.

Data was reviewed and prospects prioritised with preliminary work programmes proposed.

This work is summarised in section 2.1 on early mining history and section 2.2 on modern exploration.

3.3 O'Briens mine modelling

The O'Briens mine had been identified by previous explorers as worthy of further significant work. Historical production of 900 – 1,200 tons ore at ~30g/t Au for around 900 – 1,200 ounces.

A total of 9 drillholes have been drilled into the O'Brien's #1 reef (not counting CMD1 and CMD2 which ran parallel to the reef).

Old mine plans were digitised in 2D MAPINFO/DISCOVER, traced and then exported into a 3D model in SURPAC. Existing drillhole data was input into an ACCESS database and plotted in 3D in SURPAC to allow comparison of geology intersected in drillholes and location of reef structures as determined from old workings.

3.4 Chinamen's Hill soil proposed trenching

Existing historical soil data from Resolute Limited's exploration (MacDonald, 1996a & b) was imported into MAPINFO/DISCOVER and digitally enhanced. The resulting images for gold and arsenic are shown in figures 3.2 and 3.3.

A result of this work was the desire and intention to carry out a major body of trenching work with some follow-up drilling (figure 3.4).

A flora and fauna survey was commissioned and carried out by Phil Milner (appendix A). A field visit was made with Michael Reid of Mineral Resources Tasmania and approval given.

Due to prioritisation of work on another tenement the trenching and drilling work was not carried out.

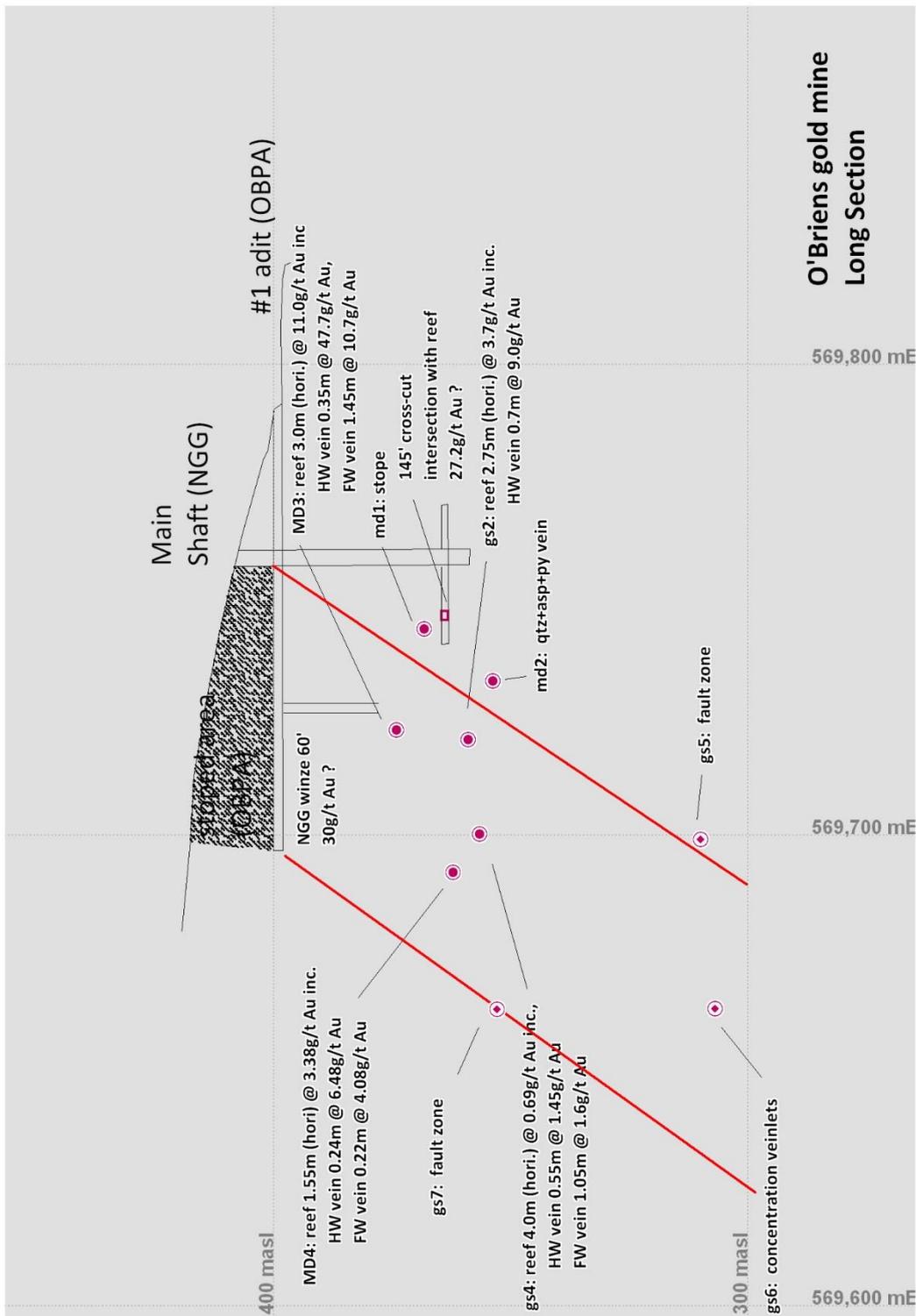


Figure 3.1: O'Briens mine long section showing pierce points of drillholes. (Nb: Holes cmd1 and cmd2 which run parallel to plane of section but without reef intersection not shown)

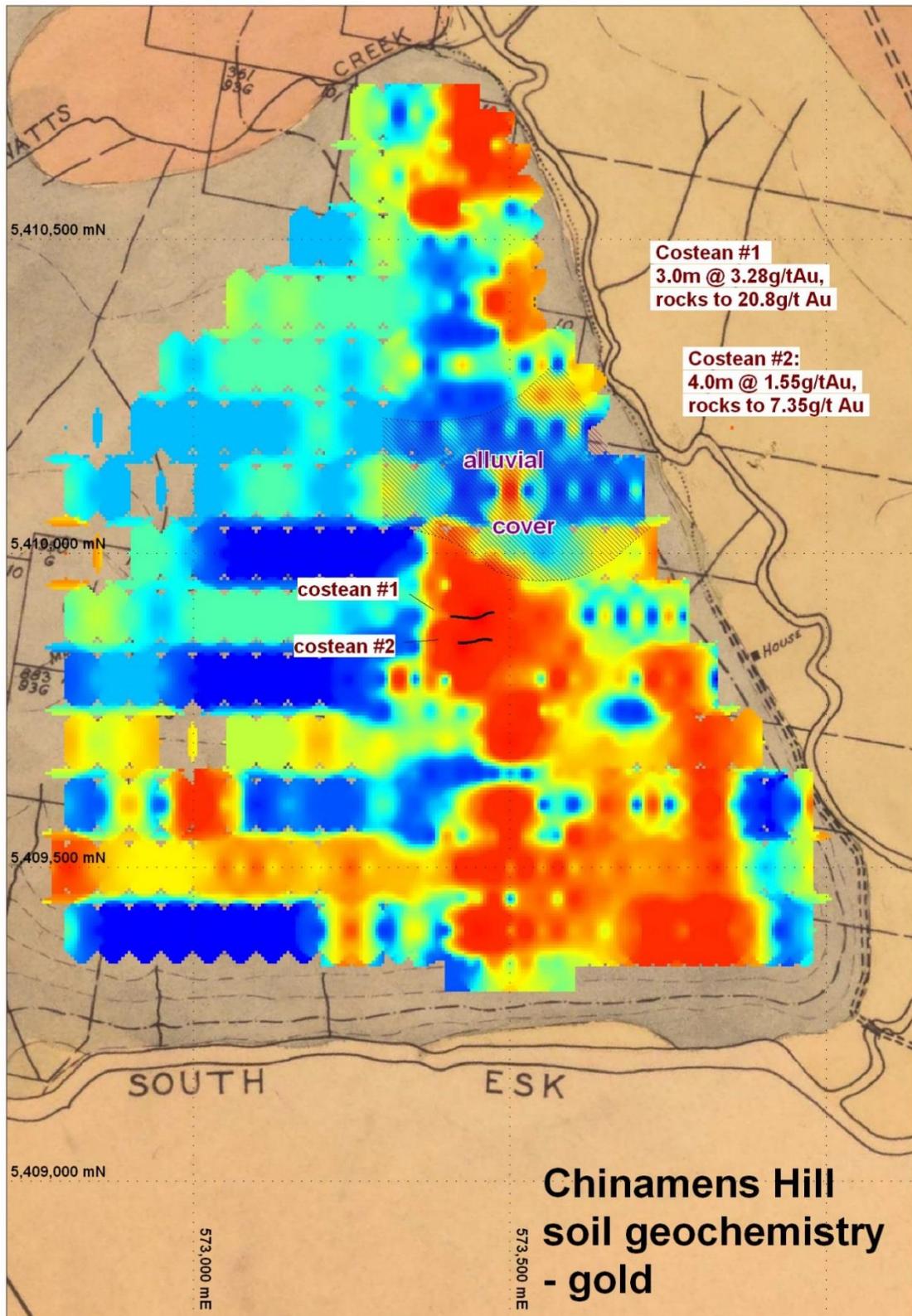


Figure 3.2: Chinamens Hill soil anomaly – gold. Note locations of costeans (= trenches).

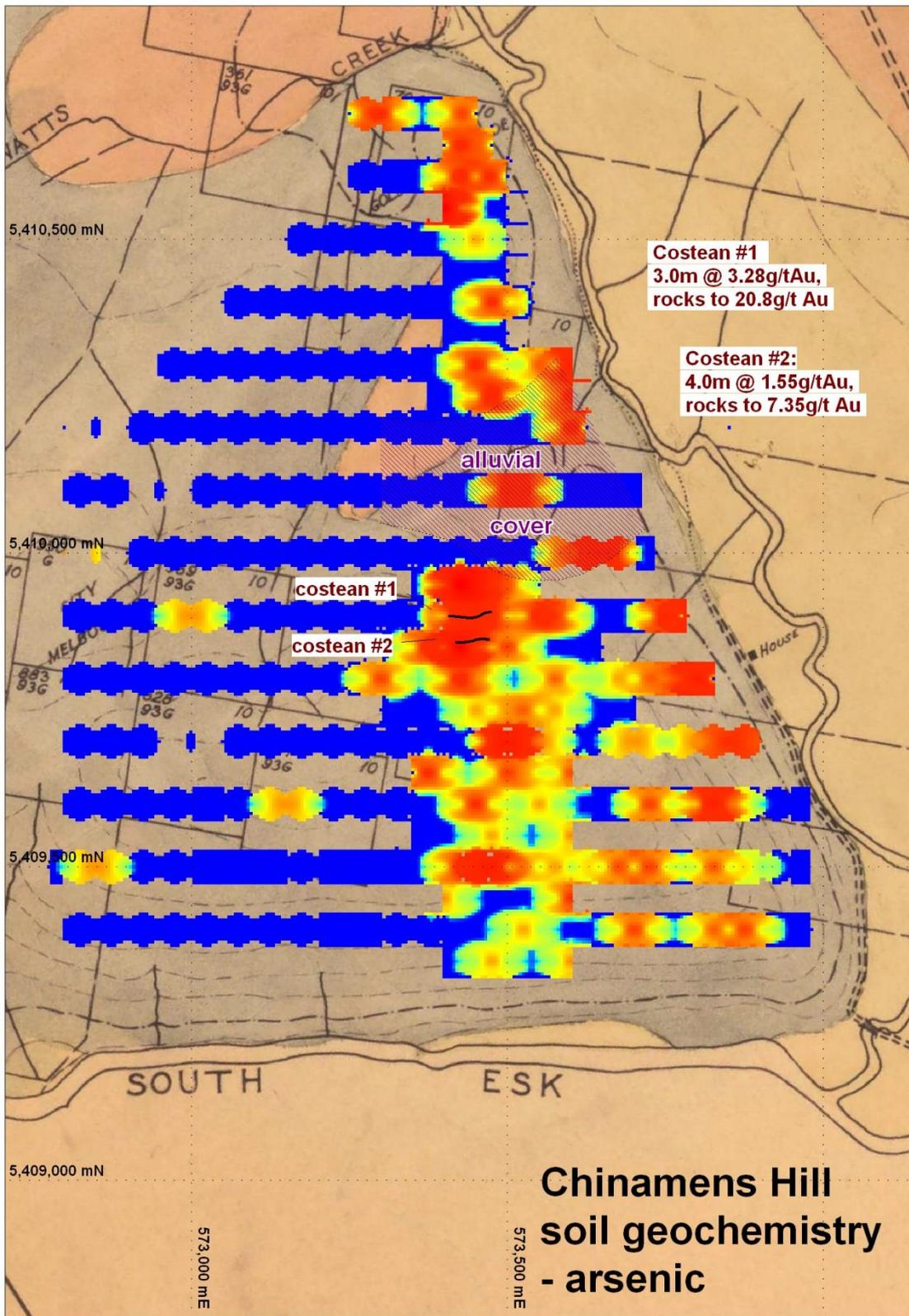


Figure 3.3: Chinamens Hill soil anomaly - arsenic

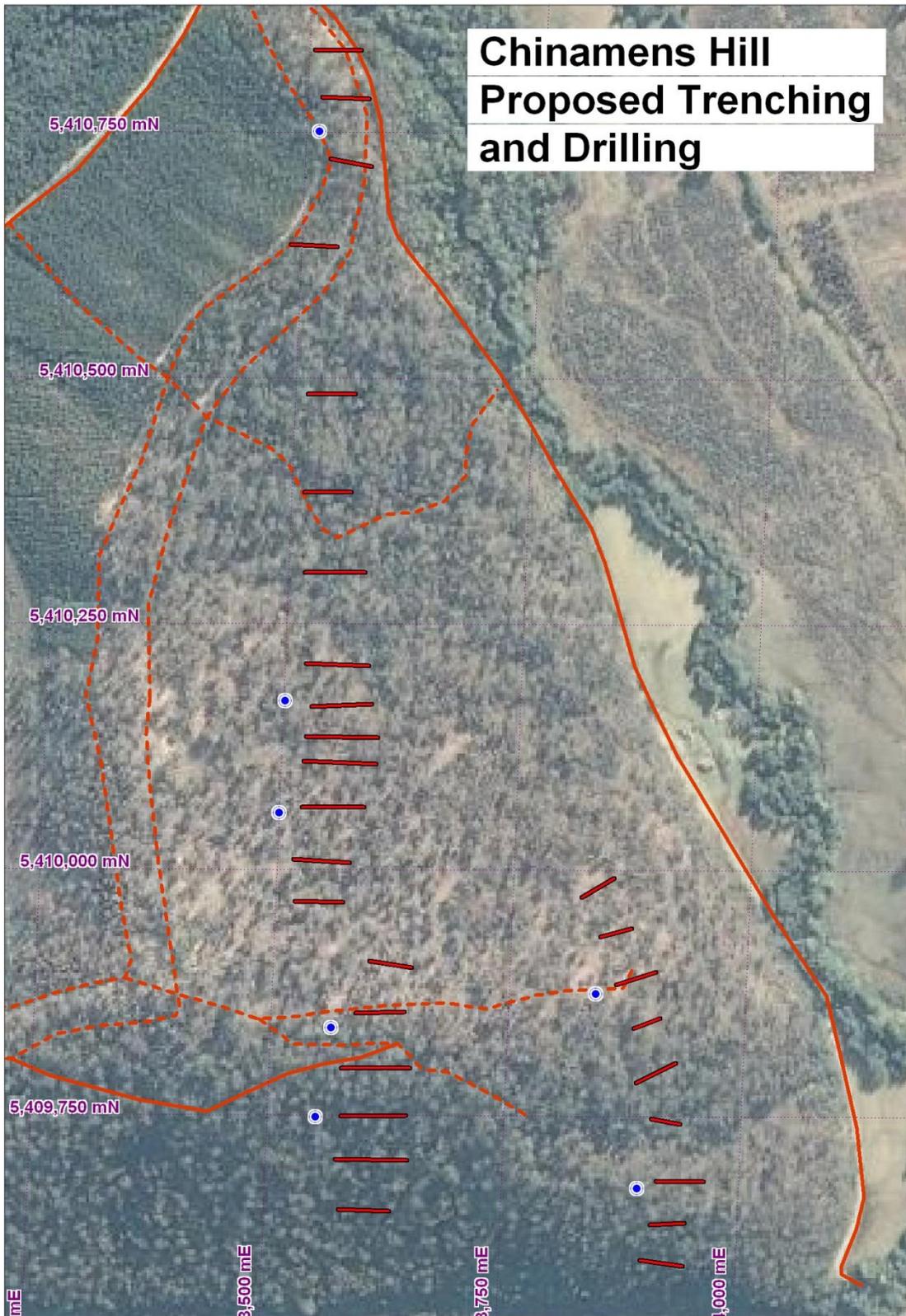


Figure 3.4: Chinamens Hill prospect showing proposed trenches and shallow drilling (nominal collar positions dependant on trenching results).

4.0 Discussion of Results

4.1 Introduction

The historical review prioritised work on the

- O'Briens mine,
- Havelock mine,
- Starlight-Carnegie-King Edward area and
- Chinamen's Hill soil anomaly.

4.2 O'Brien's mine

Modelling the O'Brien's mine downgraded the potential with holes GS5 and GS6 reducing the chances of a strong reef at depth as shown on figure 3.1.

4.3 Havelock mine

The Havelock mine produced 541 ounces of gold at 19.1g/t Au from a reef which average 0.45m thick and which was payable over 54m on the 30m level, 45m of strike on the 42m level and not developed on the 60m level due to pumping difficulties (see figure 2.2).

Sampling by Mitchell (1980) in the adit level returned 0.45m @ 4.7, 0.5m @ 9.3, 0.25m @ 5.8, 0.4m @ 2.7, 0.2m @ 0.07 and 0.3m @ 0.66g/t Au suggesting grades may be getting stronger with depth (figure 3.6).

This mine presents the best historical mine warranting further investigation.

4.4 Starlight-Carnegie-King Edward area

Sampling by Mitchell (1980) in the Starlight area returned high grades up to 24.7g/t Au (see figure 2.7). The area is one of some structural complexity and warrants further attention. A close-spaced soil sampling programme here is warranted.

4.5 Chinamen's Hill

Colour images of gold and arsenic in soils on Chinamen's Hill clearly show a strong north-south linear anomaly extending 1.2 kilometres (see figures 3.2 and 3.3. Two smaller parallel zones can be seen to the east of this main zone. The prospect has excellent potential for a near surface virgin discovery.

5.0 Conclusions

A number of prospects on EL 2/2015 have the potential to provide payable ore feed to the Webb Mining Pty Ltd mill at Mangana. In particular

- Havelock mine
- Chinamen's Hill
- Starlight-Carnegie-King Edward area

warrant further prioritised attention.

Work to be carried out in the second year of the licence will include;

- Trenching and possible subsequent shallow drilling proposed for Chinamen's Hill.
- Field investigations and underground sampling as well as further historical research of the Havelock mine with possible drilling.
- Field investigations and possible rock and/or soil sampling programme in the Starlight-Carnegie-King Edward area.

6.0 Environment

No fieldwork was carried out during the reporting period.

7.0 References

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