Nubian Resources

Annual technical report EL3/2015 (Stavely Tasmania Pty Ltd), “Lefroy”

HOLDER: Stavely Tasmania Pty Ltd

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28th of May 2021 to 27th of May 2022

Executive Summary

No work was undertaken on EL3/2015 during the 2021-2022 reporting period due to the ongoing effects of the COVID-19 pandemic. Best efforts are being made to recommence exploration.

1 Table of Contents

1.1

2 Introduction

2.1 Location and access

EL 3/2015 “Lefroy” lies 10 kilometres east of the Tamar River. The 27 square kilometre licence covers the southern 2/3 of the Lefroy Goldfield in Tasmania’s northeast goldfields, lying directly along strike across the Tamar River from the 2 million ounce Tasmania Reef at Beaconsfield.

The licence is accessed by the bitumen Bridport Road with internal access via the Beechford Road, town streets and other bush tracks.

2.2 Land status and usage

Apart from the town itself, a portion of the northeastern part of the licence is pastured farmland whilst most of the licence area is state forest and private bushland covered in dry open sclerophyll scrub.

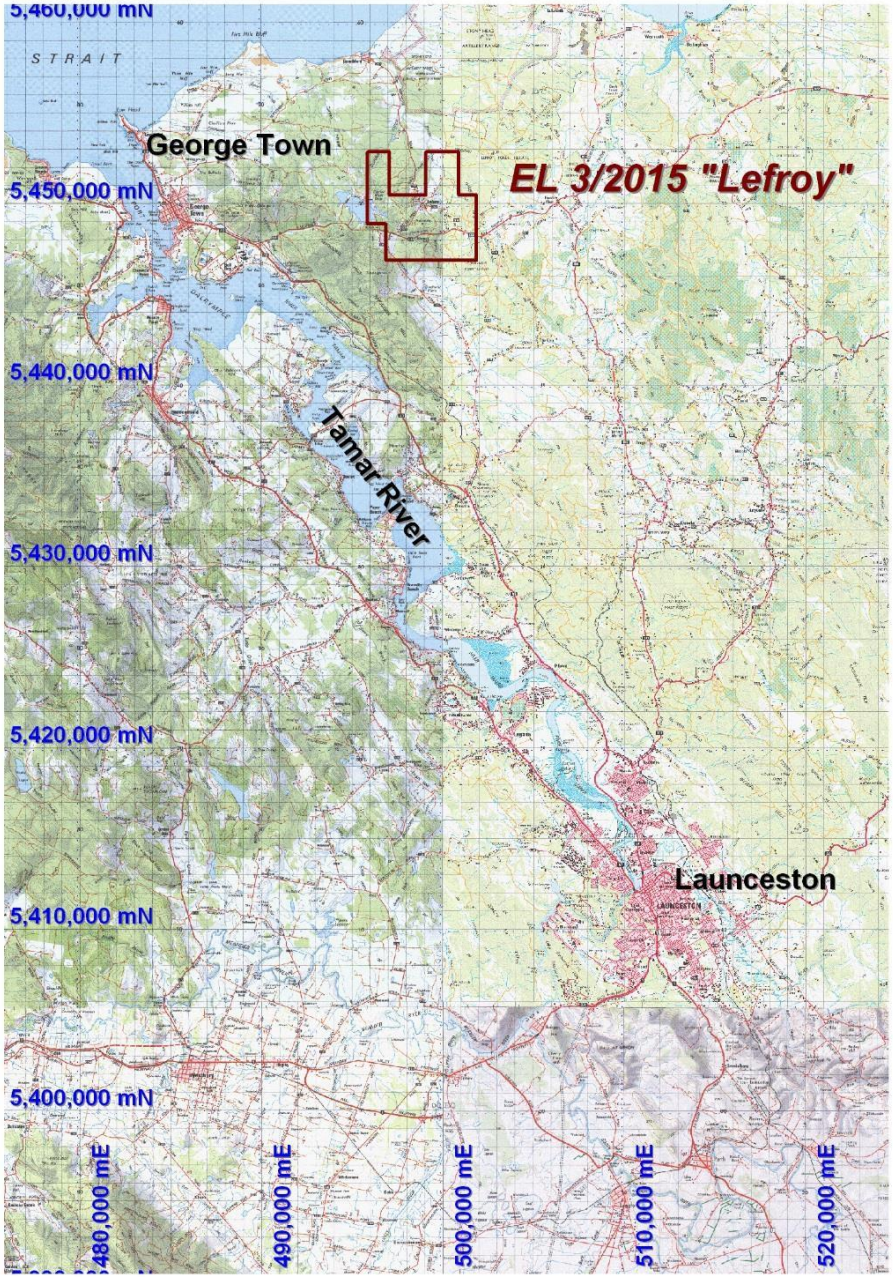

Figure 1 - EL 3/2015 “Lefroy” location in Tasmania’s central north.

1.0 Geology

EL 3/2015 covers approximately 2/3 of the Lefroy Goldfield in Tasmania's northeastern gold province.

Gold is hosted in steeply dipping quartz reefs generally striking east-west.

The Lefroy Goldfield, located in northeastern Tasmania near George Town, was a significant site during Tasmania's gold rush era. Gold was first discovered in the area in 1869 by Samuel Richards at Specimen Hill, which led to Tasmania's first major gold rush. This discovery attracted numerous prospectors, leading to the rapid development of the township of Lefroy, which at its peak housed around 5,000 residents.

The gold in Lefroy was primarily found in quartz reefs beneath the surface, making extraction challenging. Early mining efforts focused on alluvial gold in creek gullies, but as surface gold became scarce, mining shifted to deeper quartz reefs. This transition required more advanced techniques, including the use of stamping batteries to crush the ore and pumps to manage water seepage in deeper shafts. (

Several notable mines operated in the Lefroy area, including the Native Youth, Chum, Volunteer, and Pinafore reefs. The Pinafore Gold Mine, in particular, has been the subject of heritage assessments due to its historical significance and remaining archaeological features, such as mine shafts and remnants of steam machinery.

Over its operational years, the Lefroy Goldfield produced an estimated 200,000 ounces of gold, contributing significantly to Tasmania's gold output. However, by the late 1890s, the gold boom had declined, and the town's population dwindled. Today, Lefroy is a quiet locality, but its rich mining history remains a point of interest for historians and prospectors alike.

Table 1 - Summary of historical gold production in NE Tasmania

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

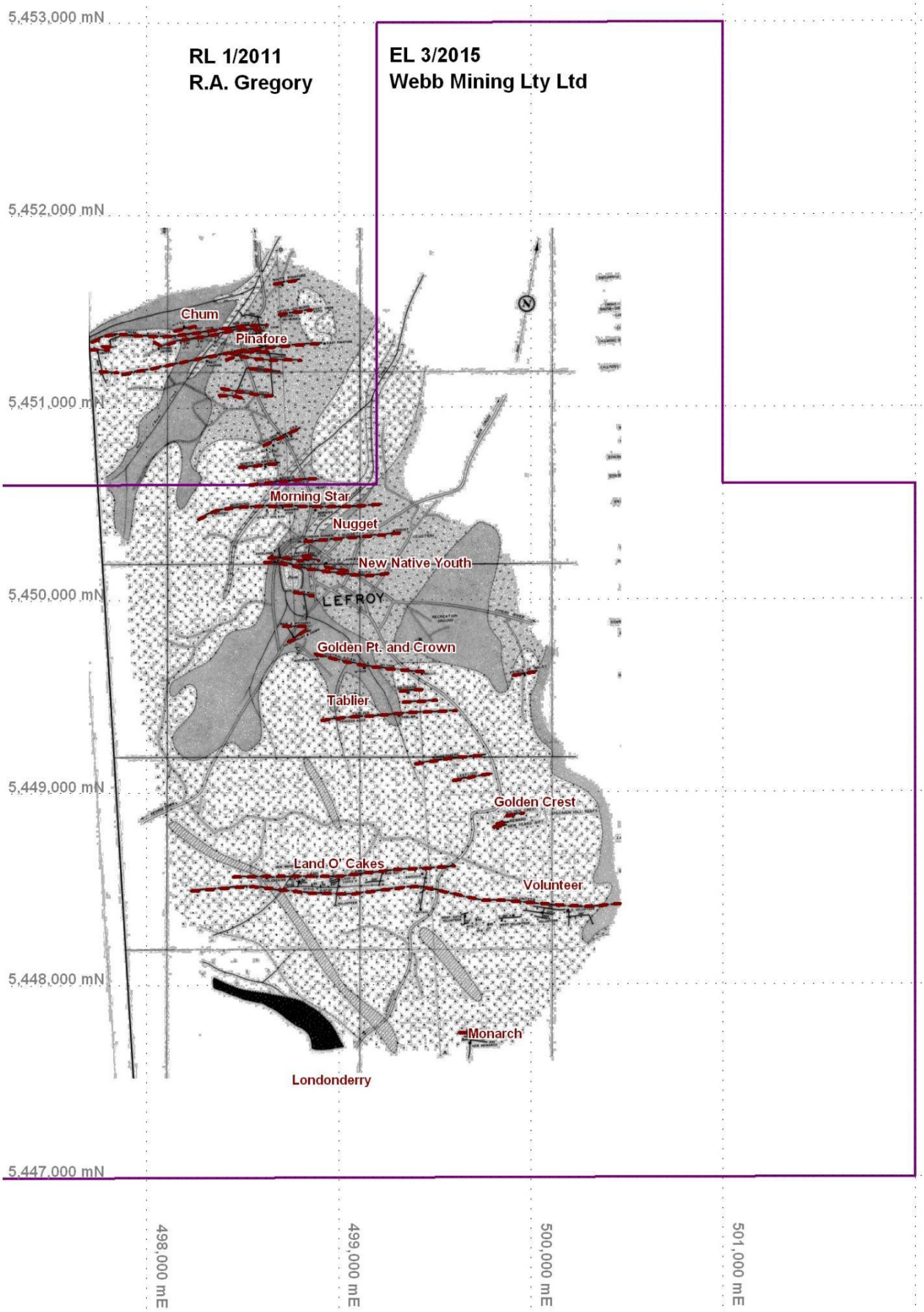

Figure 2 - Lefroy goldfield with main reef lines as dashed lines. Geology after Groves (1964).

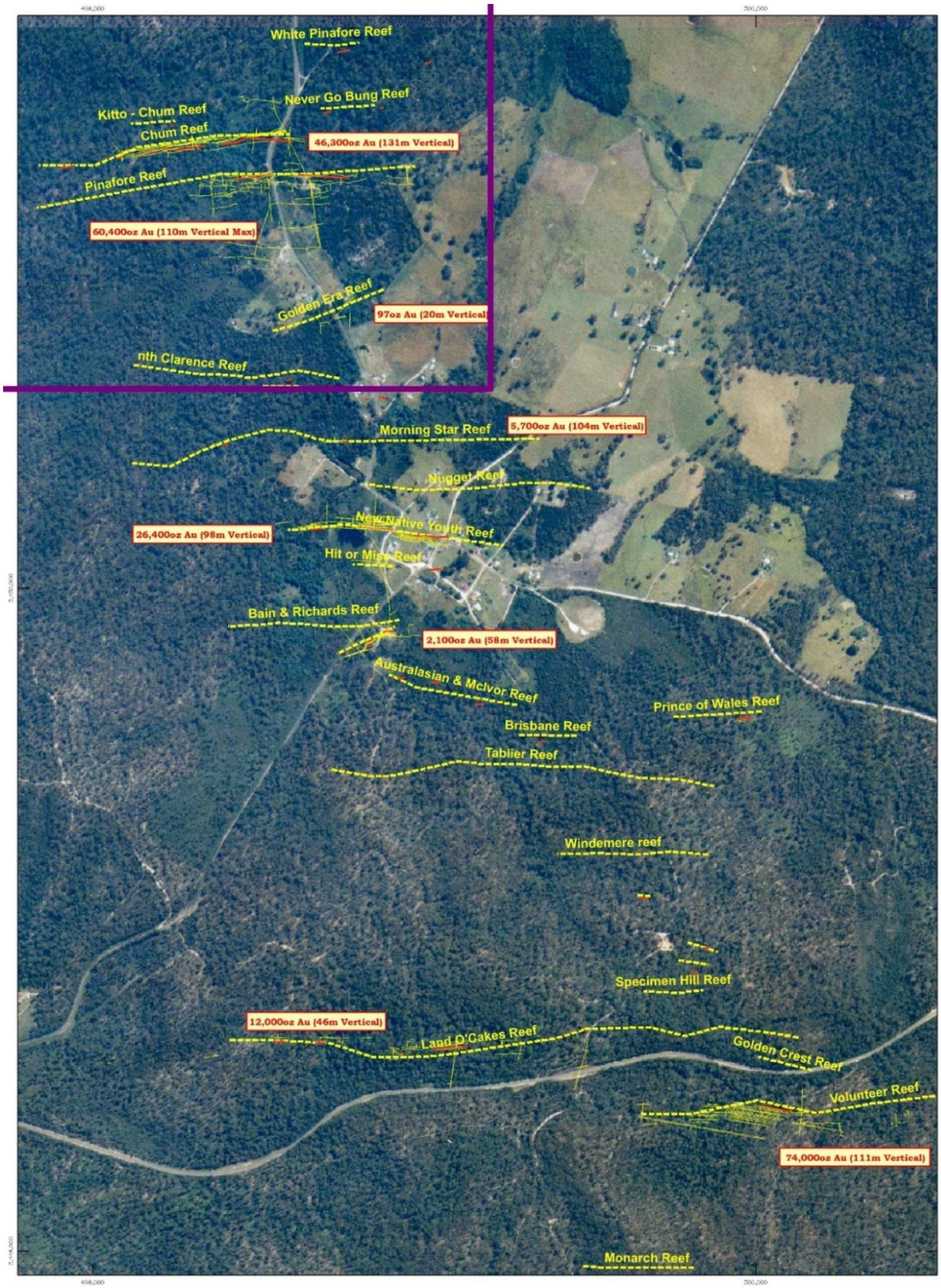

Figure 3 - Lefroy goldfield aerial view looking north. Area to south and east of purple line held by Webb Mining Pty Ltd, rest held under RL 1/2011 by R Gregory. Yellow dashed lines are lines of reef, red barred sections are areas of stoping on the reef

3 Review of Previous Work

3.1 Early Mining History

The Lefroy Goldfield contains many shafts and underground workings located on approximately 30 east-west striking gold reefs aligned in a 5 kilometre long north-northwest trending en-echelon array through the town of Lefroy.

Gold mining is documented to have begun in the area around 1864 (Gould, 1864) though mining is likely to have commenced much earlier, based on a report of gold being discovered at Lefroy in 1853 (McClenaghan, 1994).

The goldfield was the centre of discontinuous gold mining between 1869 and 1911, with two major mining booms, 1880 – 1885 and 1895 – 1898, over which time more than 180,000ozs of gold was recorded as being produced.

Records indicate\ that the average mined grade of the field was in excess of 30g/t Au (with most of the mining being restricted to a depth of approximately 30m; however some mining occurred to depths of 380m). Early reports suggest that as mining in the old goldfield progressed to depth, the ore became sulphidic and without the benefit of appropriate metallurgical technology many mines were closed as mill recoveries decreased. This factor combined with water infiltration and increasing mining costs forced the eventual closure of the field.

3.2 Modern Exploration History

3.2.1 DoM

The Tasmanian government drilled 13 diamond drillholes in the Lefroy goldfield from 1935 to 1938 in targeting beneath old workings. 10 of these holes were drilled in EL 3/2015. Core recoveries were poor and considerable drill deviation has probably occurred. BH8 and BH9 intersected the strike projection of the Volunteer mine (see figure 3.1).

3.2.2 Alluvial Exploration (1982-1993)

During the 1980's and 90's most of the activity in the field was focused on exploring for "deep lead" alluvial deposits. Several low-density soil-sampling programs were completed, and around 500 pits and costeans were dug along drainages.

3.2.3 Lefroy Gold Mines Pty Ltd (1993-2002)

Consolidated Kalgoorlie Gold Mines (CKGM) formed Lefroy Gold Mines (LGM), a wholly owned subsidiary, to explore the Field in the early 1990's. CKGM had been working to re-develop the Beaconsfield Gold Mine, and initial activity centred on delineating bulk low-grade hard-rock and alluvial targets to use as feed for the Beaconsfield Mine.

LGM explored the field from 1995 to 2002 using a combination of surface and geophysical mapping, geochemistry, rock-chip and mine dump sampling. Significant results were followed up with trenching, RAB and RC drilling mostly over historical mine areas.

A 55-hole hybrid RAB/RC drilling program was completed by LGM in 1996/1997, for a total of 1,150 metres, to a maximum depth of only 28 metres. Work targeted magnetic lows, old workings and geochemical anomalies mostly for bulk low-grade mineralisation. Results were generally disappointing with the best hole returning 1.5g/t over 5 metres.

3.2.4 Allstate Explorations NL (1997-2001)

Allstate Explorations NL (Allstate) entered into a JV agreement with LGM to explore principally for high-grade lode-style gold requiring them to spend $700,000 over four years. Allstate withdrew from the JV in 2001 having spent $300,000. Allstate completed four deep diamond holes at two locations (1 located west of Pinafore, 3 at Volunteer) in the Lefroy Gold Field for a total of 1,510 metres. The

drill holes were planned to intersect un-mined sections below historical high-grade lodes between 200 and 420 metres below surface.

Two of the three holes at Volunteer deviated and missed their targets, while one hole successfully reached target depth but experienced poor recoveries and showed low grades. Two "sister" holes were drilled off unsuccessful holes in an attempt to intersect the target zone. One of the sister holes again deviated; missing the ore zone and the other reached the proposed target depth, but was later interpreted to be short of the main target. This hole did, however, intersect the low-grade mineralised shear that hosts the high-grade ore, demonstrating that this structure continues at depth.

"The (drill) results show that it is possible to intersect significant gold values in un-mined sections of the reefs. This has not been demonstrated before at Lefroy. Almost certainly there is good grade ore yet to be found in the numerous strong and extensive reef lines, because the amount of systematic testing to date has been so limited" (Purvis, 1999).

3.2.5 Sapphire Trading Sapphire Trading Ltd (2002)

CKGM (LGM) surrendered the area in December 2001 due to economic considerations. The ground was subsequently awarded to Sapphire Trading Limited (Sapphire).

State funded airborne geophysical surveys flown over the Lefroy Gold Field in 1993 and 1999 was acquired and interpreted by Sapphire. Sapphire's interpretation of the 1999 data, released in 2001 identified several highly prospective targets along known structures and at least one new structure. The interpretation showed the presence of an important aeromagnetic and radiometric anomaly representing a significant eastern extension of one of the largest reefs in the Field. The data also indicates that key mineralised structures continue strongly at depth and have the potential to hold large deposits.

3.2.6 Lefroy Resources Ltd. (2004-2007)

Lefroy Resources acquired the Tenements from Sapphire in 2004 and conducted detailed desktop mapping, ultra-high resolution airborne geophysics, field work, interpretation and drilling.

Lefroy Resources approached exploration from a systematic perspective with relative rankings and exploration result benchmarks.

Lefroy Resources targeted a number of old gold mines within the field with drilling around the New Native Youth, Morning Star, Brisbane, Nugget, Golden Point, Pinafore, South Pinafore, Chum, Hit or Miss and Land of Cakes mines.

Lefroy Resources carried out considerable historical research as well as drilling and in 2005 defined an underground (below 200m) Inferred Resource of 304,000t @ 22.9g/t Au for 225,000 ounces gold at the Pinafore Mine on RL 1/2011 and a near surface resource (above 200m) in 2006 of 616,000t @ 2.5g/t Au for 49,345 ounces gold. The resource was based on a series of RC and lesser diamond drillholes, many of which penetrated old workings. The resource was largely based around lower grade zones in the immediate hangingwall and footwall to the higher grade reef.

3.2.7 Beaconsfield Gold NL (2008-2011)

BGNL acquired the Lefroy project from Lefroy Resources Ltd in Feb 2008. A prime focus was the existing resources at the Pinafore as defined by Lefroy Resources.

Troy Lowien from Coffey reviewed the open-pitable resource for BCD Resources and pointed out a number of issues "that hinder the classification of this resource as an Inferred Mineral Resource in accordance with guidelines as set out in the in the JORC Code guidelines (2004). These issues include the use of historical production figures in estimating grade, the use of stope fill assays in estimating grade and omitting to apply top or high grade cuts to the data to control the influence of outlying high grade samples."

Lowien re-estimated the open-pitable resource with the addition of a 4 RC and 2 diamond drillholes which had been drilled near surface in 2007.

Table 2 - Coffey mining resource estimate 2009

Coffey Mining resource estimate - May 2009			
cut-off	Tonnes	grade	oz
0.5	936000	1.38	41400
1	810000	1.46	37900
1.5	167000	2.17	11600
2	32000	4.12	4200

Mining One carried out a Whittle optimization on this newly estimated resource and determined that the open cut needed a gold price in excess of A$2000 to be viable.

BGNL also carried out further soil sampling and drilled fences of RC holes across a number of these anomalies.

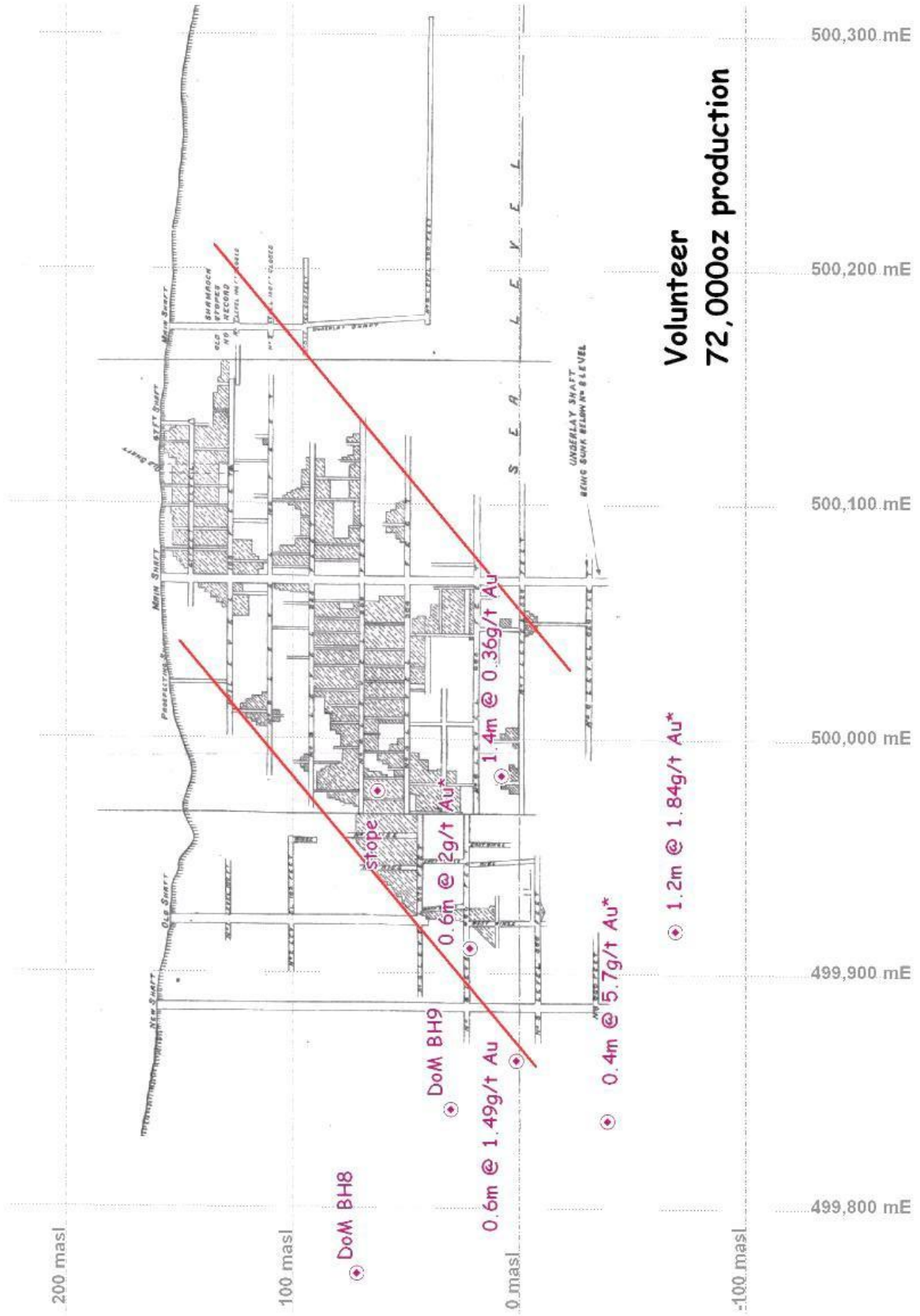

Figure 4 - Volunteer mine long section view looking north. Maroon dots are drillhole intersections with the reef. Gold grades are downhole lengths.

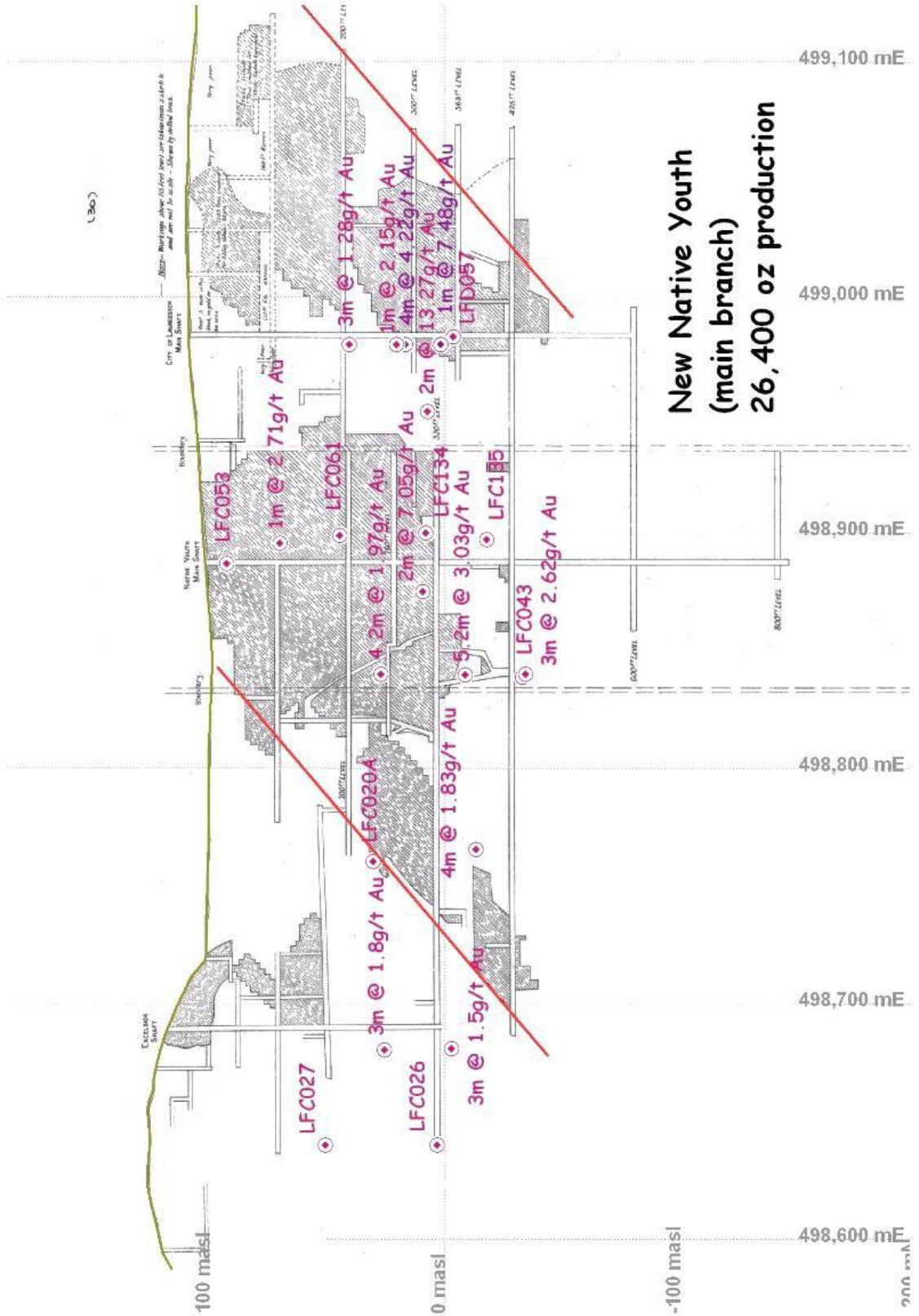

Figure 5 - New Native Youth mine long section showing main branch stoping - view looking north. Maroon dots are drillhole intersections with the main branch reef, purple dots with a separate minor branch reef. Gold grades are downhole lengths.

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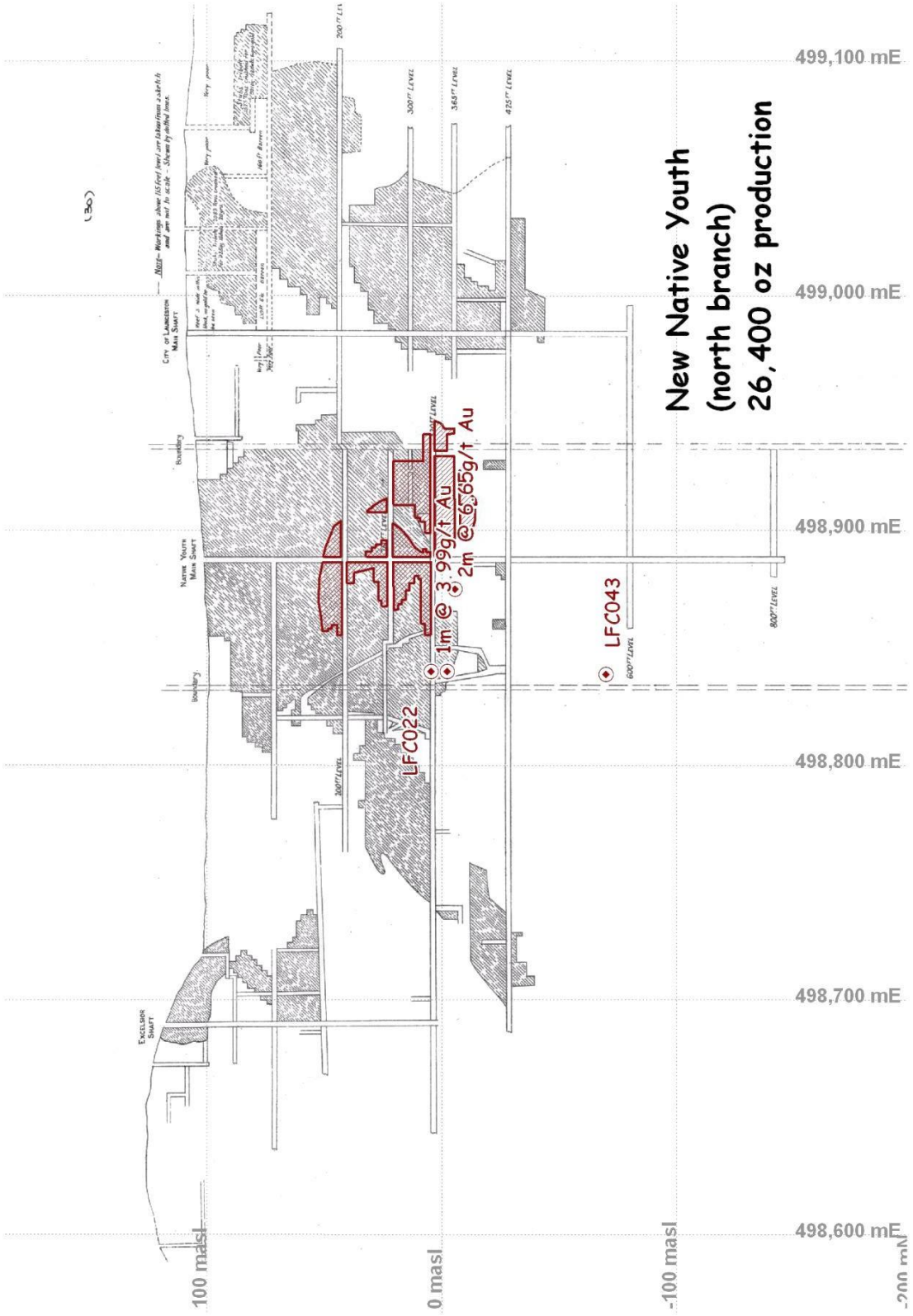

Figure 6 - New Native Youth mine long section showing north branch stoping - view looking north. Maroon dots are drillhole intersections with the north branch reef. Gold grades are downhole lengths.

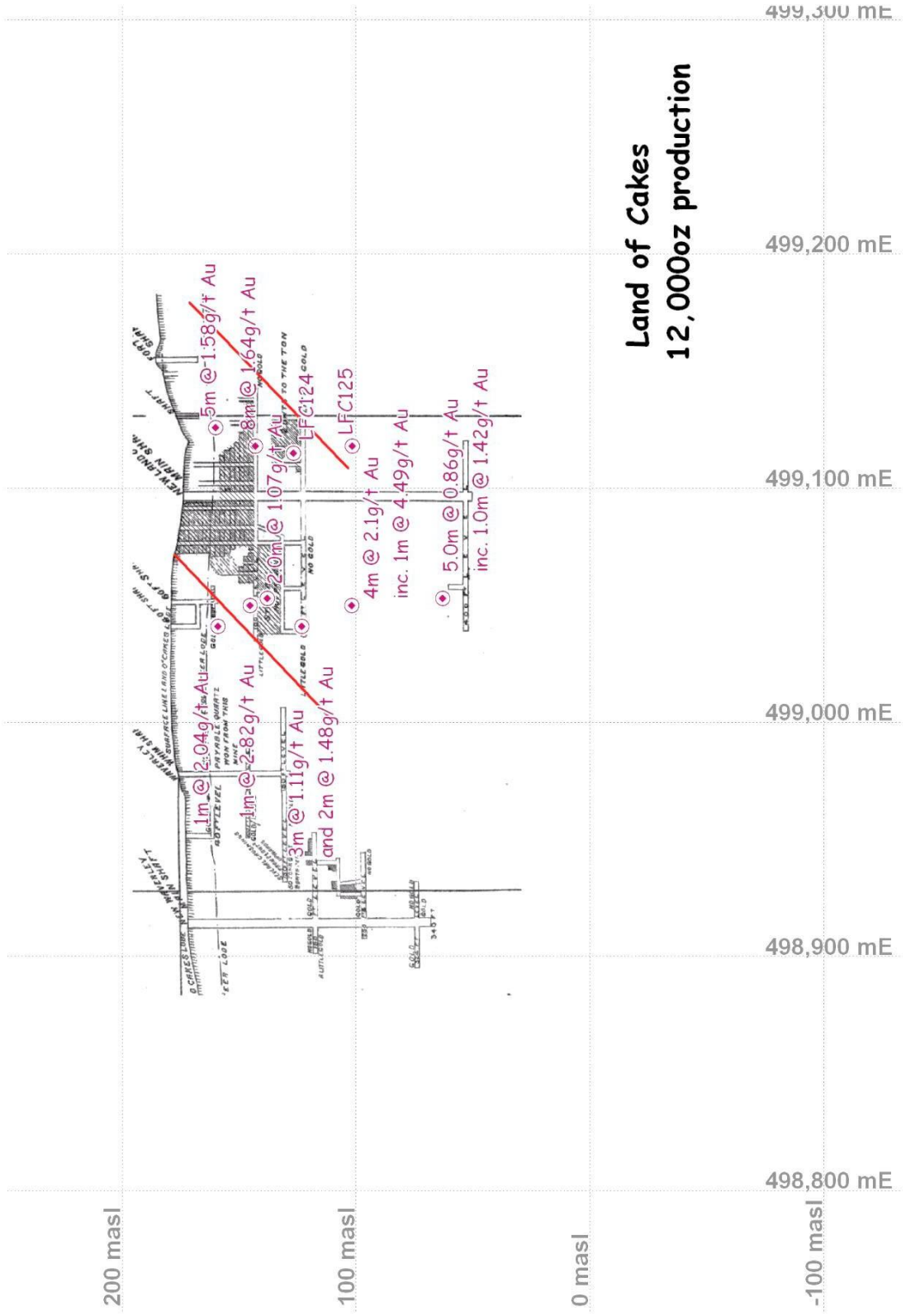

Figure 7 - : Land of Cakes mine long section view looking north. Maroon dots are drillhole intersections with the reef. Gold grades are downhole lengths.

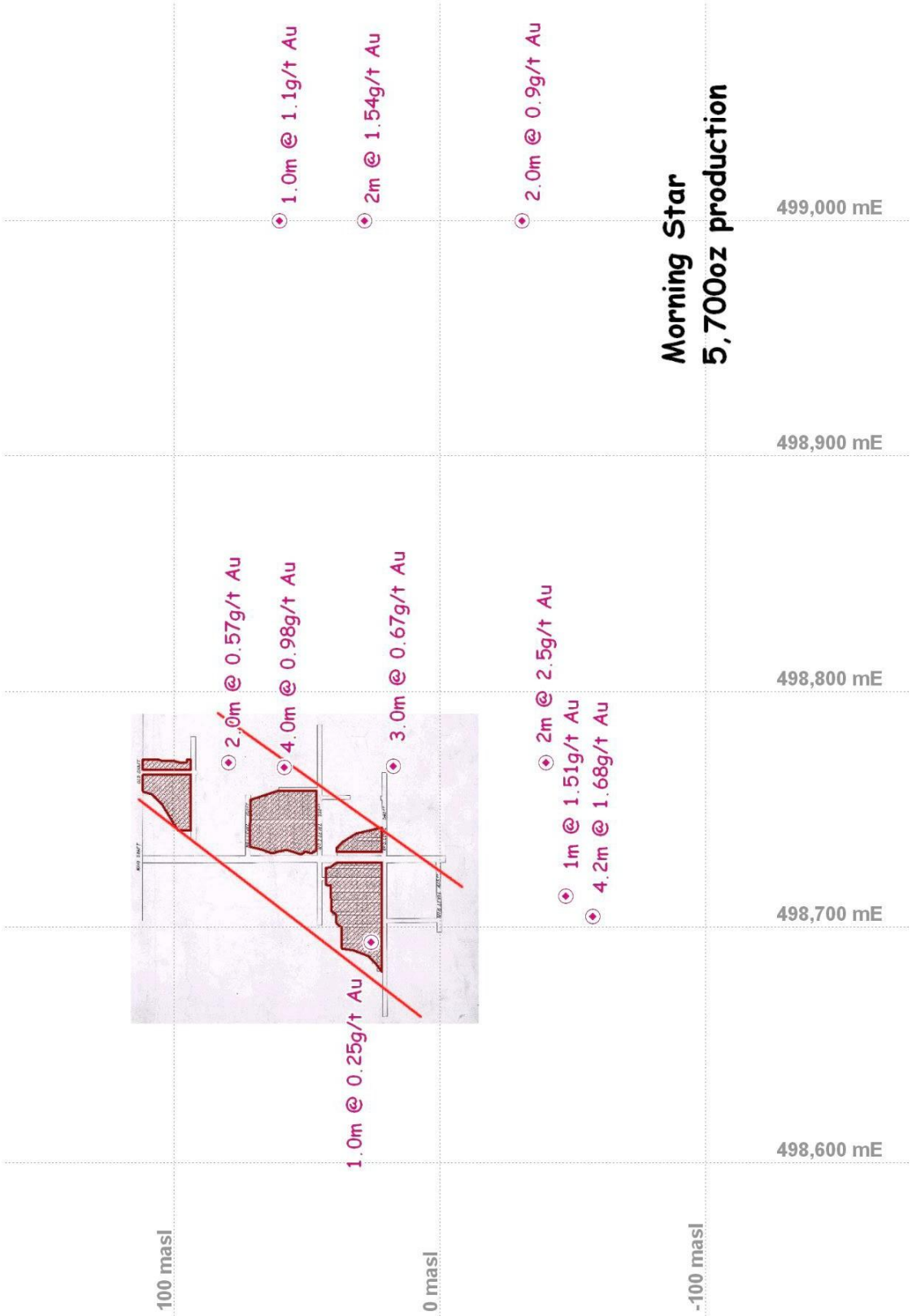

Figure 8 - Morning Star mine long section view looking north. Maroon dots are drillhole intersections with the reef. Gold grades are downhole lengths.

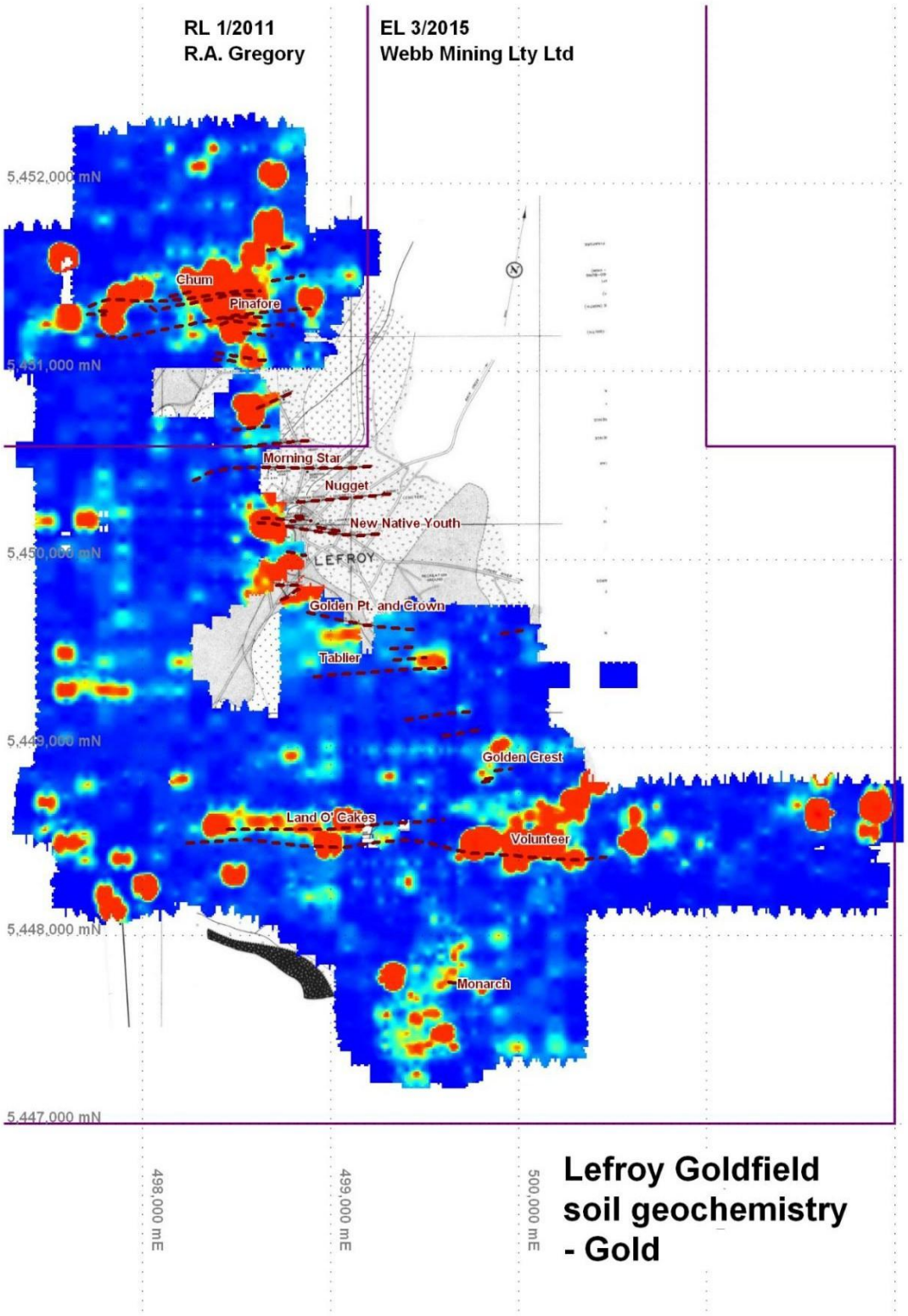

Figure 9 - Lefroy goldfield soil geochemistry – gold. (Red = hot = high grade, blue = cold = low grade).

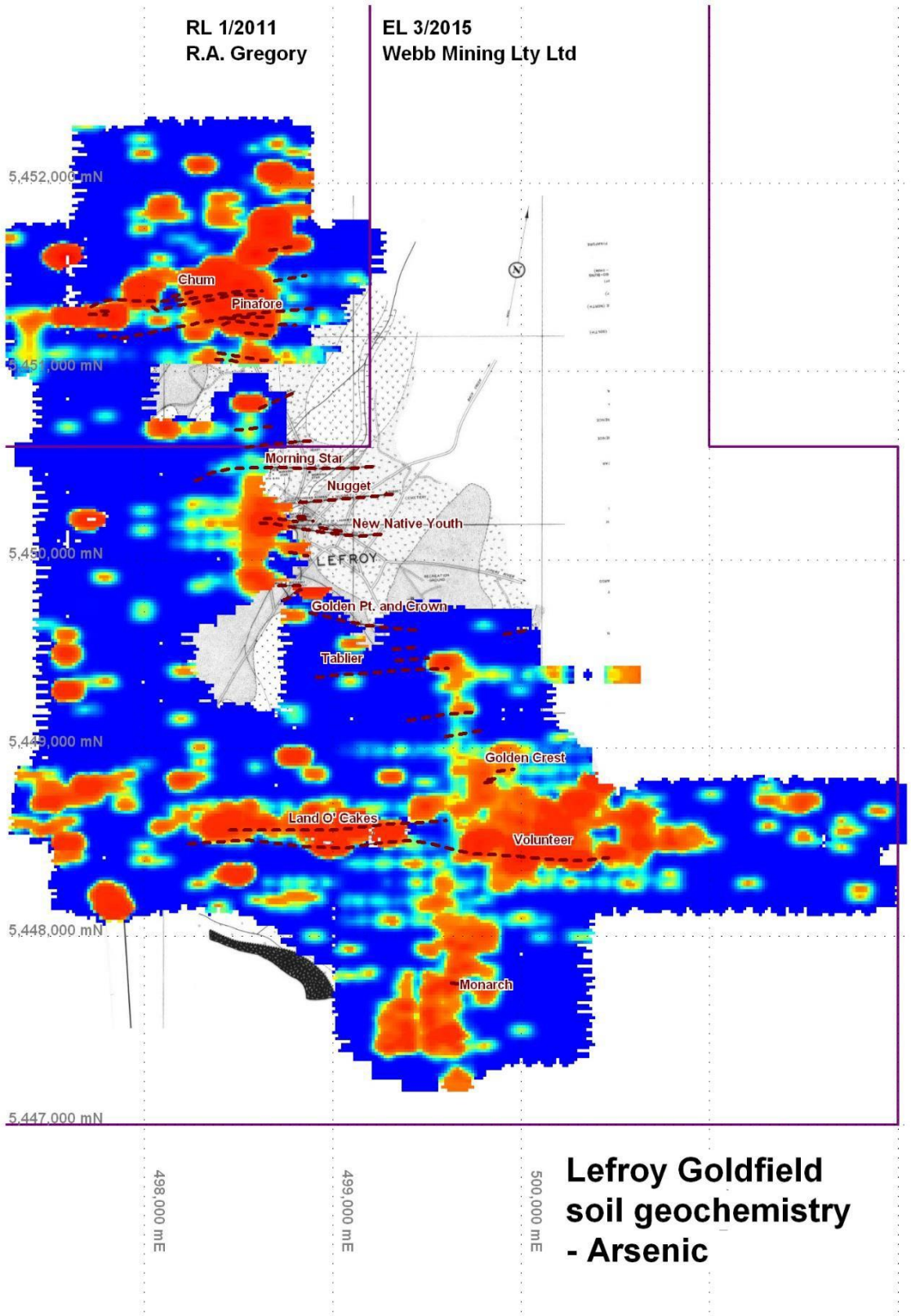

Figure 10 - Lefroy goldfield soil geochemistry – arsenic. (Red = hot = high grade, blue = cold = low grade, reproduced from Webb mining.)

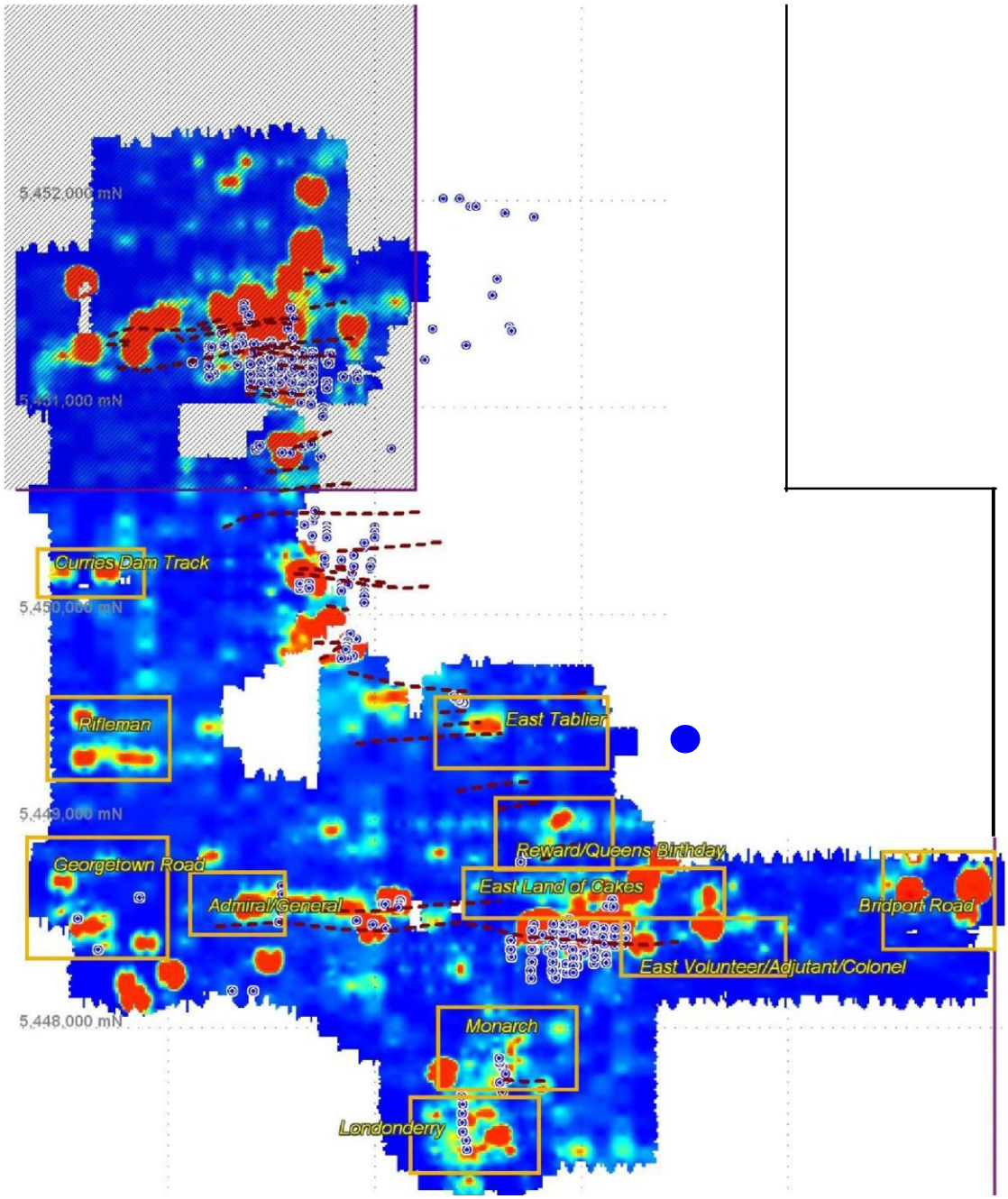

Figure 11 - Lefroy Goldfield - Soil Anomaly Zones, Gold in Soils Image & Drillhole Collars

In 1983-85 Epoch Minerals Pty Ltd carried out systematic sampling in the Lefroy Goldfield with a focus on alluvium and historical battery sands (Murdoch, 1984a & b; Murdoch, 1985)

They constructed a small treatment plant north of the town to which battery sands from a number of the old mines were transported. This material was later retreated at the Beaconsfield mill by BCD Resources though some material apparently still remains at Lefroy.

However, the New Native Youth mine battery sands were not mined and treated at the plant remaining untouched.

Murdoch (1984b) shows the location of two tailings 'heaps' south of the Excelsior shaft and associated old battery which is believed to also be the New Native Youth's battery (figure 2.9).

The areally smaller but volumetrically larger (?) "sands tailings" lies adjacent to the old rail haulage line. The areally larger but thin "old tailings" lies just to the east of this (figures 2.9, 2.10 and 2.11).

The "sands tailings" is an overgrown heap about 3-4m deep. The "old tailings" is overgrown also but has no topographic profile. Only the "sands tailings" dump was prioritised for sampling in the first instance.

23 samples were collected. Of these 15 (LF1 – LF6, LF12 – LF14 and LF18 – LF23) were collected as augered holes into the top of the main heap with the other 8 (LF7, LF8 - LF11 and LF15 - LF17) collected in two separate contiguous channel samples down the side of the main heap using a small mattock.

Samples were nominally 1kg in weight and were fire assayed for gold at ALS Burnie.

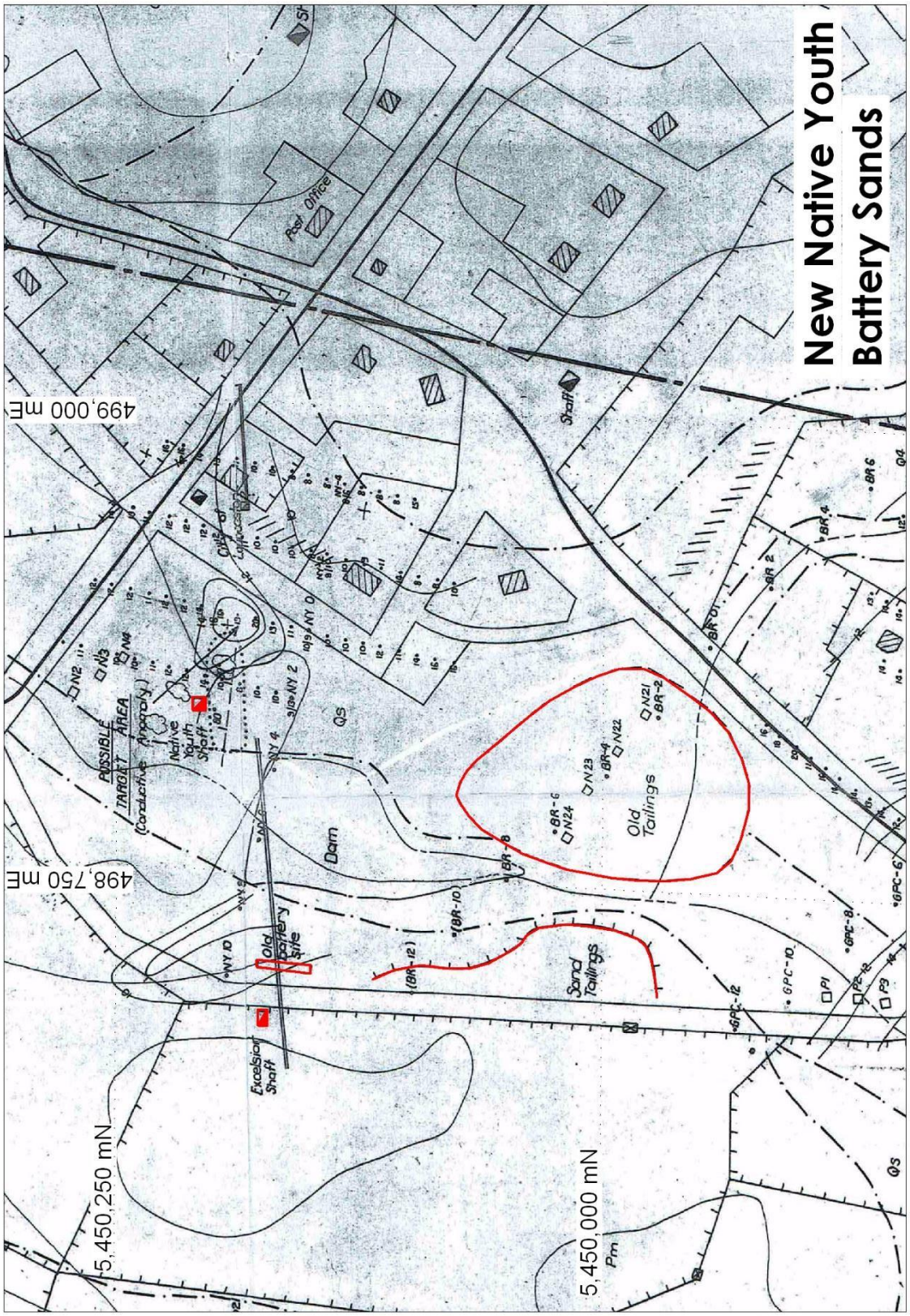

Figure 12 - New Native Youth battery sands location on Murdoch (1985a) figure 5. Red outlines define the "sands tailings" and "old tailings". Also shown is Native Youth and Excelsior shafts and old battery location.

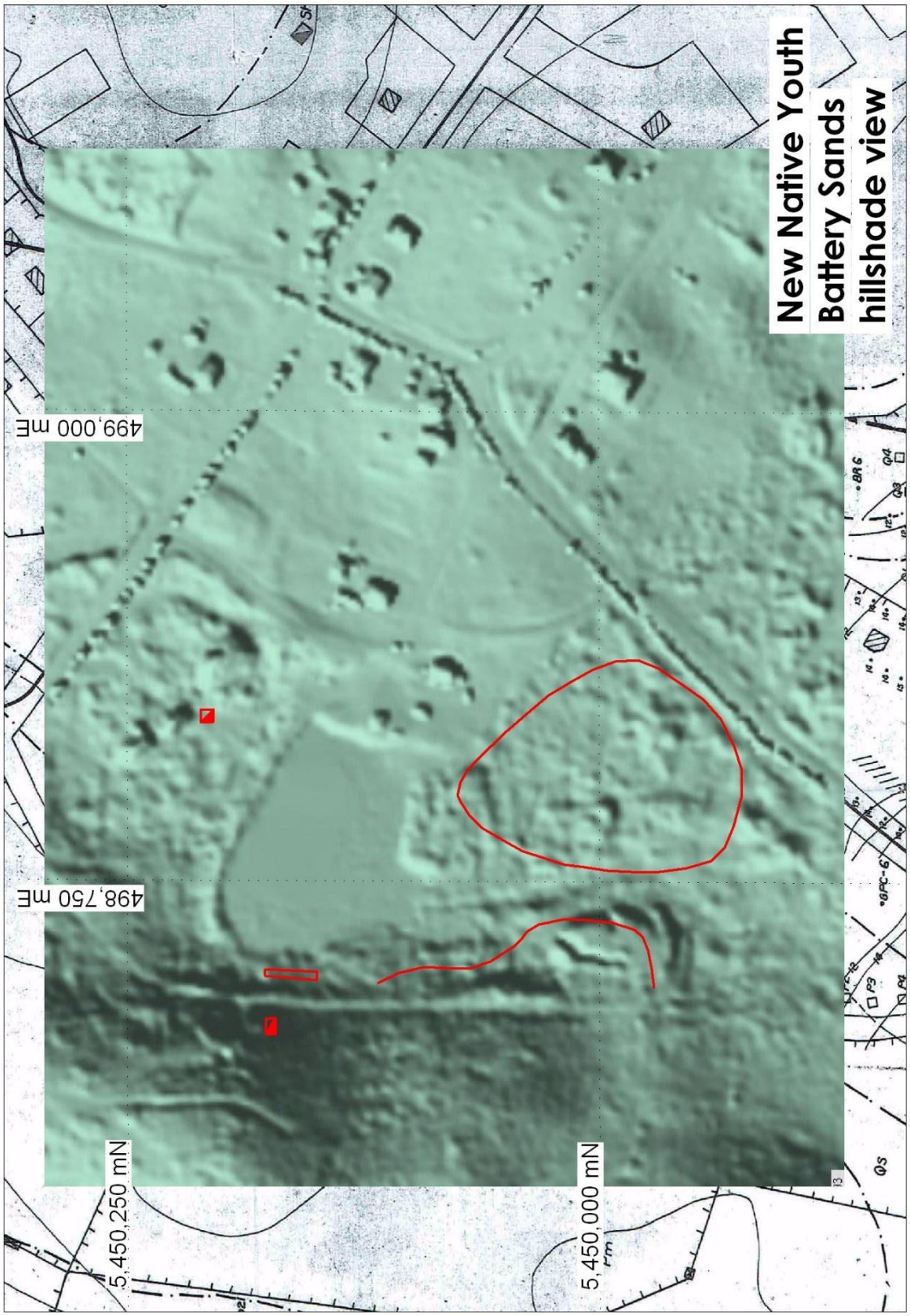

Figure 13 - New Native Youth battery sands location on hillshade image. Red outlines define the "sands tailings" and "old tailings". Also shown is Native Youth and Excelsior shafts and old battery location.

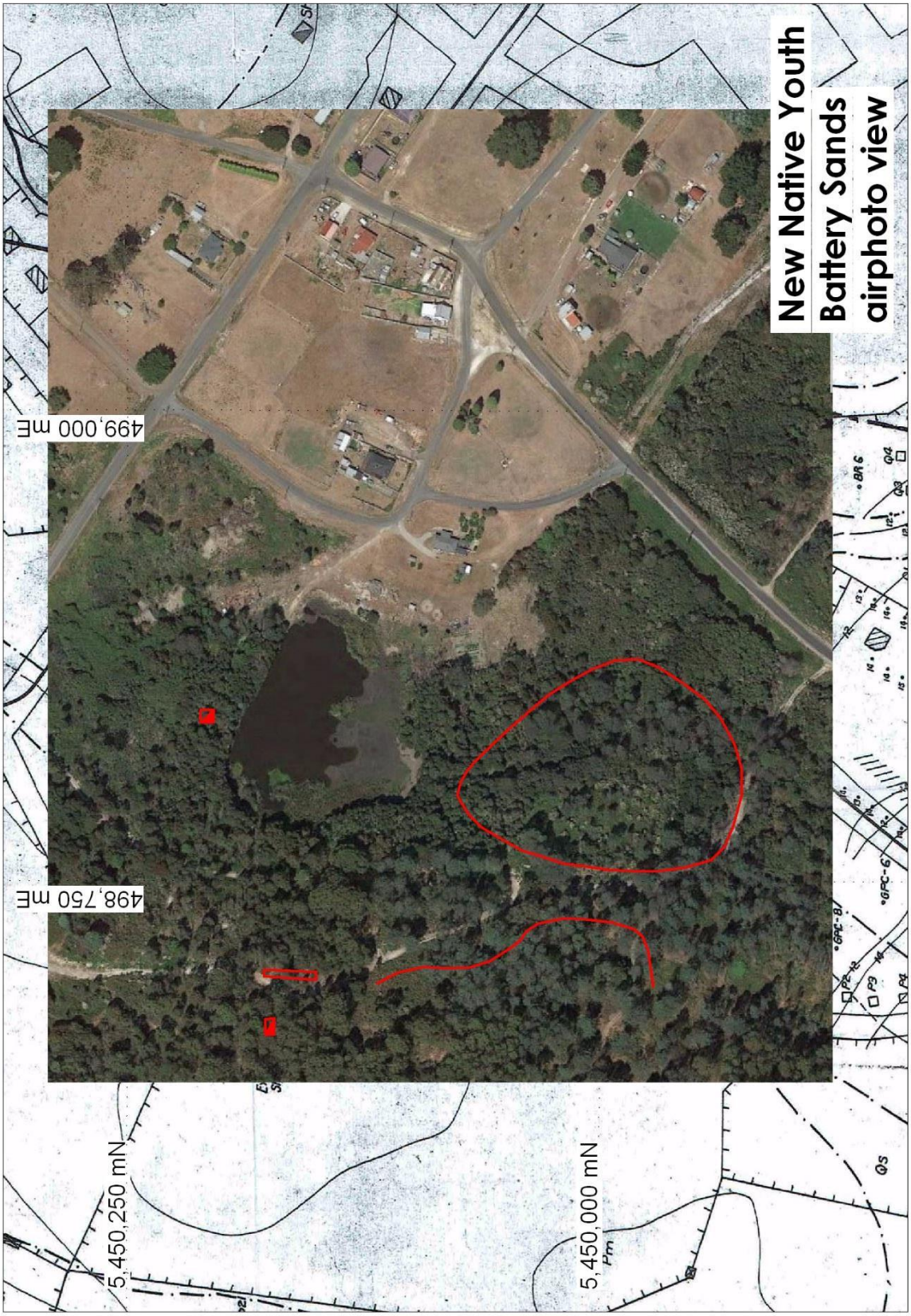

Figure 14 - New Native Youth battery sands location on airphoto. Red outlines define the "sands tailings" and "old tailings". Also shown is Native Youth and Excelsior shafts and old battery location.

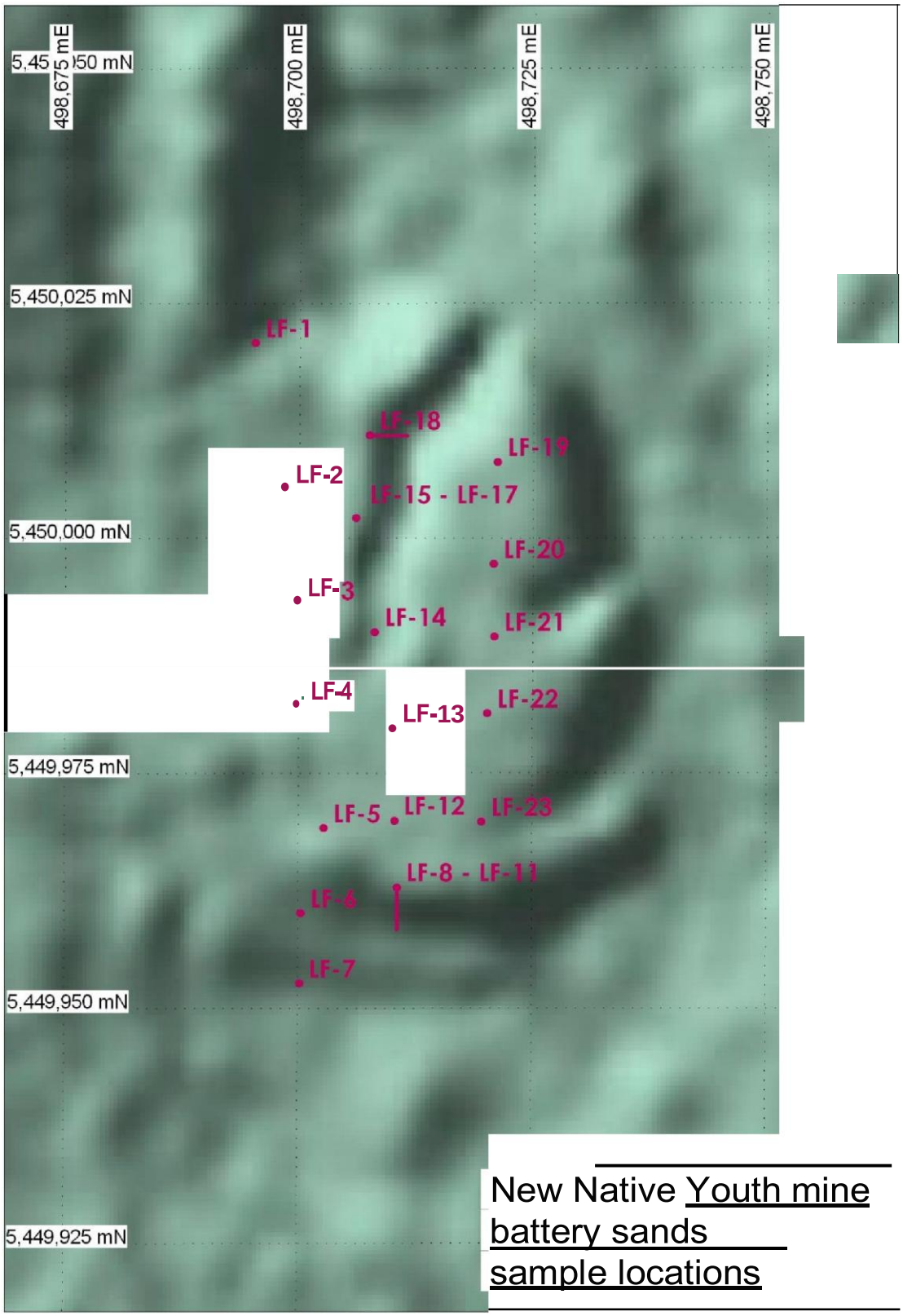

Figure 15 - New Native Youth battery sands sample locations on hillshade.

The battery sands assayed quite consistently ranging from 0.57g/t Au to 3.3g/t Au with a length weighted mean of 1.9g/t Au.

Results are summarised in table 3 and shown

The heap is approximately 60m long x 30m wide and is estimated as averaging 3m deep (this requires confirmation). Using an s.g. of 2.5t/m3 there are possibly 13,500t containing 820 ounces of gold. This is not a JORC compliant resource requiring sampling of the deeper part of the heap and confirmation of volume for classification of an inferred resource.

Table 3 - Sampling conducted by Webb mining

Sample no.	type	MGA94_east	MGA94_north	from	to	length	Au g/t	weighted assay
LF-1	augered hole	498695.24	5450020.73	0	0.8	0.8	2.41	0.8m @ 2.41g/t Au
LF-2	augered hole	498698.56	5450004.9	0	0.6	0.6	1.65	0.6m @ 1.65g/t Au
LF-3	augered hole	498699.88	5449992.76	0	0.6	0.6	2.05	0.6m @ 2.05g/t Au
LF-4	augered hole	498699.92	5449981.97	0.5	1.1	0.6	1.56	0.6m @ 1.56g/t Au
LF-5	augered hole	498702.77	5449969.12	0	0.6	0.6	1.22	0.6m @ 1.22g/t Au
LF-6	augered hole	498700.36	5449960.05	1	1.6	0.6	2.9	0.6m @ 2.9g/t Au
LF-12	augered hole	498710.29	5449969.9	0	0.6	0.6	1.14	0.6m @ 1.14g/t Au
LF-13	augered hole	498710.16	5449979.6	0	0.6	0.6	1.78	0.6m @ 1.78g/t Au
LF-14	augered hole	498708.13	5449989.95	0	0.6	0.6	3.2	0.6m @ 3.2g/t Au
LF-18	augered hole	498707.51	5450010.89	0	0.6	0.6	1.79	0.6m @ 1.79g/t Au
LF-19	augered hole	498721.2	5450008.06	0	0.6	0.6	1.39	0.6m @ 1.39g/t Au
LF-20	augered hole	498720.79	5449997.18	0	0.6	0.6	1.48	0.6m @ 1.48g/t Au
LF-21	augered hole	498720.9	5449989.45	0	0.6	0.6	1.88	0.6m @ 1.88g/t Au
LF-22	augered hole	498720.21	5449981.28	0	0.6	0.6	1.64	0.6m @ 1.64g/t Au
LF-23	augered hole	498719.62	5449969.78	0	0.6	0.6	2.08	0.6m @ 2.08g/t Au
LF-7	channel	498700.21	5449952.59	2	3	1	1.57	1m @ 1.57g/t Au
LF-8	channel	498710.59	5449962.8	3	3.5	0.5	0.57	
LF-9	channel	498710.59	5449962.8	2	3	1	1.51	
LF-10	channel	498710.59	5449962.8	0	1	1	1.53	
LF-11	channel	498710.59	5449962.8	1	2	1	1.65	4.975m @ 1.42g/t Au
LF-15	channel	498706.1	5450002.09	2	2.3	0.3	1.69	
LF-16	channel	498706.1	5450002.09	0	1	1	3.3	
LF-17	channel	498706.1	5450002.09	1	2	1	2.46	2.3m @ 2.72g/t Au

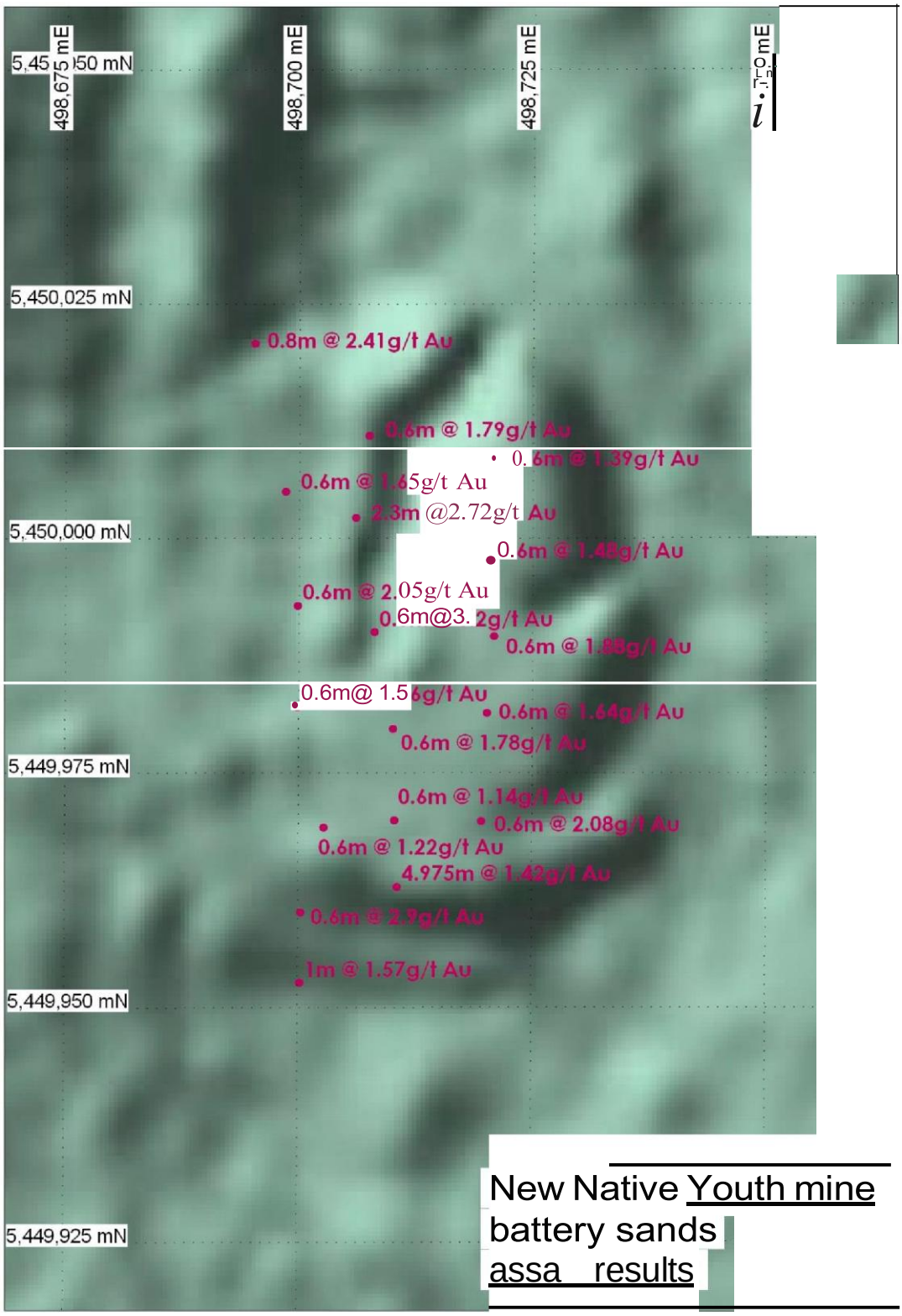

Figure 16 - New Native Youth battery sands sample locations on hillshade

4 Exploration completed during the reporting period

There was no exploration work carried out during the reporting year.

5 Results

There are no results to discuss.

3.0 Environmental Management

There are no outstanding environmental issues.

6 References

Askins P.W. (1977) Lefroy Project: FINAL REPORT ON E.L. 26/76 LEFROY

Baxter J. (2006) Lefroy Project: An Upgrade of the Structural Geology of the Lefroy Goldfield Based on a Review of Surface Mapping (May, 2006) and Historical Work

Baxter J. & Fulton R. (2006a) Lefroy Project: Structural Geology Review Lefroy Goldfield Based on Pinafore Drilling, Surface Mapping and Historical Work

Baxter J. & Fulton R. (2006b) Lefroy Project: Review of Native Youth and Volunteer, Lefroy Goldfield Based on Drilling to August, 2006

Broadbent G. (1983) Lefroy Project: PIPERS RIVER EL 53/80 GEOLOGICAL REPORT FOR YEAR ENDING 17th DECEMBER, 1982. CRA EXPLORATION PTY. LIMITED.

Canaris J., Lloyd C., Bradley K. & Baxter J. (2005) Lefroy Project: Exploration Potential

Canaris J. Lloyd C. Bradley K. Baxter J. (2006) Lefroy Project: ELs 35/2001, 2/2002, 43/2003, 44/2003, 45/2003, 39/2004, 12/2006, 13/2006 Combined Annual Report 2006

Hills P.B. (2000) Lefroy Project: Annual and Final Report – Lefroy EL 1/95, Allstate Explorations NL.

Keele R.A. (1995) Lefroy Project: Ann Rept Exploration EL 21_94 Bell Bay and 22_94 Pipers River CKGM

Keele R.A. (1996) Lefroy Project: Ann Rept Lefroy EL 1_95 CKGM 96-3852

Keele, R.A. (2004) Lefroy Project: EL 2/2002 Annual Report

Lloyd C. & Baxter J. (2007) Lefroy Project: Project Review and Recommendations

Lloyd C. (2007) Lefroy Project: Combined Annual Technical Report LEFROY PROJECT EL35/2001, 2/2002, 43/2003, 44/2003, 45/2003, 39/2004, 12/2006, 13/2006, 30/2006, 13/2007, 16M/1991

Lloyd C., Canaris J., Bradley K. & Baxter J. (2005) Lefroy Project: Inferred Resource Estimation Report Pinafore “Underground”

Lloyd C., Canaris J., Bradley K. & Baxter J. (2006a) Lefroy Project: Inferred Resource Estimation Report Pinafore “Open Pitable”

Lloyd C., Canaris J., Bradley K. & Baxter J. (2006b) Lefroy Project: Inferred Resource Estimation Report Pinafore “Tailings”

Lloyd C., Fulton R., Bradley K. & Baxter J. J. (2006) Lefroy Project: Exploration Model

McClenaghan, M.P. (1993). A summary of the Beaconsfield, Lefroy, Back Creek and Gladstone goldfields. *Min. Res. Tasm. 1994/03*

MacDonald, G. (2016). EL 3/2015 “Lefroy”, Annual Report on Exploration 27th May 2015 to 27th May 2016, unpub. report to Mineral Resources Tasmania for Webb Mining Pty Ltd

MacDonald, G. (2017). EL 3/2015 “Lefroy”, Annual Report on Exploration 27th May 2016 to 27th May 2017, unpub. report to Mineral Resources Tasmania for Webb Mining Pty Ltd

MacDonald, G. (2018). EL 3/2015 “Lefroy”, Annual Report on Exploration 27th May 2017 to 27th May 2018, unpub. report to Mineral Resources Tasmania for Webb Mining Pty Ltd

Morrison K.C. (2008) Lefroy Project: Lefroy Project ann rept

Morrison K.C. (2009) Lefroy Project: Lefroy Project ann rept

Morrison K.C. (2010) Lefroy Project: 10_6141

Morrison K.C. (2012) Lefroy Project: Lefroy Project Final Report

Murdoch, R. (1984a) Report on first stage of alluvial exploration programme (November, 1983) Epoch Minerals

Murdoch, R. (1984b) Report on second stage of alluvial exploration at Lefroy, Tasmania Jan-March, 1984 for Epoch Mineral Exploration NL.

Murdoch, R. (1985) A feasibility study into the mining of alluvial gold over area 1, Lefroy, Tasmania prepared for Epoch Mineral Exploration NL.

Purvis J.G.P. (1997) Lefroy Project: Annual Report – Lefroy EL 1/95, Allstate Explorations NL.

Purvis J.G.P. (1998) Lefroy Project: Annual Report – Lefroy EL 1/95, Lefroy Joint Venture.

Purvis J.G.P. (1999) Lefroy Project: Annual Report – Lefroy EL 1/95, Allstate Explorations NL.

Reed A.R. (2001) Lefroy Project: Pre-Tabberabberan deformation in eastern Tasmania: extension of the Benambran Orogeny. AJES 48; 785 – 796.

Reed A.R. (2002a) Lefroy Project: Formation of Lode-style gold mineralisation during Tabberabberan wrench faulting at Lefroy, eastern Tasmania, Aust. J. of Earth Sciences.

Reed A.R. (2002b) Lefroy Project: Targeting Hard-Rock Gold Mineralisation at Lefroy, Northeastern, Tasmania, Australia. Sapphire Trading In-House Confidential GIS.

Reed A.R. (2004) Lefroy Project: Gold mineralisation and the regional Palaeozoic structure of the Mathinna Supergroup, eastern Tasmania: Mineral Resources Tasmania, Tasmanian Geological Survey Record 2004/01

Vines (2006a) Lefroy Project: Pinafore Heritage Assessment

Vines (2006b) Lefroy Project: Native Youth Heritage Assessment

William, P., Bucci., L., Guibal D., Morley, A., Roberts, A., Simpson, R., (2005) Lefroy Project: SRK Project LFR001 Phases 1 & 2 - Geological Modelling and Geostatistical Review

[1]: https://robin-cartledge.blogspot.com/2014/05/gold-gold-gold-fossicking-at-lefroy.html?utm_source=chatgpt.com "Gold, gold, gold! Fossicking at Lefroy - Blogger"
[2]: https://howtofindgoldnuggets.com/gold-prospecting-tasmania/?utm_source=chatgpt.com "Gold Prospecting in Tasmania - How to Find Gold Nuggets"
[3]: https://www.youtube.com/watch?v=PR5smpuOSr8&utm_source=chatgpt.com "Gold Hot Spots of Australia - Lefroy, Tasmania - YouTube"
[4]: https://www.tysaustralia.com/goldrushtasmania.html?utm_source=chatgpt.com "Gold Rush Tasmania - locations, mines, rewards, find, Tasmanian gold rush."
[5]: https://www.academia.edu/1950200/Pinafore_Gold_Mine_Site_Heritage_Assessment_Lefroy_Tasmania?utm_source=chatgpt.com "Pinafore Gold Mine Site Heritage Assessment, Lefroy, Tasmania"
[6]: https://www.goldrushnuggets.com/eagorutota.html?viewfullsite=1&utm_source=chatgpt.com "Early Gold Rushes to Tasmania - Gold Rush Nuggets"