

**ASX ANNOUNCEMENT**

**30 January 2019**

**Quarterly Activities Statement – December 2019**

**Summary**

- Drilling of high-priority gravity/magnetic targets, that may be indicative of an Olympic Dam Style Copper-Gold (IOCG) system scheduled to start in the first quarter of 2020.
- Yuengroon (EL 6897), a large licence area covering 683 km<sup>2</sup>, over a portion of the highly prospective Bendigo Gold Zone in Victoria has been granted and ground exploration works are underway over historical gold occurrence areas.
- Comet Gold Project (SA), prospective for Challenger-style high-grade gold, tenement granted. Comet Prospect includes multiple shallow gold intersections, which are open at depth and along strike.
- The company held \$3,024,000 cash at the end of the quarter.

**Review of Operations**

During the period the Company continued to strategically develop a project portfolio in world-class mineral provinces and ground activities and advanced its Flagship Mabel Creek Copper-Gold Project to a drill ready status. Drill preparations of several high tenor Olympic Dam Style gravity targets are now in their final stages, with drilling scheduled to begin during the first quarter of 2020. The Phase 1 drill program is currently scheduled to test 4 sites.

In October 2019 the Yuengroon Gold Project (EL 6897), a large licence area covering 683 km<sup>2</sup>, was granted allowing ground exploration works to begin. The area secured covers a highly prospective ground position over a portion of the Bendigo Zone, covering the historic northern Wedderburn Goldfield (recorded historic production of 140,000 Oz gold) and extends westwards to cover sizable strike extensions of several major faults, with several important historical gold occurrences spatially associated.

The Comet Gold Project (EL 6443), located within the Gawler Craton of South Australia, covering 256 km<sup>2</sup> has been awarded through a South Australian Government managed competitive bid process. The tenement is prospective for Challenger-style high-grade gold (recorded historical production of 1.1 million ounces at an average grade of 5.1 g/t). The tenement includes the Comet Gold Prospect which has only been partially drill tested and includes multiple shallow gold intersections, which are open at depth and along strike.

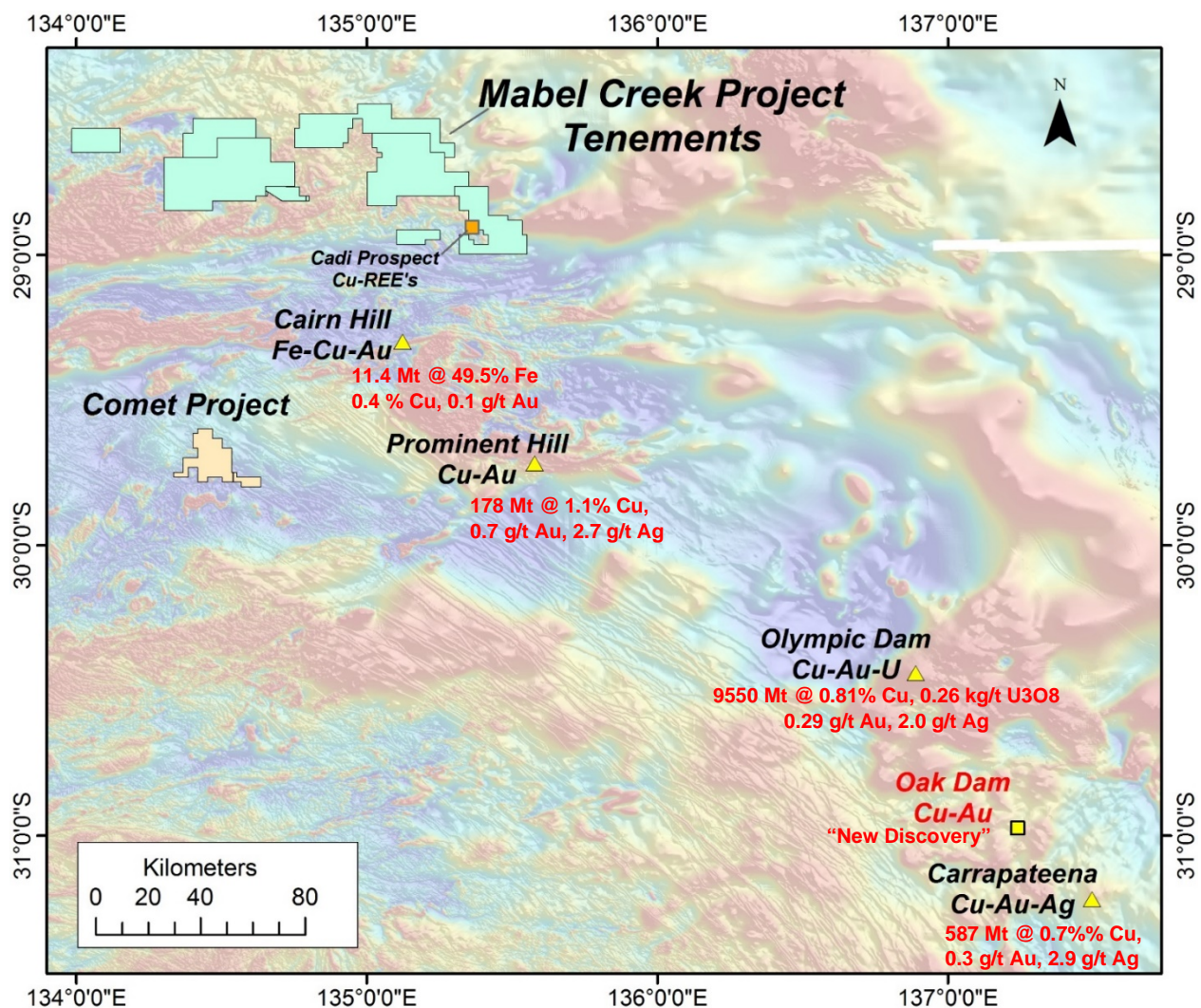
During the quarter, Petratherm Limited ("the Company/ Petratherm") had exploration and evaluation costs of \$490,000 relating to the Plugging and Abandonment (P&A) of the Paralana 2 Deep Geothermal Well and on the Mabel Creek Project, where gravity surveying, Native Title negotiations and heritage surveying was completed. The P&A costs are the final rehabilitation activities required before formal surrender of the Company's historical Paralana Engineered Geothermal Project (GEL 156) which is no longer operational. A Research and Development Tax Refund of approximately \$100,000 is anticipated to be recouped from these final activities. Administration costs totalled \$102,000, primarily relating to, reporting & compliance, office costs and directors' fees. The Company held \$3,024,000

cash at the end of the quarter. A summary of ground activities during the period is presented below. No groundwork was undertaken on the Walparuta Project (EL 6250) during the quarter.

## Mabel Creek Project – Targeting Olympic Dam Style, Copper-Gold

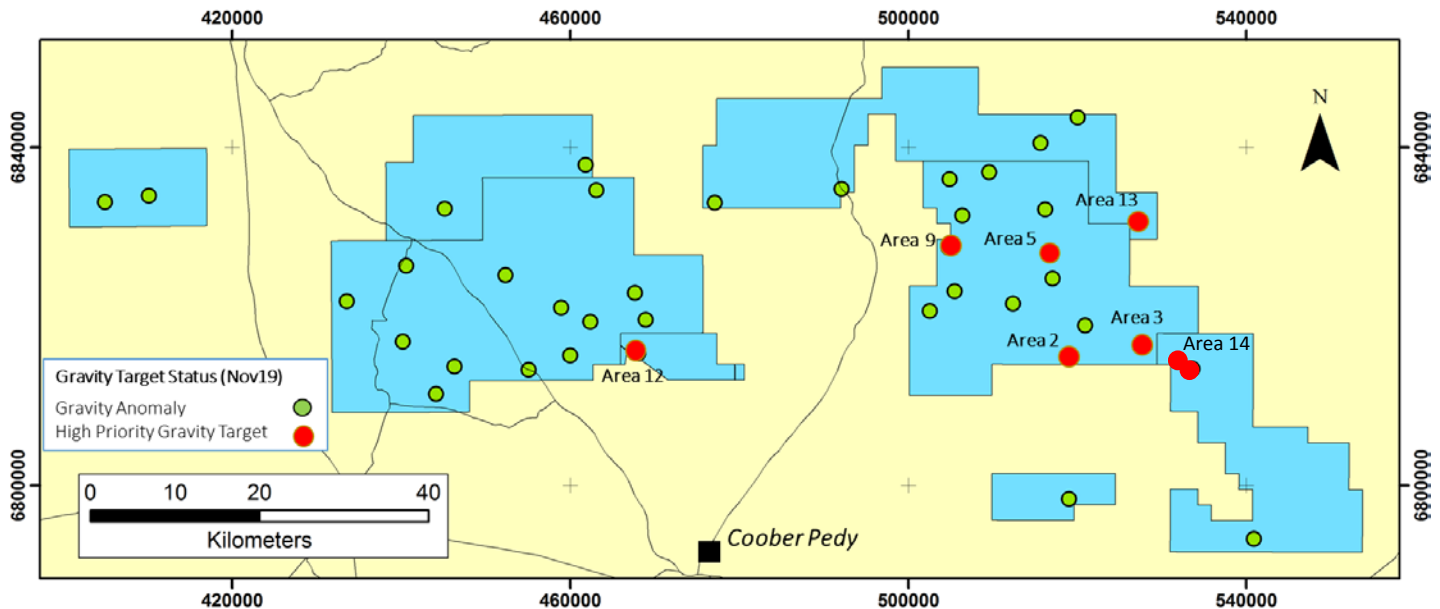
The Mabel Creek Project comprises four granted tenements (EL's 6332, 6333, 6404 & 6405) totalling 2852 km<sup>2</sup> (Figure 1). The Mabel Creek Ridge is an ENE trending zone of shallow covered basement rock, which displays high magnetic and gravity relief along the eastern margin of the Gawler Craton. These geophysical domains are prospective for hydrothermal iron-oxide systems including, copper-gold, magnetite skarn copper and high value rare earth elements (REEs). Examples of mines and prospects located close to the Mabel Creek Project include the Cairn Hill Mine, Prominent Hill Mine and the Cadi Prospect (Figure 1).

BHP's recent Oak Dam West Copper Gold Discovery (Figure 1) is a reminder that a cluster of Iron Oxide Copper and Gold (IOCG) accumulations occur along the eastern margin of the Gawler Craton and re-confirms the regions status as a world-class copper and gold province. One of the better BHP drill hole intersections returned 205m @ 2.04 % Cu and 0.43 g/t Au from 1247m and includes 44m @ 5.77% Cu and 1.20 g/t Au from 1408m (refer BHP ASX release 17/10/19 September Quarterly for details). There is excellent potential for further IOCG and other related mineral discoveries particularly in the northern areas where only limited historic exploration has occurred.



**Figure 1-** Location map of Mabel Creek Project Tenements, IOCG mines and related prospects, overlying a regional reduced to pole aeromagnetic image (compiled from Sth. Aust. Government data).

During the period the Company completed 3D gravity inversion modelling of new gravity data acquired from ground gravity surveys undertaken during August and October 2019 (refer to PTR ASX releases 14/08/2019 and 22/10/2019). Several high-amplitude gravity anomalies have been defined (Figure 2), with modelled depths to top of the target ranging from 130 metres to 600 metres. A summary of current gravity targets is presented below.



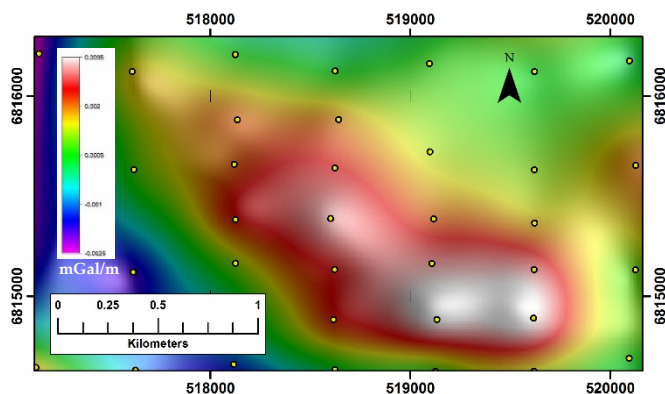
**Figure 2 – Mabel Creek Project Gravity Anomaly Location Map**

### **Mabel Creek Gravity Targets – *Drill Ready!***

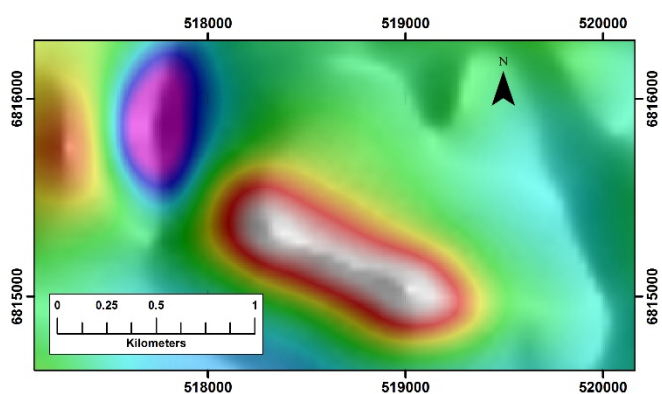
#### Area 2 Target

The Area 2 target is a residual 1 milligal gravity target within a broader 3 milligal gravity anomaly. Figure 3 depicts a gradient gravity image highlighting the target area along with a reduced to pole magnetic image of the same area. The aeromagnetic image contains a discrete highly magnetic body however the gravity body appears to have a larger extent. Depth to basement estimates suggests the target may start at about 150 metres.

#### **Area 2 - Gradient Gravity Image**



#### **Area 2 – Reduced to Pole Magnetic Image**

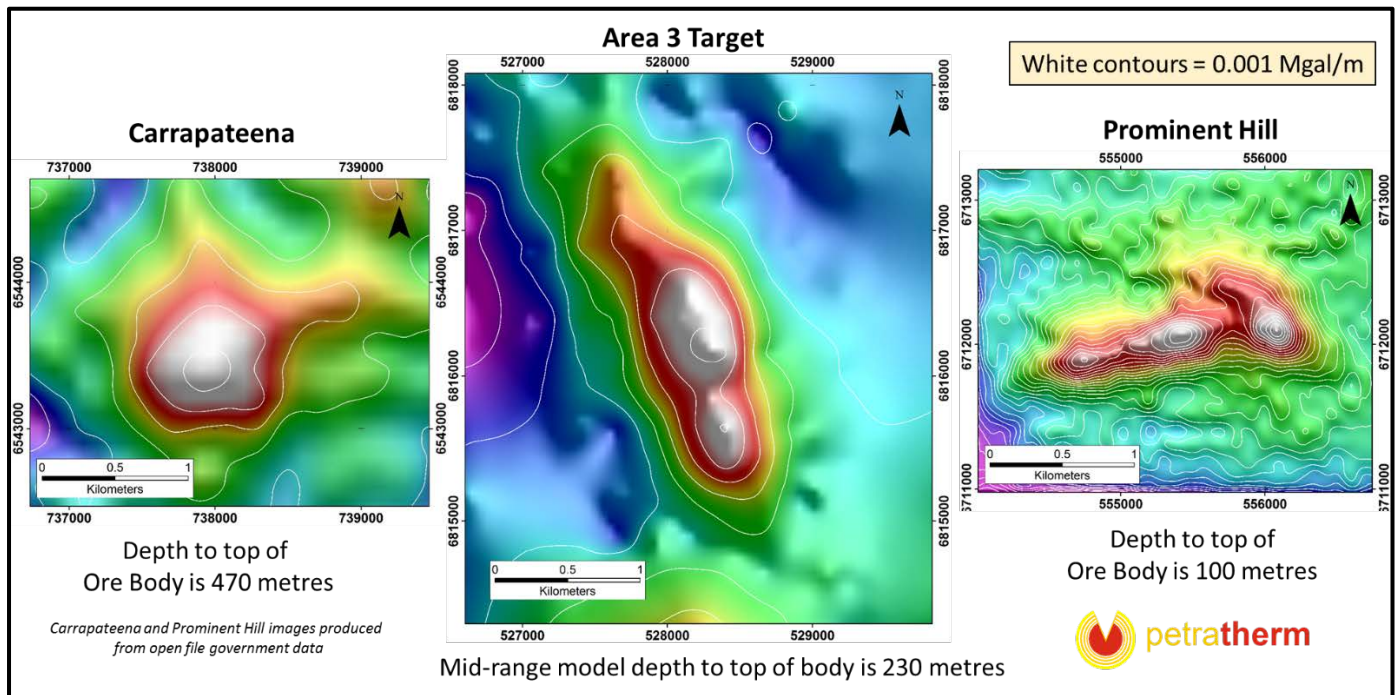


**Figure 3 - Area 2 Anomaly – Gradient Gravity Image (left) and Reduced to Pole Magnetic Image (right).** Gravity stations yellow dots. Gravity anomaly is an approximate 1 milligal anomaly within a larger area of increased gravity anomalism. Note discrete high intensity magnetic body partly coincides with gravity target.

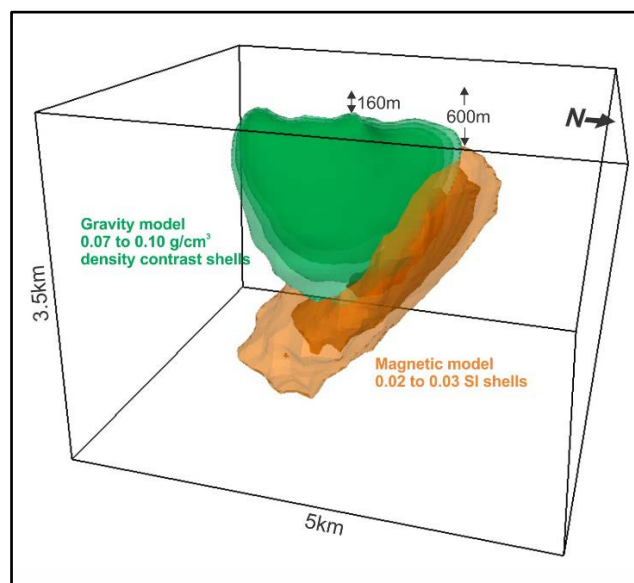


## Area 3 Target

The Area 3 Target is a discrete, NNW trending, high-amplitude gravity anomaly of approximately 3 milligals in magnitude. The gradient gravity response from the Area 3 Target is presented below with both the Carrapateena and Prominent Hill IOCG deposits gravity responses to provide a direct comparison (Figure 4). Note the rate of change in gravity (white contours) is mostly a function of the depth to the top of the dense body, with deeper bodies producing a more subdued response. The unconstrained 3D inversion model (Figure 5) for the Area 3 target indicates a minimum depth of 160-180 metres to the top of the body however forward modelling using a variety of model densities show that the source could be as deep as 300 metres.



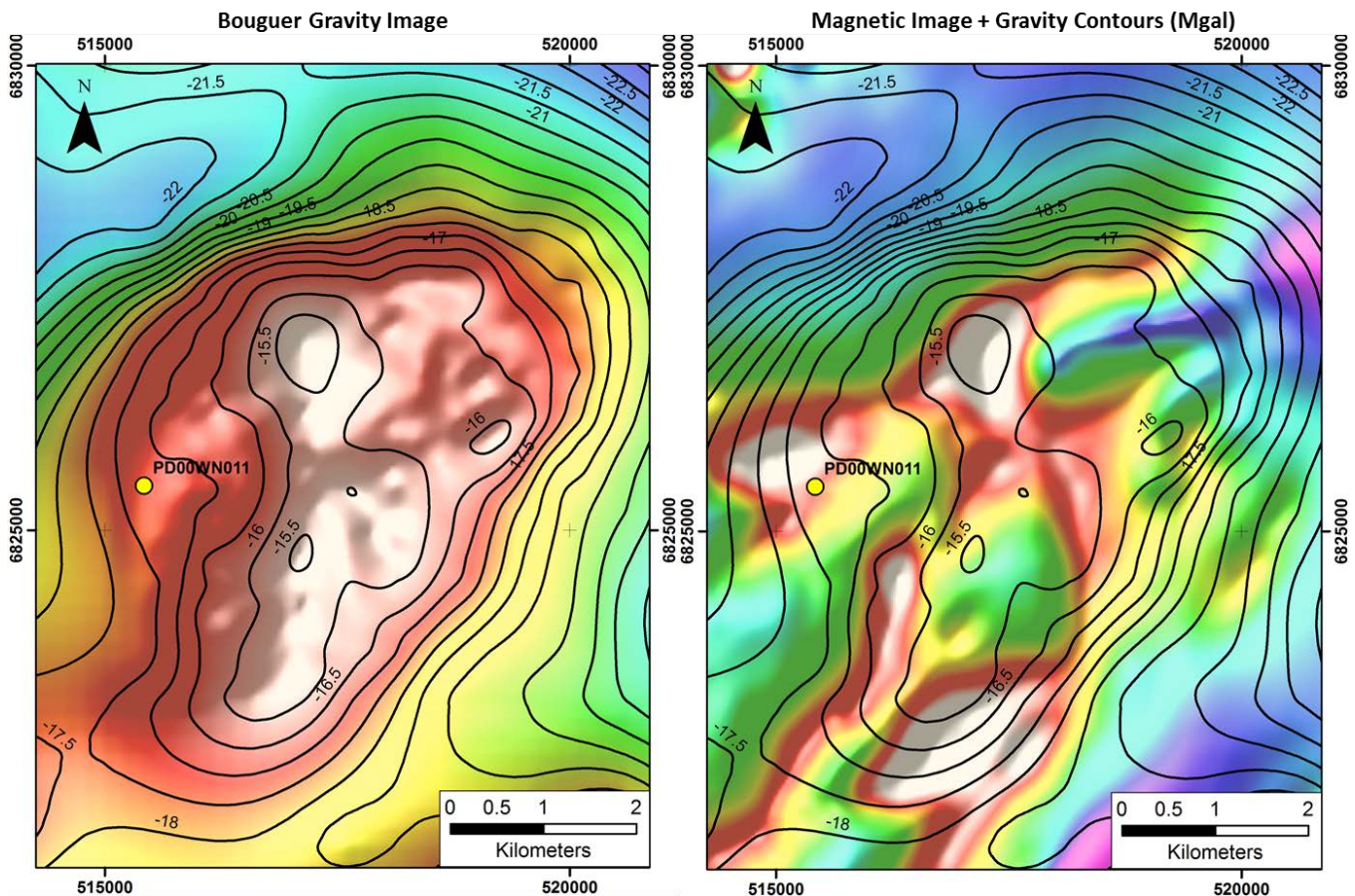
**Figure 4** - Gradient Gravity Images of the Carrapateena and Prominent Hill IOCG deposits compared to the Area 3 drill Target.



**Figure 5** - 3D Inversion Model of the Area 3 Target showing the relationship between the magnetic and gravity bodies.

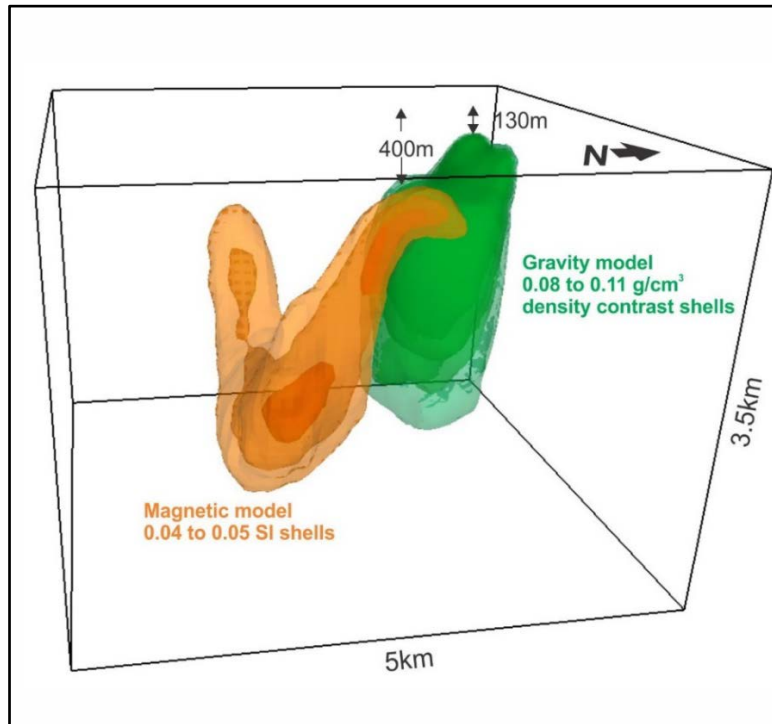
## Area 5 Target

The Area 5 Target is a broad multi-peak, high-amplitude gravity anomaly of approximately 7 milligals in total, which is semi-coincident with a moderately strong (500nT) magnetic anomaly. A single historical Drill Hole PD00WN011, drilled by Goldstream Mining in 2000, approximately 1 kilometre west of the main target area intersected the top of basement at 136 metres and noted strongly sericitized and weakly hematite altered granite which is characteristic of the alteration seen on the margins of an IOCG style hydrothermal system (Figure 6). The 3D model indicates the top of the gravity anomaly occurs at a depth of around 130 metres (Figure 7).



**Figure 6** - Area 5 Target Bouguer Gravity and Magnetic Images. Note drill hole PD00WN011 drilled approximately 1km west of main target intersected mineral alteration that may be indicative of an edge to an IOCG system.

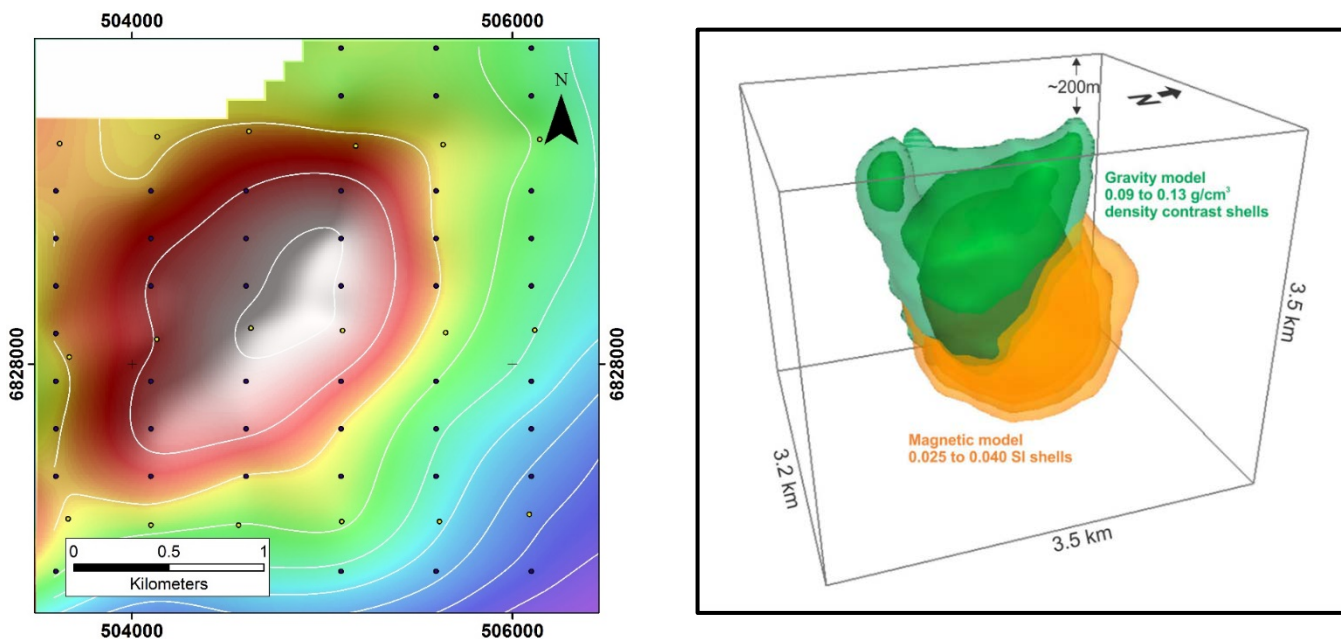




**Figure 7** - 3D Inversion Models of Area 5 Anomalies showing the relationship between the deep magnetic body and shallower gravity target.

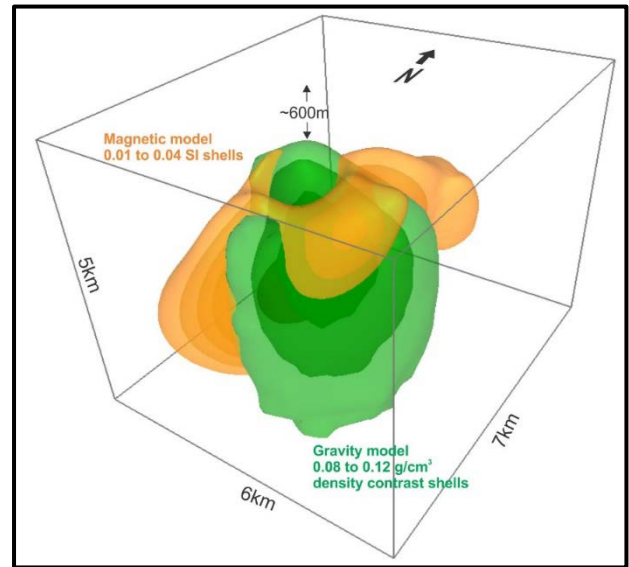
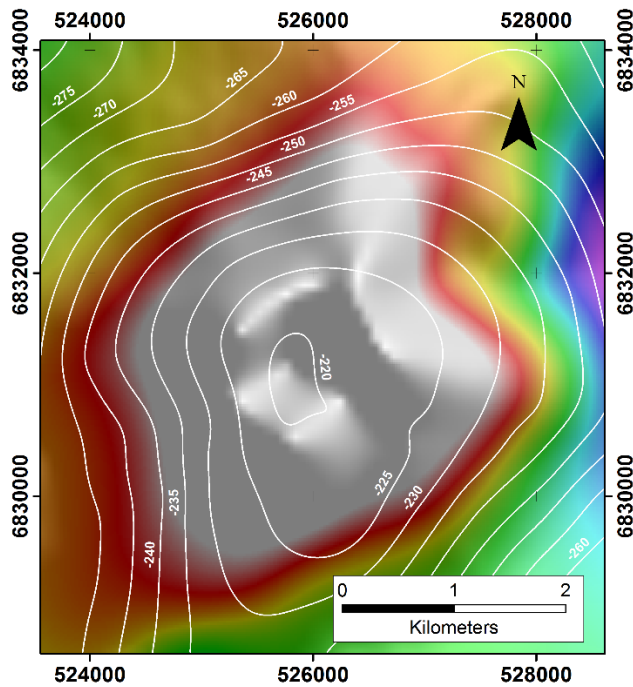
New high priority gravity targets identified during the October 2019 gravity survey include Areas 9, 13 and 14 (Figures 8, 9 & 10). 3 D inversion models of each target and selected images are shown below.

#### Area 9 Target



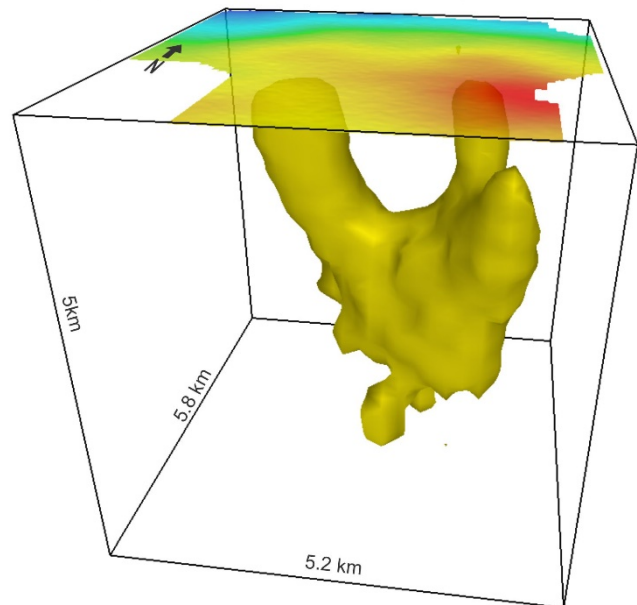
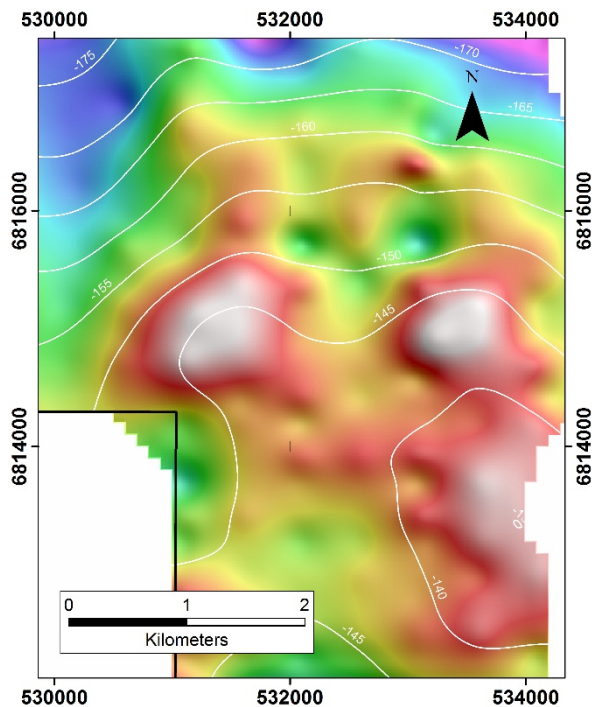
**Figure 8** – Area 9 Gravity Target. Left - Bouguer Gravity Image with (0.5 milligal Contours). Right - 3D Inversion Model showing the relationship between the magnetic and gravity bodies. The target occurs at an interpreted major NE-NW fault intersection and displays a high-density contrast (up to 0.13 g/cm³). Modelled Depth to top of body is 200 metres.

### Area 13 Target



**Figure 9** - Area 13 Gravity Target. left - 0.5 milligal gravity contours overlain on Reduced to pole magnetic image. Right - 3D Inversion of Magnetic and Gravity Bodies. Area 13 target is a 4 to 5 milligal gravity anomaly with the dense body starting at a modelled depth of 600 metres.

### Area 14 Target



**Figure 10** - Area 14 Gravity Target. Gradient Gravity Image (left) with 0.5 milligal bouguer gravity contours. Gradient image highlights 3 dense bodies within a broader anomalous area. The 3D inversion model (right) shows 3 pipe-like bodies coincident with the 3 denser gravity features identified. Depth to top of interpreted targets is modelled at approximately 550 metres.

The offset in the gravity and magnetic anomalies observed in the 3D models could be indicative of zonation within a magnetite-haematite system (e.g. IOCG style alteration). The models show, the non-magnetic gravity anomalies positioned shallower and/or to one side of the magnetic feature, which is typical of an IOCG style system. To date, on the Gawler Craton of South Australia, economic concentrations of copper and gold have only been associated with non-magnetic, haematite enriched bodies, and hence these gravity targets are a priority for drill testing. Also of note, the inversion models demonstrate a high average density contrasts (mostly  $\geq 0.1 \text{ g/cm}^3$ ) which may also be indicative of an IOCG style system.

### **Mabel Creek Project - Native Title Works**

The Mabel Creek Project spans two Native Title Areas and the Company has been working closely with both Native Title Holders to establish a strong relationship and an agreed framework for future ground exploration activities. In October 2019 the Company executed a Native Title Mining and Land Access Agreement (NTMA) for Exploration with the Antakirinja Matu-Yankunytjatjara Aboriginal Corporation (AMYAC), which covers the western and central portions of the licence areas. In December 2019 the Company executed a NTMA with the Arabana People who are the Native Title Holders over the eastern licence areas. Subsequent initial Heritage survey work with both Native Title Holders has been completed for gravity survey work and in addition, clearing high priority targets for exploration drill testing.

### **Yuengroon (EL 6897) - Victoria Gold and Copper Potential**

In early October 2019, the Company's Yuengroon Project Tenement (EL 6897) was granted by the Victoria State Government. The area secured covers a highly prospective ground position over a portion of the Bendigo Zone, covering the historic northern Wedderburn Goldfield and extends westwards to cover sizable strike extensions of several major crustal faults, with several important historical gold occurrences spatially associated. The western areas have only been lightly explored and are mostly under shallow cover. The recent resurgence in interest in Victorian Goldfields largely stems from the spectacular success of Kirkland Lake Gold's Fosterville 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).

#### Wedderburn Goldfield Area

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.

#### Golden Jacket Mine

The Golden Jacket Fault which extends through the tenement area for approximately 12 kilometres is associated with two notable recorded local historic mine occurrences (Figure 11). The Golden Jacket Mine comprises a shallow small historic shaft reef mine worked to 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 11) 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) (reference: Victorian State Government GeoVic database).



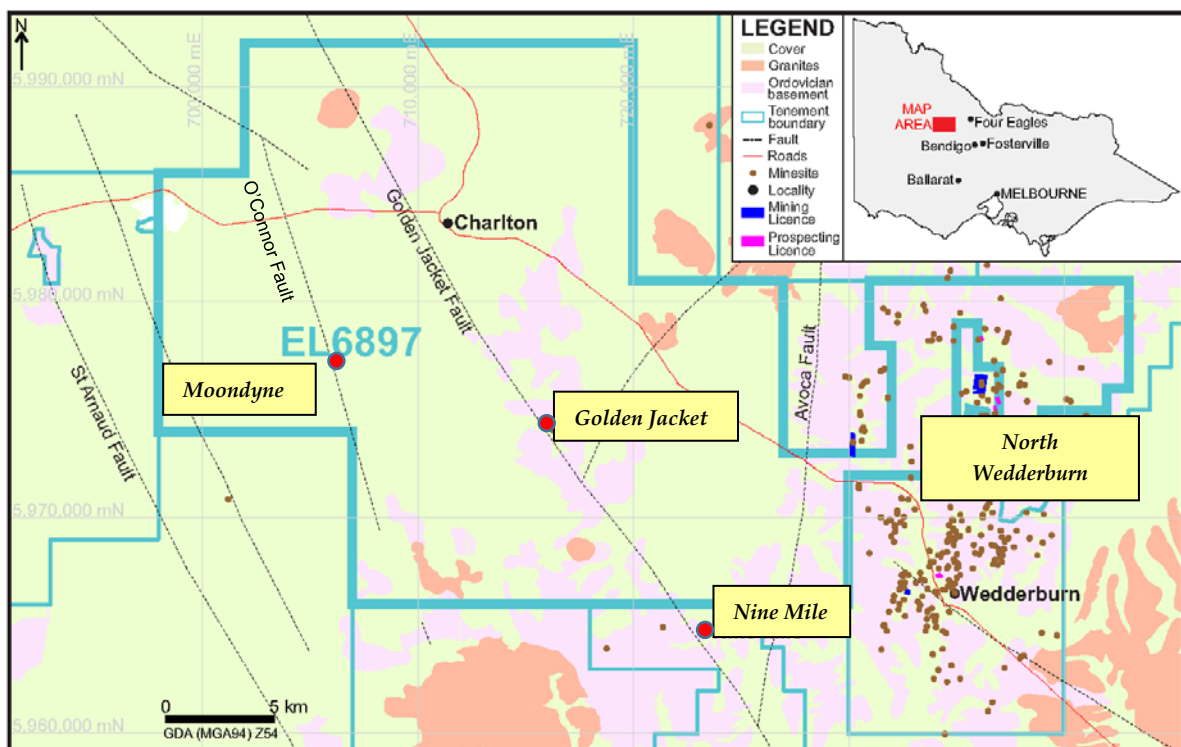
### Moondyne Gold Prospect

Further west the historic Moondyne Mine Area is spatially linked with the O'Connor Fault (Figure 1) and comprises a line of shallow sub-cropping quartz reef workings which extend for approximately 1.2 kilometres before being blanketed by shallow younger cover sediment. This line of quartz reefing was worked on a small scale during the 1930's depression years with a number of shallow shafts sunk to an approximate maximum depth of 20 metres. Limited historical production data (389 tonnes), returned an average grade of 10.9 g/t Au (reference: Geological Survey of Victoria Record 24913, 1933). The immediate host rock is described as clay rich and soft to mine with abundant iron stained pitting evident in the wall rock. The widespread clay alteration and pitting, potentially after primary sulphides, along with the extensive strike length of worked reef, are positive indications that this prospect could have good upside potential. The workings have never undergone systematic modern exploration, never been drilled, and remain open at depth and along strike.

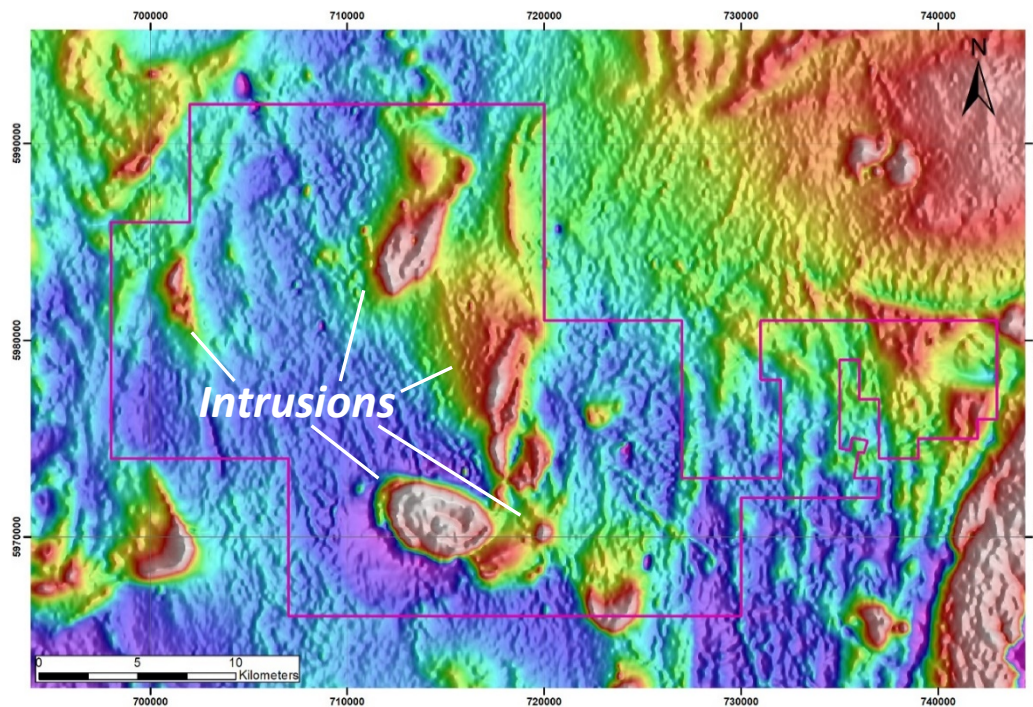
### Base Metal Potential

A prominent north-northwest (NNW) trending line of intrusive bodies and some other discrete satellite bodies are evident from the aeromagnetic data across the tenement (Figure 12). In the light of the recent success of ASX listed Stavelly Minerals (ASX: SVY), Thursday's Gossan copper-gold-silver drill intersections (reference: SVY ASX release 26/9/2019), this intrusive suture zone will be closely evaluated for copper-gold-silver and other base-metals resulting from porphyry and related magmatic fault hosted metal accumulations.

Prior to granting of the licence, Petratherm was busy undertaking land access preparations. To date, the landholder consultation process has opened two prospective corridors on the tenement currently totalling 150 km<sup>2</sup> along the Golden Jacket and O'Connor Fault trends which have allowed ground exploration activities to start. The prospective corridors are mostly under shallow cover making the ground amenable to XRF soil geochemistry as the first targeting tool (Figure 13). This work, along with vein mapping and sampling where outcrop exists is currently underway and will be used to identify anomalous sites for later potential drill testing.



**Figure 11** – EL6897 (Yuengroon) Location Map, showing historical mine sites and known major faults.



**Figure 12** – EL6897 (Yuengroon) Reduced to Pole, Aeromagnetic Image. Note major NNW trending suture zone with nested series of intrusive bodies (high magnetic intensity bodies). This zone and other discrete bodies will be explored for porphyry and related magmatic fault hosted copper-gold-silver and other base-metals.



**Figure 13** – Petratherm Geologist, Emmett D'Urso, undertaking soil and rock chip sampling around historical Wedderburn Goldfield Area, Victoria.

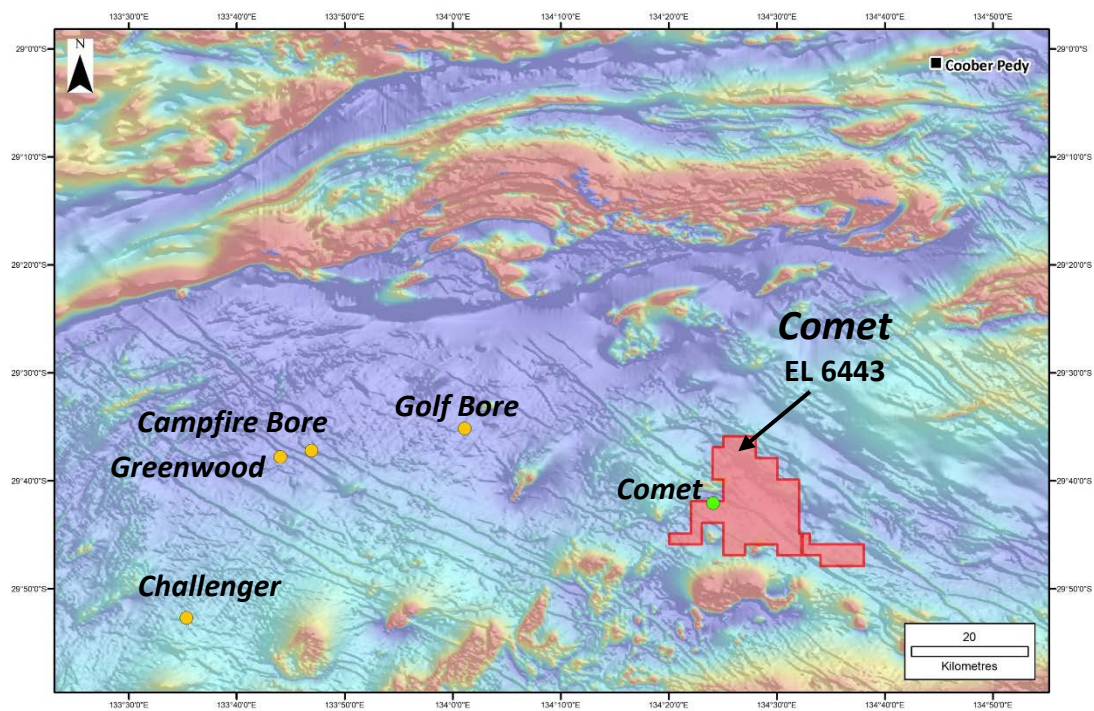


## Comet (EL 6443) – North Gawler Craton (SA) Gold Potential

At the end of reporting period the Comet Project Tenement (EL6443) which was originally won through a South Australian Government managed competitive bid process was granted. The tenement is located within the northern Gawler Craton of South Australia, which hosts numerous significant, gold occurrences, including the Challenger gold deposit (Figure 14), which has a recorded historical production of 1.1 million ounces at an average grade of 5.1g/t.

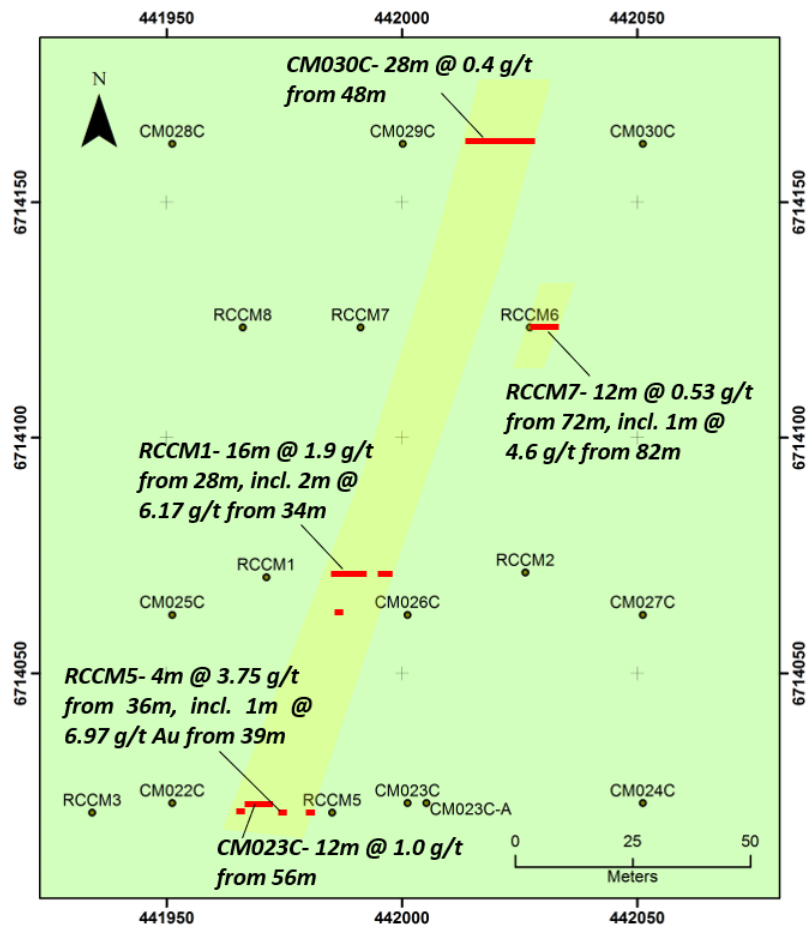
The tenement includes the Comet Gold Prospect, where limited RC drilling identified a continuous zone of gold intersections, over at least 150 metres of strike, and remains open to the north, south and at depth (Figure 15). Best historical drill intercepts (not true width; refer to PTR ASX release 18/10/19 for historical drilling details) include:

- **CM023C** – 12m @ 1.0 g/t Au from 56m to then end of hole
- **CM030C** – 28m @ 0.4 g/t Au from 48m
- **RCCM1** – 16m @ 1.9 g/t Au from 28m and 8m @ 0.7 g/t Au from 48m  
Inc. 2m @ 6.17 g/t Au from 30m
- **RCCM5** – 4m @ 3.75 g/t Au from 36m  
Inc. 1m @ 6.97 g/t Au from 39m
- **RCCM7** – 12m @ 0.53 g/t Au from 72m  
Inc. 1m @ 4.6 g/t Au from 82 m



**Figure 14** – Location map of the new tenement area, Comet Gold Prospect (green dot) and proximal contained gold Resources (orange dots) overlying a regional reduced to pole aeromagnetic image (compiled from St. Aust. Government data).





**Figure 15 – Comet Drill Collar Map.** Historical anomalous gold intercepts (red lines) projected to surface. Gold intercepts occur over a strike length in excess of 150 metres and is open to the north, south and at depth.

Follow up drill testing of the Comet Prospect will be a priority for the Company during the 2020 period. The Company has an existing Native Title Mining Agreement in place with the Native Title Holders and anticipates future drilling approval could be achieved quickly. The Company will also re-evaluate the broader tenement area which may have been prematurely down-graded based on ineffective historical surface soil geochemistry and will apply other exploration methods to target gold and other metals. This work will include some surface geochemical methods, where the cover-type is suitable, but will also target potential structural / magnetic target sites via proposed regional based shallow RAB drilling to identify prospective mineralised zones.

**For further information please contact:**

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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 Petratherm 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.

## EL's 6332, 6333, 6404 & 6405 (Mabel Creek Project) JORC Table 1

### Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li><i>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.</i></li> <li><i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></li> <li><i>Aspects of the determination of mineralisation that are Material to the Public Report.</i></li> <li><i>In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse Au that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</i></li> </ul>	<ul style="list-style-type: none"> <li>No drilling or sampling has been undertaken by Petratherm, although limited historical drilling and sampling exists.</li> <li>Historical sampling was undertaken using standard industry practices.</li> <li>Historical drill hole co-ordinates are in UTM grid (GDA94 Z53) and have been measured by hand-held GPS with a lateral accuracy of <math>\pm 4</math> metres and a vertical accuracy of <math>\pm 5</math> metres.</li> <li>No mineralisation was encountered in the historic drilling or sampling and therefore this information is not considered Material.</li> <li>Secondary metasomatic alteration minerals noted from an independent petrological study performed by MinTeck Services, from drill hole PD00WN011 (Goldstream Mining NL., 2000).</li> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li><i>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).</i></li> </ul>	<ul style="list-style-type: none"> <li>Historic exploration drilling includes:</li> <li><b>Rotary:</b> CR/82AWH 1 &amp; 2 (CRA Exploration Pty Ltd., 1982).</li> <li><b>Rotary-Percussion:</b> CRA/MU 5 &amp; 6 (Australian Selection Pty Ltd., 1975).</li> <li><b>Reverse Circulation:</b> NC9201 &amp; NC9305 (Broken Hill Pty Co Ltd, 1992 – 1993) &amp; PD00WN009 – 011 (Goldstream Mining NL., 2000).</li> <li>Additional details from historic drilling are unknown.</li> </ul>
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <li><i>Method of recording and assessing core and chip sample recoveries and results assessed.</i></li> <li><i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i></li> <li><i>Whether a relationship exists between sample</i></li> </ul>	<ul style="list-style-type: none"> <li>No drilling has been undertaken by Petratherm although limited historical drilling exists.</li> <li>Additional details from</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</i>	historic drilling are unknown.
<b>Logging</b>	<ul style="list-style-type: none"> <li>• <i>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</i></li> <li>• <i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.</i></li> <li>• <i>The total length and percentage of the relevant intersections logged.</i></li> </ul>	<ul style="list-style-type: none"> <li>• No drilling has been undertaken by Petrathern although limited historical drilling exists.</li> <li>• Additional details from historic drilling are unknown.</li> </ul>
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <li>• <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></li> <li>• <i>If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</i></li> <li>• <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></li> <li>• <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></li> <li>• <i>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</i></li> <li>• <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></li> </ul>	<ul style="list-style-type: none"> <li>• No drilling has been undertaken by Petrathern although limited historical drilling exists.</li> <li>• Additional details from historic drilling are unknown.</li> </ul>
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <li>• <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></li> <li>• <i>For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</i></li> <li>• <i>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</i></li> </ul>	<ul style="list-style-type: none"> <li>• No drilling has been undertaken by Petrathern although limited historical drilling exists.</li> <li>• Additional details from historic drilling are unknown.</li> </ul>
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <li>• <i>The verification of significant intersections by either independent or alternative company personnel.</i></li> <li>• <i>The use of twinned holes.</i></li> <li>• <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></li> <li>• <i>Discuss any adjustment to assay data.</i></li> </ul>	<ul style="list-style-type: none"> <li>• No drilling has been undertaken by Petrathern although limited historical drilling exists.</li> <li>• Additional details from historic drilling are unknown.</li> </ul>
<b>Location of data points</b>	<ul style="list-style-type: none"> <li>• <i>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</i></li> <li>• <i>Specification of the grid system used.</i></li> <li>• <i>Quality and adequacy of topographic control.</i></li> </ul>	<ul style="list-style-type: none"> <li>• All maps and locations are in UTM grid (GDA94 Z53) and have been measured by hand-held GPS with a lateral accuracy of <math>\pm 4</math> metres and a vertical accuracy <math>\pm 5</math>m.</li> <li>• Phase 1 Gravity — Two Atlas Geophysics Gravity/GNSS control stations; 201909500001</li> </ul>



Criteria	JORC Code explanation	Commentary
		<p>"Mt Barry South" and 201909500002 "Mt Barry North" were used to control all field observations throughout the gravity survey.</p> <ul style="list-style-type: none"> <li>Phase 2 gravity — A Daishat GPS/Gravity base station; 1337 "Oolgelima North" was used to control all field observations throughout the gravity survey.</li> <li>Gravity control for all base stations was established via multiple ABA tie loops with existing Australian Fundamental Gravity Network (AFGN) control station 1992932018 "Airstrip Terminal – Coober Pedy SA".</li> <li>GPS control for the base stations was established through multiple static sessions and Geoscience Australia's AUSPOS processing systems with x, y and z accuracy of 5-10mm.</li> </ul>
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul style="list-style-type: none"> <li>Ground gravity survey stations were collected on 250 x 250m, 250 x 500m, 500 x 500m 500 x 1000m, and 1000 x 2000m grid configurations.</li> <li>No drilling or sampling has been undertaken by Petratherm although limited historical drilling exists.</li> <li>No mineralisation was encountered in the historic drilling and therefore this information is not considered Material.</li> </ul>
<b>Orientation of data in relation to geological structure</b>	<ul style="list-style-type: none"> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	<ul style="list-style-type: none"> <li>No drilling has been undertaken by Petratherm although limited historical drilling exists.</li> <li>No mineralisation was encountered in the historic drilling and therefore this information is not considered Material.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Sample security</b>	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>No sampling has been undertaken by Petratherm although limited historic sampling exists.</li> <li>Additional details from historic drilling are unknown.</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>No sampling has been undertaken by Petratherm although limited historic sampling exists.</li> <li>Additional details from historic drilling are unknown.</li> </ul>

## Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</b>	<ul style="list-style-type: none"> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	<ul style="list-style-type: none"> <li>ELs 6332 and 6333 was granted to Petratherm (100%) on the 29/03/2019. EL's 6404 and 6405 were granted to Petratherm (100%) on the 12/09/2019.</li> <li>ELs 6332, 6333, 6404 and 6405 are located approximately 50km north and east of Coober Pedy overlapping portions of the Mt Willoughby, Mabel Creek, Mt Clarence, Mount Barry, Nilpinna and Anna Creek Pastoral Stations.</li> <li>The southern half of the tenement group overlaps the Woomera Prohibited Area (Green Zone).</li> <li><b>Native Title Claims:</b> SCD2012/002 Arabana &amp; SCD2011/001 Antakirinja Matu-Yankunytjatjara.</li> <li>The tenement is in good standing and no known impediments exist.</li> </ul>
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>Previous exploration work includes;  <b>Airborne Geophysics:</b> Magnetism, Radiometrics and MCR.  <b>Ground Geophysics:</b> Magnetism and Gravity.  <b>Exploration Drilling:</b> 2 Rotary, 2 Rotary Percussion, 5 Reverse Circulation.</li> </ul>
<b>Geology</b>	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>Petratherm is primarily exploring for Fe-Oxide-</li> </ul>

Criteria	JORC Code explanation	Commentary
		Copper-Gold mineralisation (e.g. Olympic Dam-style) within the Peake & Denison Domain of the Gawler Craton, South Australia.
<b>Drill hole Information</b>	<ul style="list-style-type: none"> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: <ul style="list-style-type: none"> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul>	<ul style="list-style-type: none"> <li>No drilling has been undertaken by Petratherm although limited historical drilling exists.</li> <li>Additional details from historic drilling are unknown.</li> </ul>
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul style="list-style-type: none"> <li>No drilling has been undertaken by Petratherm.</li> </ul>
<b>Relationship between mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</li> </ul>	<ul style="list-style-type: none"> <li>No drilling has been undertaken by Petratherm.</li> </ul>
<b>Diagrams</b>	<ul style="list-style-type: none"> <li>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</li> </ul>	<ul style="list-style-type: none"> <li>No drilling has been undertaken by Petratherm.</li> </ul>
<b>Balanced reporting</b>	<ul style="list-style-type: none"> <li>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</li> </ul>	<ul style="list-style-type: none"> <li>No drilling has been undertaken by Petratherm.</li> </ul>
<b>Other substantive exploration data</b>	<ul style="list-style-type: none"> <li>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating</li> </ul>	<ul style="list-style-type: none"> <li>Ground gravity surveys were conducted over ELs 6332, 6333, 6404 and 6405 by Atlas Geophysics and Daishat Geodetic Surveyors.</li> <li>The combined surveys</li> </ul>



Criteria	JORC Code explanation	Commentary
	<i>substances.</i>	<p>comprise 2314 gravity stations, on 250 x 250m, 250 x 500m, 500 x 500m 500 x 1000m, and 1000 x 2000m grid configurations.</p> <ul style="list-style-type: none"> <li>• Gravity control was established via an existing AFGN control station.</li> <li>• Data was acquired using Scintrex CG- Autograv Gravity Meters, GNSS Rover and Base GPS Receivers.</li> </ul>
<b><i>Further work</i></b>	<ul style="list-style-type: none"> <li>• <i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li> <li>• <i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></li> </ul>	<ul style="list-style-type: none"> <li>• A range of exploration techniques are being considered to progress exploration including drilling.</li> </ul>