

# PETRATHERM LIMITED

ABN 17 106 806 884

Level 1, 169 Fullarton Road  
Dulwich SA 5065  
T: +61 8 8133 5000  
W: [www.petratherm.com.au](http://www.petratherm.com.au)  
E: [admin@petratherm.com.au](mailto:admin@petratherm.com.au)



## ASX ANNOUNCEMENT

30 April 2019

### Quarterly Activities Statement – March 2019

#### Summary

- The company held \$4,051,696 cash at the end of the quarter
- Mineral exploration tenements granted totalling 1479 km<sup>2</sup>, prospective for Olympic Dam style, copper-gold mineralisation. Several semi-coincident large magnetic and gravity anomalies identified.
- Large ground position secured in highly prospective Bendigo Gold Zone in Victoria.

#### Review of Operations

During the quarter, Petratherm Limited ("the Company/ Petratherm") had exploration and evaluation costs of \$66,000 primarily related to project review and acquisition activities and administration costs of \$64,000 primarily relating to, reporting & compliance, office costs and directors' fees. The Company held \$4,051,696 cash at the end of the quarter.

The Company has continued to strategically develop a project portfolio in world-class mineral provinces. The Company secured a second Victorian gold project, Silver Spoon (EL6951) over prospective ground close to the Fosterfield and Costerfield Gold Mines. The recent resurgence in interest in Victorian Goldfields, largely stems from the spectacular success of Kirkland Lake Gold's Fosterfield operations, with production forecast to increase to over 500,000 ounces in 2020 and reach over 570,000 ounces by 2021 (reference: Kirkland Lake Gold Press Release 11/12/2018). In South Australia, two tenements (EL6332 & EL6333) totalling 1479km<sup>2</sup> were granted and are prospective for Olympic Dam style, copper-gold mineralisation. A summary of ground activities during the period is presented below. No ground work was undertaken on the Companies other projects at Walparuta (EL5717 & EL5306) and Corunna Projects (EL5497 & EL6229) during the quarter.

#### **Mabel Creek Project (EL6332 & EL6333) – Targeting Olympic Dam Style, Copper-Gold**

Petratherm Limited has been granted two tenements (EL6332 & EL6333) totalling 1479km<sup>2</sup> over a portion of the Mabel Creek Inlier of the Gawler Craton (Figure 1). A number of semi-coincident magnetic and gravity anomalies have been identified (Figures 2 & 3) over the new licence areas (refer to PTR ASX releases 05/12/18, 12/12/18 & 21/3/2019 for background). These geophysical features have potential to be due to hydrothermal iron-oxide systems. Mineralised examples of these occur along the eastern margin of the Gawler Craton of South Australia and include Olympic Dam, Carrapateena, Prominent Hill and most recently BHP's latest discovery at Oak Dam (Figure 1).

The Mabel Creek Inlier has only been lightly explored for IOCG style mineralisation, however a single hole drilled by BHP in 1992 (NC9202) testing a magnetic anomaly, 13 km south of EL 6332 intersected mineralised magnetite-amphibole-pyroxene rock containing significant concentrations of pyrite and pyrrhotite and disseminated chalcopyrite in massive magnetite (ref. SA Govt. Records ENV08647) (Figure 3). The hole contained broad zones (not true widths) of anomalous geochemistry including:

134m @ 626ppm Cu, 256ppm Pb, 593 ppm Zn from 96m.  
Inc. 28m @ 0.14% Cu, 614ppm Pb, 0.23% Zn, 2 ppm Ag from 168m.

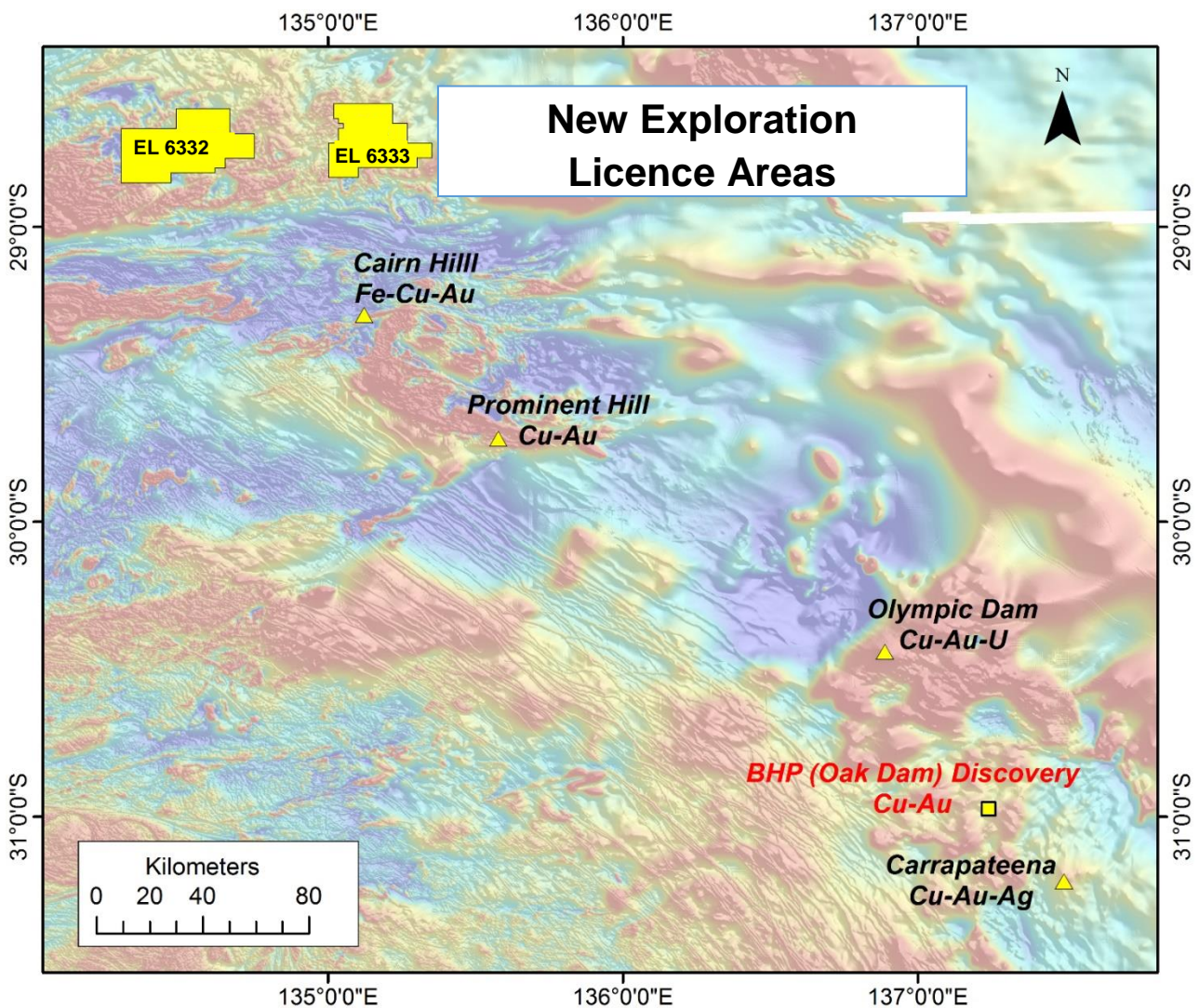
Anomalous rare earth elements were also present with values up to 1% Ce and La reported.

Goldsteam Mining subsequently drilled a line of five overlapping RC holes perpendicular to the strike of the magnetic anomaly in October 1999. Four holes intersected skarn alteration with a peak result in drillhole 99WS003 (not true width) of:

16m @ 0.57% Cu and 0.16% Ce+La from 184 m.

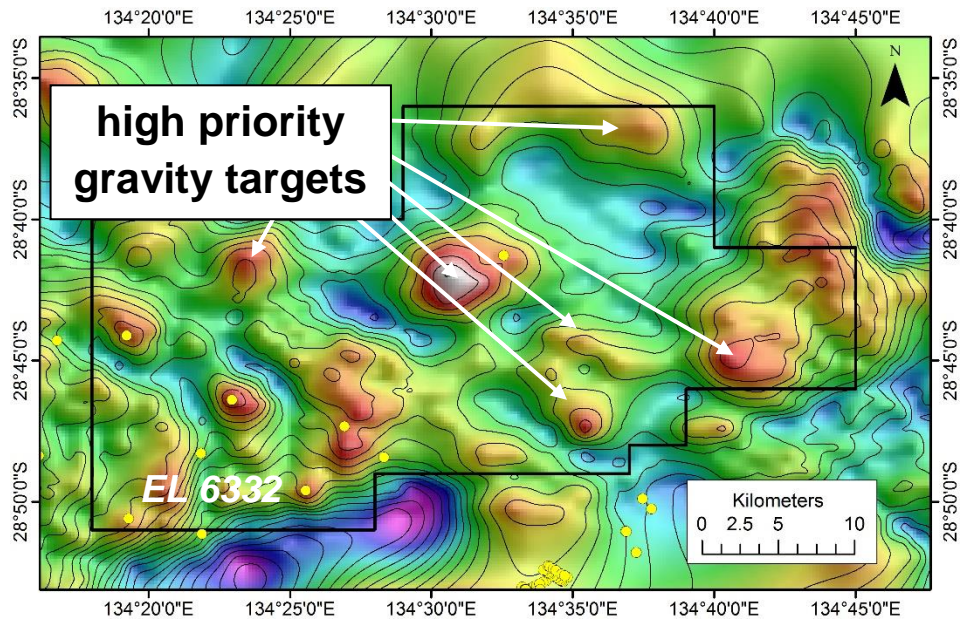
These results are characteristic of magnetite skarn alteration/mineralisation found in areas around Prominent Hill and other IOCG systems further to the south and provides evidence that IOCG style alteration/mineralisation is likely to continue through the region of Petrathem's new tenement areas.

Importantly, depth of the overlying cover sediments over the licence areas is minimal. Historical drilling in the records the top of the prospective basement, between 80 metres and 200 metres over the majority of the tenements. The Company has started access arrangement works with stakeholders and once completed, plans undertake in-fill gravity surveying to aid definition and ranking of targets. It is anticipated this work will generate between 6 and 10 priority targets worthy of drill testing later in the calendar year.

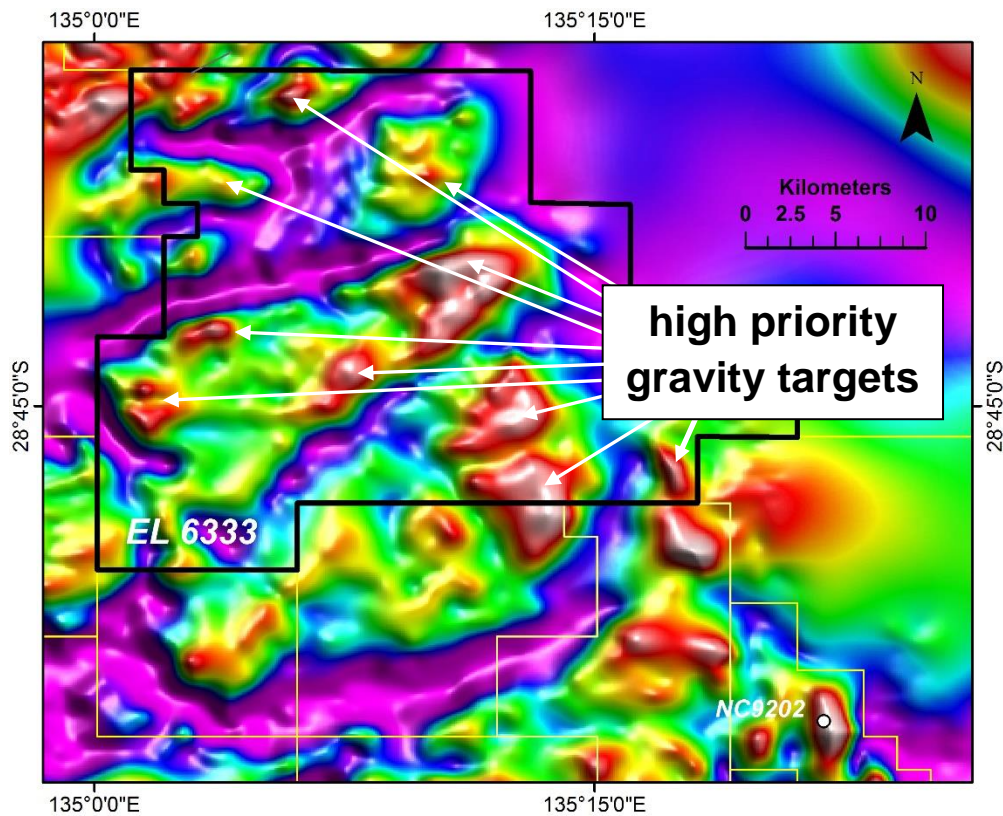


**Figure 1** - Location map of major mines, the new BHP discovery (Oak Dam) and outline of the new tenement areas overlying a regional reduced to pole aeromagnetic image (compiled from Sth. Aust. Government data).





**Figure 2** – Regional pseudo-colour residual gravity image with 1 milligal gravity contours over EL 6332. Historical drill hole collar positions shown as yellow dots. Several large gravity features are apparent, requiring follow up infill gravity surveying ahead of potential drill testing.



**Figure 3** – Pseudo-colour residual gravity image over EL 6333 (compiled from Sth.Aust. Government data). Historical BHP drill hole collar (NC9202) shown, which intercepted anomalous geochemistry and alteration indicative of IOCG systems. Several large gravity features are apparent, requiring follow up infill gravity surveying ahead of drill testing.

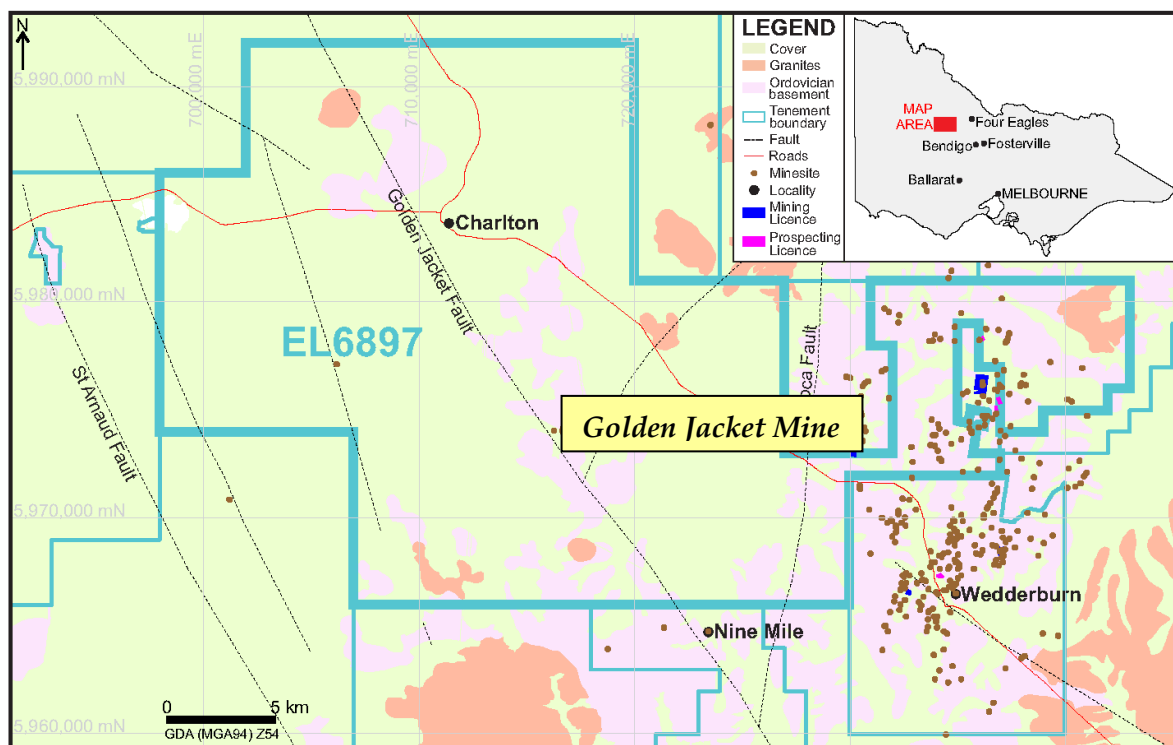
## Yuengroon Project (ELA006897) - Victoria Gold Position Secured

The Yuengroon Project Tenement Application was formally accepted by the Victoria State Government Authority in January and given the highest ranking over the area shown in Figure 4. The area secured, totalling 687 km<sup>2</sup>, covers a highly prospective ground position over a portion of the Bendigo Zone, covering the historic northern Wedderburn Goldfield and extends westwards to cover a large strike continuance (32 kilometres) of the Golden Jacket Fault which shows several important historical gold occurrences. The western area has only been lightly explored and is mostly under shallow cover.

Recorded historical gold production from the Wedderburn field is 140,000 Oz. These finds came mainly from alluvial workings but also included some shallow reef mining down to the water table which occurs at approximately 20 metres depth. Very little modern drilling has occurred to test for depth extensions of the reef systems below the water table.

There are two notable recorded historic mine occurrences along the Golden Jack Fault. The Golden Jacket Mine (Figure 4) comprises a shallow small-scale shaft reef mine worked to just 46 metres depth. Total recorded production was 171.7 tonnes of ore which produced 1,385 Oz of gold. Whilst only a small historic working the grade is exceptional, running at an average of 250.1 g/t Au. The Nine Mile Reef (Figure 4) is a larger historical mine, which was worked down to 131 metres depth and mined 43,571 tonnes of ore producing 16,236 Oz of gold (average grade 11.6 g/t Au) (Source: Victorian State Government GeoVic database).

Much of the recent upturn in gold exploration in Victoria has come from explorers gaining a better understanding of the structural controls of the reef systems hosting the gold shoots, and the importance of major faults localising mineralisation. In many cases, very little serious modern exploration has occurred, testing the extents and depth of these historic gold reef systems. The utilization of modern gravity surveying techniques to locate prospective faults under cover has been paramount in targeting areas for later drill testing with the potential of leading to new discoveries. Petrathern is reviewing previous exploration results and processing geological and geophysical data in readiness to commence field work once the tenement is granted.

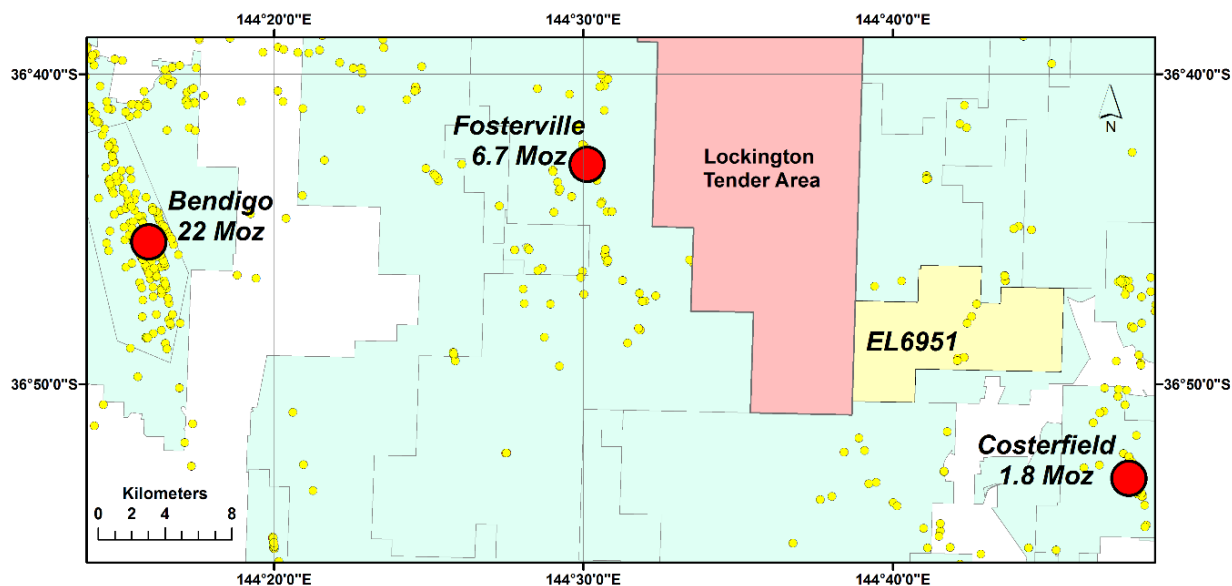


**Figure 4** – EL6897 (Yuengroon) Location Map, showing historical mine sites and known major faults.

## Silver Spoon Project (ELA06951) - Close to Fosterville Gold Mine

In March the Company secured a prospective ground position close to the operating Fosterville and Costerfield Gold Mines (Figure 5). The area contains several historic gold and other mineral prospects in areas of outcrop. Younger cover sediment however masks much of the prospective host rock and these regions have only been very lightly explored.

In recent years the utilisation of modern detailed gravity surveying to locate prospective faults under shallow cover sediment has been paramount in identifying potential gold bearing zones for later drill testing. ASX listed Catalyst Metals' has demonstrated the success of this methodology with the both the Four Eagles and Tandarra Prospect gold discoveries under shallow cover sediment north of Bendigo (reference Catalyst ASX: CYL, 08/08/2018 ASX release). Petrathern is reviewing previous exploration results and processing geological and geophysical data in readiness to commence field work once the tenement is granted.



**Figure 5** – EL6951 (Silver Spoon) Location Map, showing recorded historical mine sites (yellow dots (source Vic Govt. “GeoVic” Database), current exploration (light blue) licences and major gold mines. (Total Mineral Resources and Reserves: Costerfield – Mandalay Resources Press Release 08/01/2019, Fosterville – Kirkland Lake Gold Press Release 21/02/2019, Bendigo: Vic State Government Records)

END

Donald Stephens  
Director

### For further information please contact:

Peter Reid  
Exploration Manager  
Tel: (08) 8133 5000

**Competent Persons Statement:** The information in this report that relates to Exploration Targets and Exploration Results is based on information compiled by Mr Peter Reid, who is a Competent Person, and a Member of the Australian Institute of Geoscientists. Mr Reid is not aware of any new information or data that materially affects the historical exploration results included in this report. Mr Reid is an employee of Petrathern Ltd. Mr Reid has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Reid consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.