EL18/2018
TELEGRAPH CREEK, TASMANIA

FIRST ANNUAL REPORT

FOR THE YEAR ENDED
27 MARCH 2020

LICENSEE:
PACIFIC TRENDS RESOURCES PTY LTD
IN JOINT VENTURE WITH:
KINGFISHER EXPLORATION PTY LTD

Prepared by:
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March 2020

TASMETALS
JOINT VENTURE

EXECUTIVE SUMMARY

EL18/2018 covers 94 square kilometers of ground in the vicinity of Telegraph Creek, near Gladstone in NE Tasmania that is considered prospective for orogenic gold style deposits. The project is currently operated and funded through the Tasmetals Farm-in and Joint Venture (Tasmetals JV) between Kingfisher Exploration Pty Ltd (KFE) and Pacific Trends Resources Pty Ltd (PTR). PTR is wholly funding the exploration programs. This report documents exploration activities carried out in the first year of tenure during the period 28th March 2019 to 27th March 2020.

Exploration activity undertaken for EL18/2018 during the reporting period included:

- Historical prospecting/exploration activity data search;
- Reprocessing and imaging of regional gravity and airborne magnetic data;
- Desktop review and target generation;
- Land owner notifications commenced.

Interpretation from imaged magnetic data indicates significant NNW- and NW-trending structures traverse the project area. Several large magnetic features trend parallel to the interpreted NNW structures and are hosted in a wedge of Mathinna Group sediments bounded by the Gardens Pluton to the west and the Eddystone Batholith granites to the east. Modelling of these magnetic features indicates a series of steeply dipping tabular magnetic bodies with magnetic susceptibilities ranging from 2 to 3 orders of magnitude higher than normal Mathinna Group sediment ranges. This would be consistent with magnetite or pyrrhotite alteration of discrete beds or units within the Mathinna Group sediments but could also be explained by basalt or dolerite bodies. Geological mapping is required to properly assess these features.

Land owner notification and the reconnaissance mapping program that had been planned for early-2020 was delayed due to the coronavirus COVID19 situation and is anticipated to commence in year 2 of the licence tenure.

Recommendations for exploration work during the second year of tenure include:

- Geological reconnaissance and district-scale mapping and sampling, with priority to investigate the NNW-trending magnetic features;
- Soil sampling grids over prospective areas if identified from the reconnaissance geological mapping and sampling;
- Possible trenching pending results of geological mapping and soil sampling.

Land owner notifications will be re-commenced in during mid-2020 with a view to start the field mapping program as soon as personnel availability permits and restrictions related to the coronavirus are eased.

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1 INTRODUCTION

This report is the first Annual Report for EL18/2018 located near Gladstone in NE Tasmania (Figure 1). EL18/2018 covers 92 square kilometers of ground that is considered prospective for orogenic gold deposits based on proximity to mineralisation in the adjacent EL11/2012 and EL18/2016. This report documents exploration activities completed over the 12 months ending 27th March 2020 (the Reporting Period).

EL18/2018 and the two adjacent EL's 11/2012 and 18/2016 altogether make up the Portland Gold Project.

The project is currently operated and funded through the Tasmetals Farm-in and Joint Venture (Tasmetals JV) between Kingfisher Exploration Pty Ltd (KFE) and Pacific Trends Resources Pty Ltd (PTR). PTR is wholly funding the exploration programs.

All maps and location coordinates contained within this report are presented in GDA94 datum format unless otherwise noted.

1.1 EXPLORATION RATIONALE

The main exploration target for EL18/2018 is for Victorian-style, turbidite-hosted orogenic gold deposits. Numerous studies indicate that northeastern Tasmania can be interpreted to represent a lateral equivalent of the turbidite-dominated fold-thrust belt of the western Lachlan Orogen in central Victoria (e.g. Bierlein et al, 2005). The turbidite successions of northeastern Tasmania are host to extensive orogenic style gold mineralisation and numerous historical goldfields but are largely un-explored compared to the Victorian goldfields.

Recent work by Tasmetals JV within the adjacent EL11/2012 and EL18/2016 has identified multiple exploration targets and the EL18/2018 has been acquired to test for a possible eastwards continuation of the system.

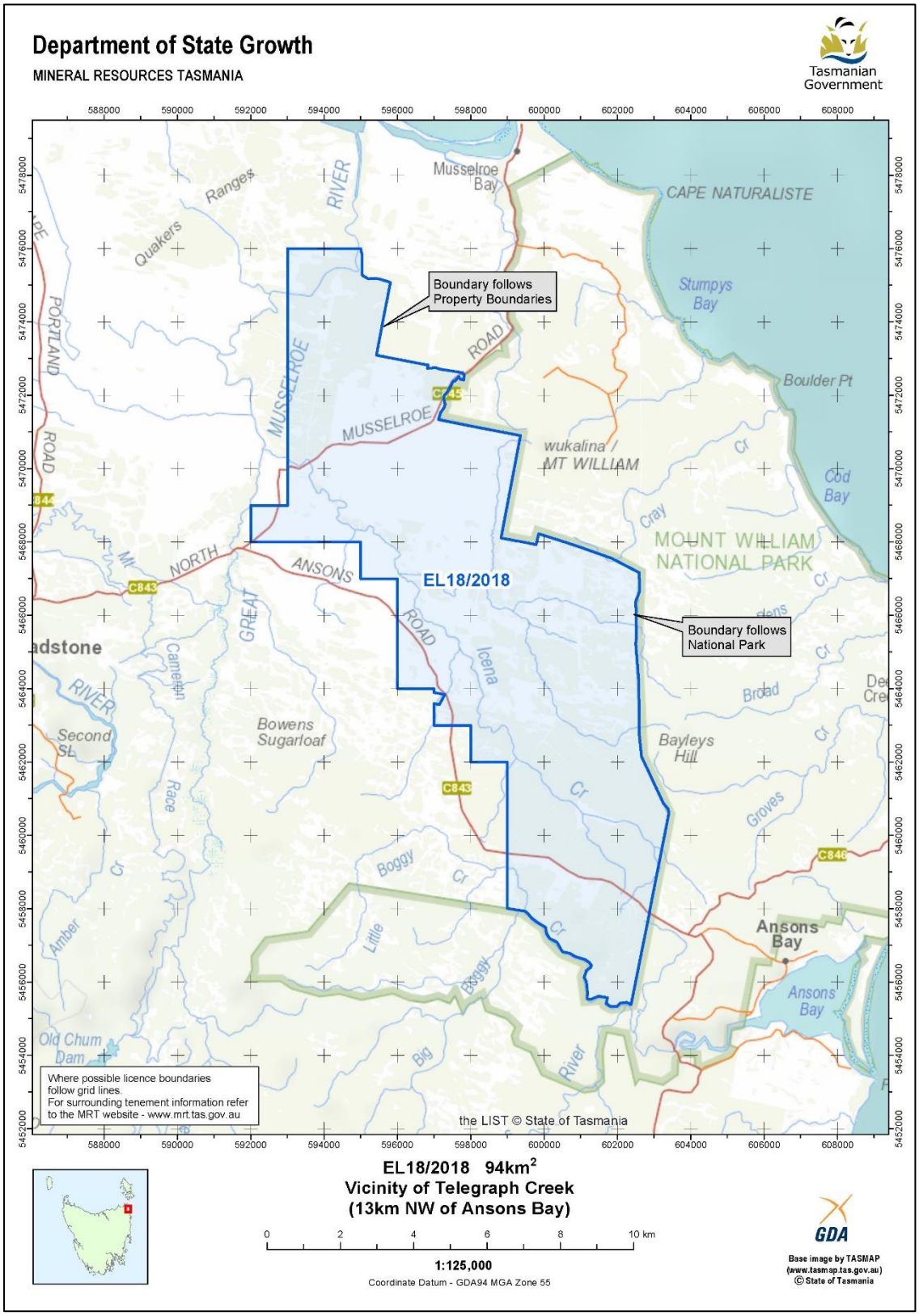

Figure 1. Location plan showing the EL18/2018 tenement area.

1.2 GEOLOGICAL SETTING

Figure 2 shows the simplified geology of the EL18/2018 tenement and Portland Gold Project area.

The Paleozoic geology of northeastern Tasmania comprises a 5 to 7 km thick, deformed sequence of Ordovician-Silurian (to early Devonian) aged turbidites known as the Mathinna Supergroup (or “Mathinna Group”). Rocks of the Mathinna Group were folded and metamorphosed to sub- to mid-greenschist facies during the Early to Middle Devonian. Several extensive S- and I-type granitoid batholiths (namely the Scottsdale, Blue Tier and Eddystone Batholiths) intruded the Mathinna Supergroup during Late Devonian times (around 400 Ma to 375 Ma). The granitoids are surrounded by narrow metamorphic aureoles indicative of intrusion at relatively high crustal levels. The Mathinna Supergroup and granitoid rocks are unconformably overlain by flat-lying Permo-Triassic rocks of the Parmeener Supergroup which are intruded by sills of Jurassic dolerite. Exhumation and weathering during the Tertiary was accompanied by basaltic volcanism.

Historical gold workings in the Gladstone-Portland district comprise gold-bearing quartz-sulphide vein lodes hosted within the deformed and metamorphosed turbidite shales, sandstones and quartzite of the Mathinna Supergroup sediments.

Aeromagnetic and radiometric surveys flown over the Gladstone-Portland district have assisted with interpretation of local- and district-scale structural trends within the Mathinna Group and boundaries with the Devonian granitoids and associated contact metamorphism. Significant variation in the magnetic properties of the Mathinna sediments appears to be due to metamorphic magnetite alteration of quartz phyllite units (Roach, 1990), and in some areas (EL11/2012) has allowed for magnetite-bearing marker units to be used to interpret folds and faults which are not immediately apparent at surface.

Large magnetic features identified within EL18/2018 are apparently hosted in hornfelsed Mathinna Supergroup rocks and suggest extensive magnetite alteration in the area. However, alternative magnetic source rocks such as basalt or dolerite have not been entirely ruled out.

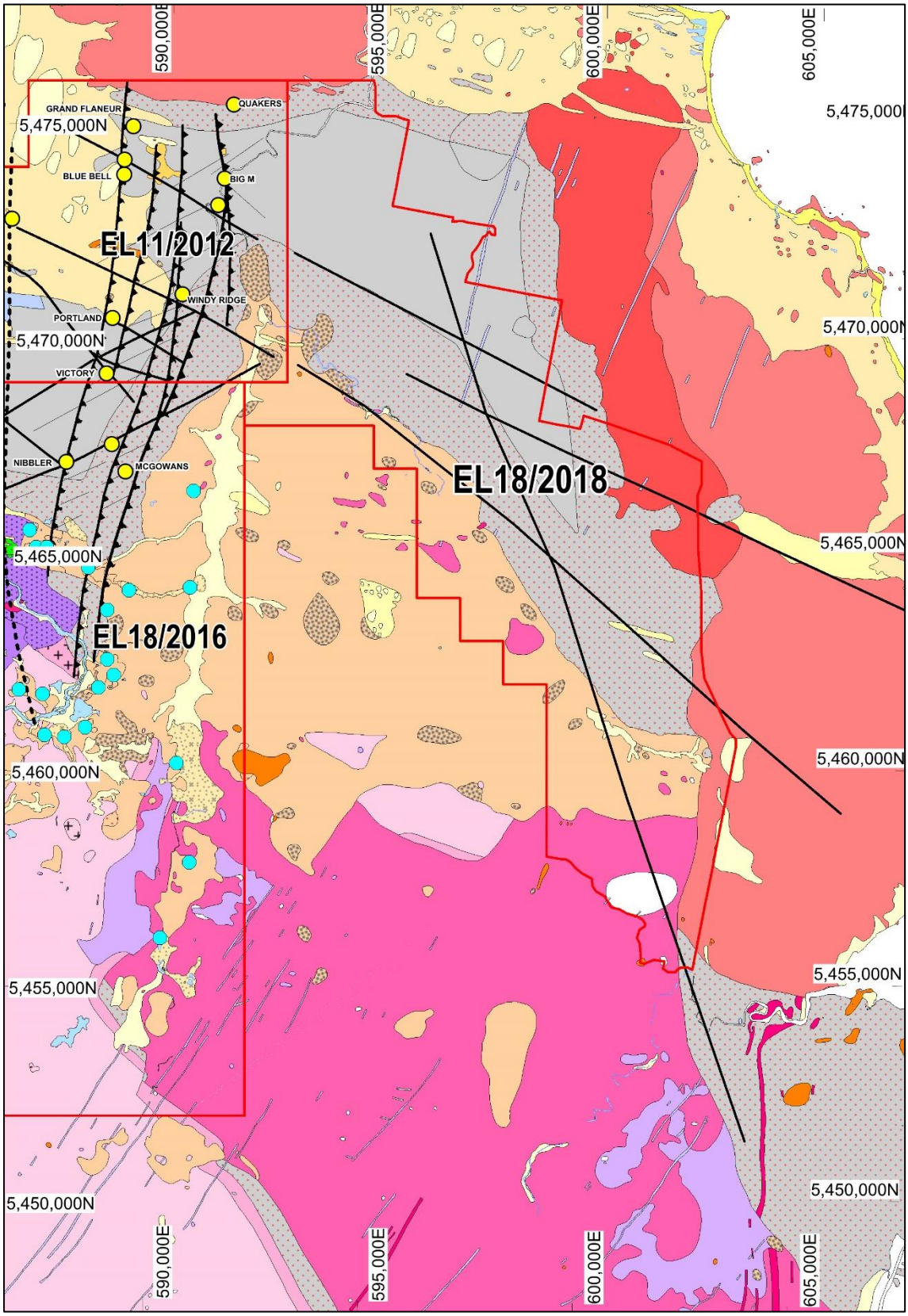

Figure 2. Geology map of the tenement area (adapted from the MRT 1:25,000 scale digital geology).

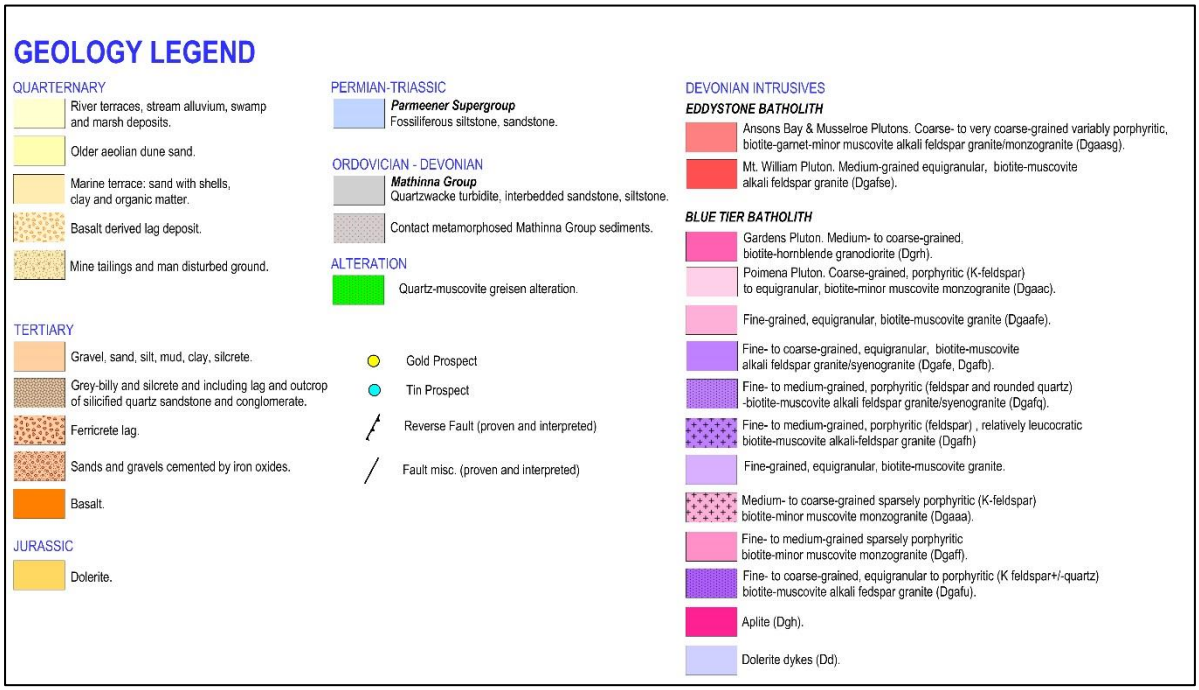

Figure 3. Explanatory legend for the geology map in Figure 2.

1.3 MINERALISATION STYLES

The Mathinna Group rocks in northeastern Tasmania are host to over 600 gold prospects and deposits, the most significant of which are Beaconsfield (3.25 Mt @ 19.0 g/t Au), the New Golden Gate mine (0.51 Mt @ 15.6 Mt Au) and Pinafore Reef, Lefroy (0.97 Mt @ 10.1 g/t Au). Most of the deposits are orogenic mesothermal to epizonal vein-style and occur in clusters along regional NNW trends. Intrusion-related gold (IRG) style mineralisation is noted to occur in the Lisle-Golconda and Golden Ridge areas. Significant Sn-W deposits are associated with S- and I-type granites and northeastern Tasmania was a historical tin mining region.

Orogenic style gold mineralisation in northeastern Tasmania is attributed to deformation, folding and peak orogeny in the Early to Middle Devonian, at about 390 Ma, with most of the vein deposits formed between 385 Ma and 395 Ma (Bierlein et al. 2005). An earlier phase (420-430 Ma) of gold mineralisation during the Silurian has also been noted in some deposits. Based on lithological, structural, tectonic and metallogenetic similarities, northeastern Tasmania has been interpreted as a lateral correlate of the turbidite-dominated fold-thrust belt of the western Lachlan Orogen in central Victoria (Bierlein et al. 2005). Timing of gold mineralisation in NE Tasmania shows a broad relationship to the epizonal Au-As-Sb deposits of central Victoria (Melbourne Zone) (Figure 4).

Gold mineralisation in the Portland area (EL's 11/2012 and 18/2016), adjacent to EL18/2018, shows a close association with arsenopyrite and to a lesser extent pyrite. These sulphides occur as fine- to coarse-grain euhedral disseminations throughout mineralised quartz veins and adjacent altered sediments. Many of the historical gold workings at Portland are located on or adjacent to interpreted fold axes and/or axial-planar N-S to NNE trending reverse fault structures. Extensive silicified, fractured/brecciated and quartz-veined sandstone units locally intersected these structural trends and form an important stratigraphic control/host to the Portland gold mineralisation (Westbrook, 2019).

Geochemistry of surface samples at Portland indicates an As-(Sb-Bi) association with gold mineralisation. The Au-As-Sb association and general timing of NE Tasmanian gold mineralisation has drawn comparisons with the epizonal gold system of central Victoria (Figure 4).

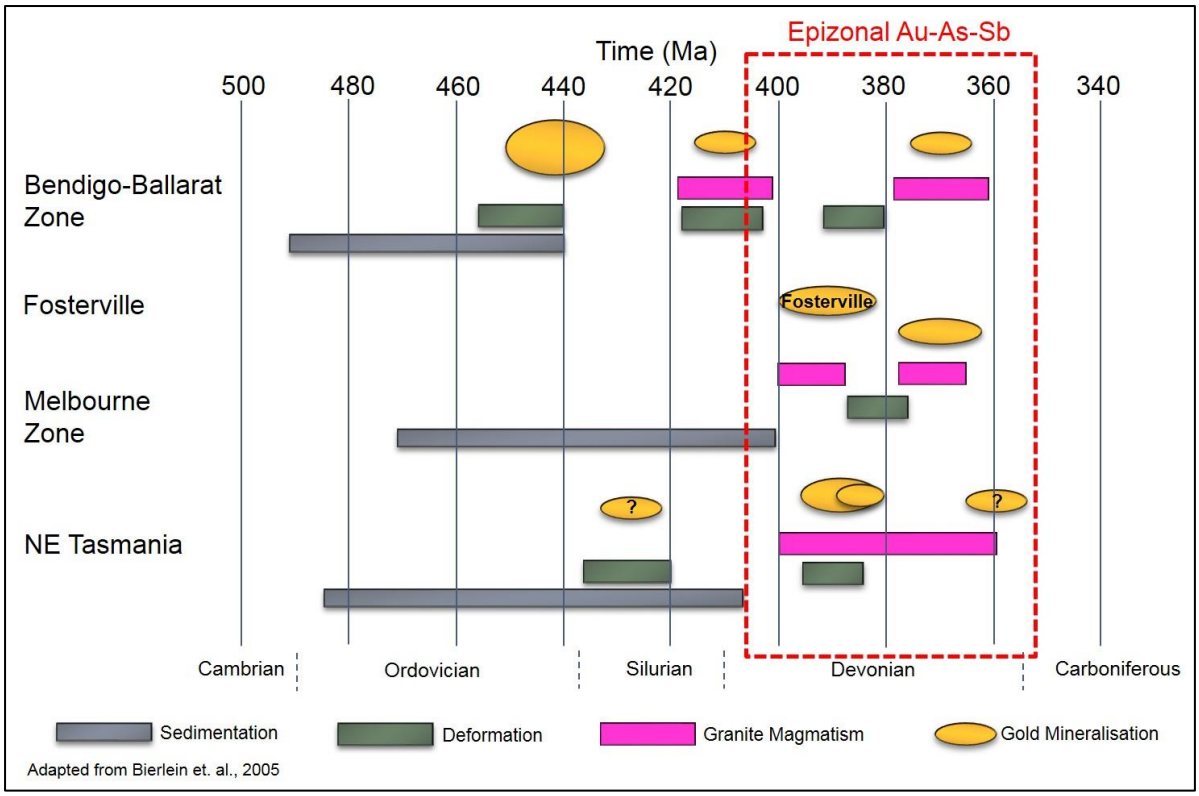

Figure 4. Summary diagram of the timing of sedimentation, deformation, granite magmatism and gold mineralisation events in central Victoria and NE Tasmania. Adapted from Bierlein et al (2005).

2 REVIEW OF PREVIOUS WORK

A search of available data has revealed no record of historical prospecting/mining or modern-day mineral exploration activity within the EL18/2018 area. There are no historical workings, economic mineral occurrences, or drillholes indicated from the MRT databases.

The area has been covered (or partly covered) by the following airborne geophysical surveys:

- 1985 Regional Tasmania airborne magnetics survey (AGSO) – 1500m line spacing;
- 1987 Gladstone airborne magnetic-radiometric survey (Placeco) – 125m line spacing;
- 2007 NE Tasmania airborne magnetic-radiometric survey (TGS) – 200m line spacing.

3 EXPLORATION COMPLETED DURING REPORTING PERIOD

Exploration activity undertaken during the reporting period included:

- Historical prospecting/exploration activity data search (see Section 2);
- Reprocessing, imaging and modelling of regional gravity and airborne magnetic data;
- Desktop review and target generation;
- Land owner notifications commenced.

3.1 GEOPHYSICAL DATA PROCESSING

Western Geophysics Pty Ltd (WGPX) were engaged by the Tasmetals JV to complete processing, analysis and interpretation of regional to district scale magnetic and gravity data obtained from open file sources covering northeast Tasmania and the Portland Gold Project area (report attached as Appendix I).

In a separate investigation, WGPX took a detailed look at the NNW-trending magnetic anomalies within the Mathinna Group sediments in EL18/2018 (report attached as Appendix II). WGPX concluded that based on model calculations using 3D inversion and forward methods, magnetic susceptibility values of the source bodies to the anomalies are 2 to 3 orders of magnitude higher than normal Mathinna Group sediment ranges and that magnetic anomalies with coincident gravity anomalies may suggest mass additional due to magnetite and/or pyrrhotite. Taking geological considerations into account, it is possible that at least some of these anomalies may be due to basalt or dolerite bodies, however, this was not considered by WGPX. Additionally, the gravity “anomalies” are not necessarily anomalous for Mathinna group sediments. Field reconnaissance is planned and will hopefully shed more light on the source of the magnetic features.

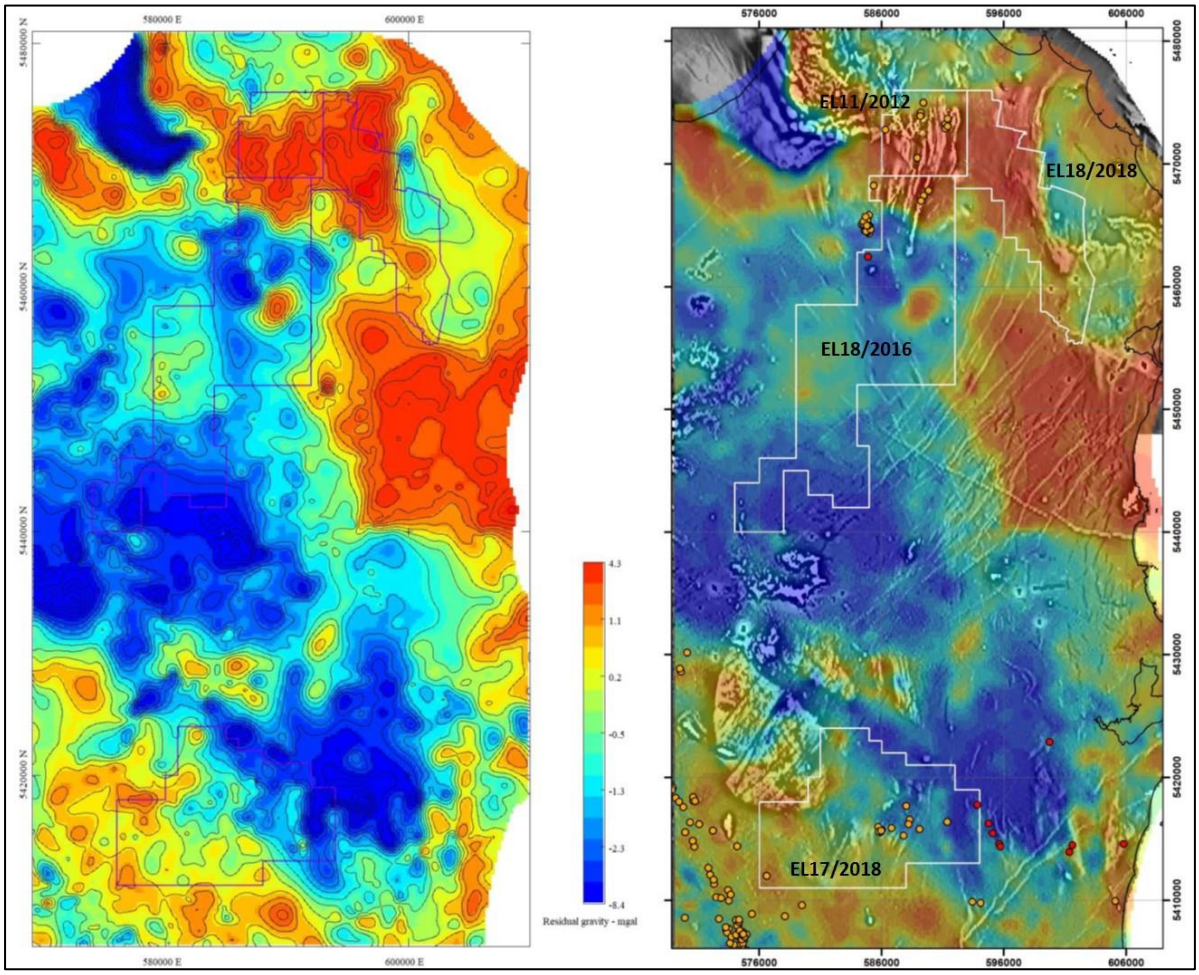

Figure 5. Images of regional residual gravity(left) and residual gravity with greyscale first vertical derivative magnetics (right). Gold occurrences shown as yellow circles.

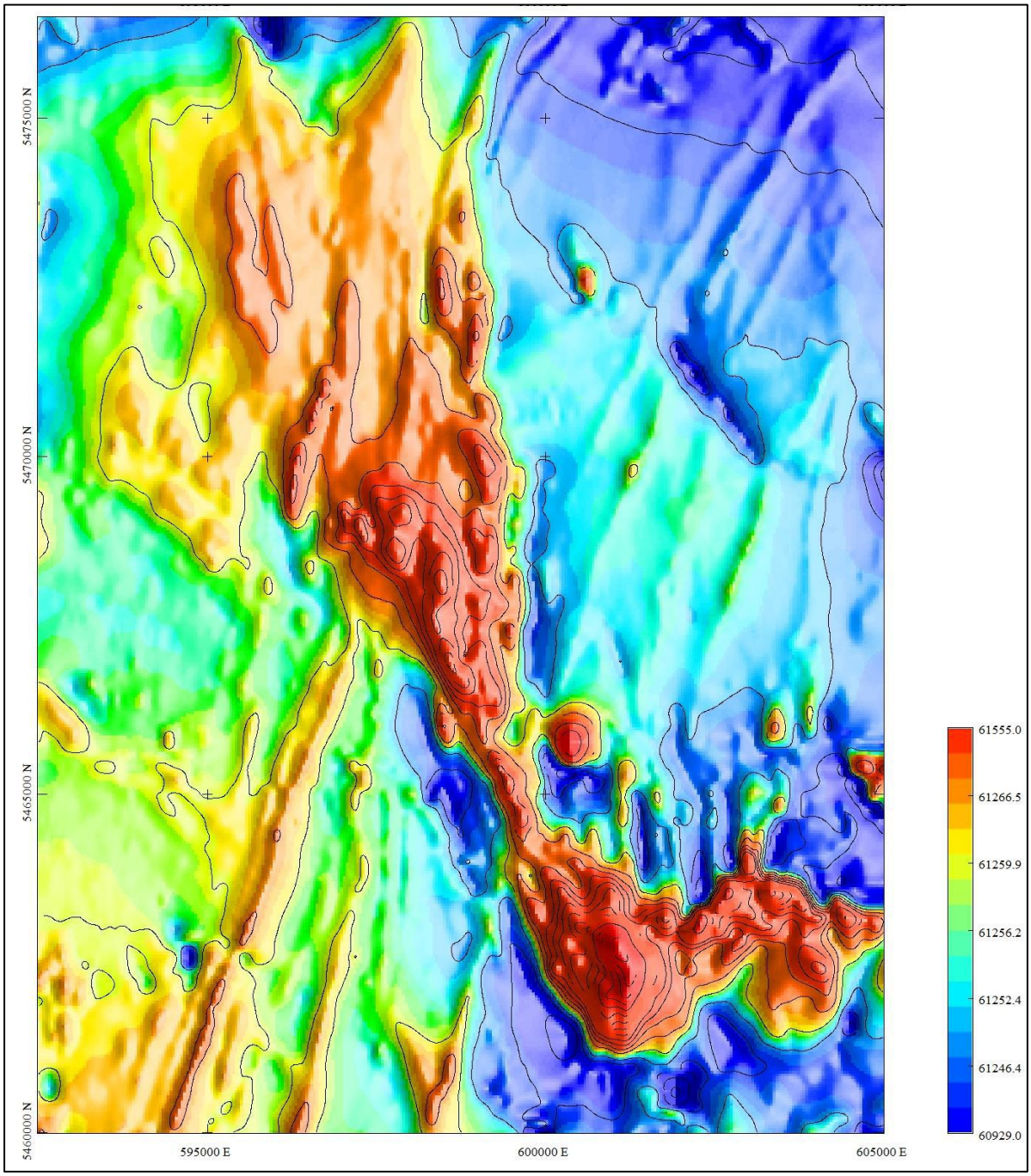

Figure 6. Imaged and contoured total magnetic intensity (TMI) showing the NW-trending magnetic features hosted in Mathinna Group sediments within EL18/2018.

3.2 DESKTOP REVIEW AND TARGETING

Due to the limited amount of historical data, desktop review and targeting was restricted to the available government geological and airborne geophysical data sets.

The large magnetic features above are the obvious priority targets to be assessed with field reconnaissance mapping and sampling. Otherwise, given the group's exploration experience that outcrop is generally more common than typically realised in the wider Portland Gold Project area, it is recommended that the whole of EL18/2018 should be covered by reconnaissance geological mapping and sampling. Prospective areas should be followed up with soil sampling and then trenching.

3.3 LANDOWNER NOTIFICATIONS

Landowner notifications for the planned reconnaissance mapping exploration program over EL18/2018 was commenced during late 2019 but the notification/meetings process and therefore the planned exploration program was subsequently delayed due to the coronavirus COVID19 situation. It is anticipated that the program will be able to be recommenced in the latter half of 2020.

4 DISCUSSION OF RESULTS

EL18/2018 is thought to be prospective for a possible eastern extension of the Portland Goldfield that is currently being explored by Tasmetals JV under the adjacent 11/2012 and 18/2016 Exploration Licenses.

Interpretation from imaged magnetic data indicates a significant NNW-trending structure lies adjacent to the Mathinna Group - Gardens granitoid pluton. Large NW-trending structures are also evident and are consistent with NW-trending cross-course structures observed in EL11/2012. Several large magnetic features trend parallel to the interpreted NNW structure and are hosted in the wedge of Mathinna Group sediments bounded by the Gardens Pluton to the west and the Eddystone Batholith granites to the east.

Modelling of these magnetic features indicates a series of steeply dipping tabular magnetic bodies with magnetic susceptibilities ranging from 2 to 3 orders of magnitude higher than normal Mathinna Group sediment ranges. This would be consistent with magnetite or pyrrhotite alteration of discrete beds or units within the Mathinna Group sediments, probably due to thermal contact metasomatism associated with the granites. However, possible basalt or dolerite sources to the magnetic features cannot be discounted and geological mapping is required to properly assess these features.

The EL18/2018 reconnaissance mapping program, scheduled for early-2020, was delayed due to the coronavirus COVID19 situation and is anticipated to commence in year 2 of the licence tenure.

5 CONCLUSIONS AND RECOMMENDATIONS FOR FUTURE WORK

EL18/2018 remains to be considered prospective for gold mineralisation of the style observed at the Portland goldfield. While there is no record of historical mining or prospecting in the area, it is also apparent that probably there has been no modern-era exploration carried out and therefore the area is practically virgin ground.

The NNW-trending magnetic features that are apparently hosted in Mathinna Group sediments are considered priority targets for reconnaissance geological mapping and surface geochemical sampling programs to be carried out in the second year of the tenement license.

Recommendations for ongoing exploration work in Year 2 of the licence include:

- Geological reconnaissance and district-scale mapping and sampling over the EL, with priority to investigate the NNW-trending magnetic features;
- Soil sampling grids over prospective areas if identified from the reconnaissance geological mapping and sampling;
- Possible trenching pending results of geological mapping and soil sampling.

Land owner notifications will be re-commenced with a view to start the field mapping program as soon as personnel availability permits and restrictions related to the coronavirus are eased.

6 ENVIRONMENT

There was no environmental disturbance within EL18/2018 due to exploration activities during the reporting period.

7 EXPENDITURE

Exploration expenditure over the first annual report period for EL18/2018 is summarized in Table 1. The exploration commitment for the first two years of tenure is $47,000.

	ITEM	**EXPENDITURE (AUD)**
1.	GEOSCIENTIFIC COSTS Geology Geochemistry Geophysics Remote Sensing	 $ 4,200 $ 0 $ 4,350 $ 0
2.	DRILLING AND GRIDDING COSTS Gridding Drilling	 $ 0 $ 0
3.	LAND ACCESS COSTS	$ 1,200
4.	REHABILITATION COSTS	$ 0
5.	FEASIBILITY STUDY COSTS	$ 0
6.	OTHER COSTS Field supplies and equipment, rental, bond and application fees	 $ 12,122
7.	ADMINISTRATION COSTS Administration and Legal	 $ 500
	Total Expenditure	**$ 22,372**

Table 1. Exploration expenditure on EL18/2018 during the reporting period.

8 REFERENCES

Bierlein, F.P., Foster, D. A., Gray, D. R., Davidson, G. J. (2005). Timing of orogenic gold mineralisation in northeastern Tasmania: implications for the tectonic and metallogenetic evolution of Palaeozoic SE Australia. Mineralium Deposita 39: 890-903.

Bierlein, F.P., Fuller, T., Arnes, D.C., and Keays, R.R. 1998. Wallrock alteration associated with turbiditic-hosted gold deposits. Examples from the Palaeozoic Lachlan Fold Belt in central Victoria, Australia.

Massey, S. 2019. Airborne and Ground Geophysics – Processing and Interpretation, Portland and Golden Ridge Projects. Report to Pacific Trends Resources by Western Geophysics Pty Ltd, June 2019.

Massey, S. 2020. Processing and Interpretation of Magnetic Survey Data EL18/2018. Report to Pacific Trends Resources by Western Geophysics Pty Ltd, February 2020.

Roach, M.J. 1997. Detailed Ground Magnetic Surveys in the Gladstone and Denison Areas, N.E. Tasmania, EL 15/95. Unpublished report Anglo Australian Resources NL, University of Tasmania. [98_4245A].

Westbrook, S.J. 2019. Seventh Annual Report, EL11/2012 Gladstone Tasmania.