

# **PETRATHERM LIMITED**

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## **ASX ANNOUNCEMENT**

**31 October 2019**

### **Quarterly Activities Statement – September 2019**

#### **Summary**

- The company held \$3,607,000 cash at the end of the quarter
- Two additional tenements granted, EL 6404 and EL 6405, increasing the Company's tenement holding to 2,852 km<sup>2</sup> over the Mabel Creek Ridge which is prospective for Olympic Dam Style Copper and Gold and related Rare-Earth mineralisation.
- High-priority gravity/magnetic targets identified, that may be indicative of an Olympic Dam Style Copper-Gold (IOCG) system.
- The Area 3 Anomaly is a large-amplitude discrete gravity target of at least 3 milligals and comparable in size and magnitude to the Prominent Hill copper-gold deposit gravity response.
- Ground exploration underway at Yuengroon (Vic), a large holding with several important gold occurrences.
- The Yuengroon tenement includes a line of magmatic intrusions along a structural suture which has potential for porphyry related copper-gold-silver, similar to the recent spectacular Stavelly Minerals, Thursday's Gossan discovery.

#### **Review of Operations**

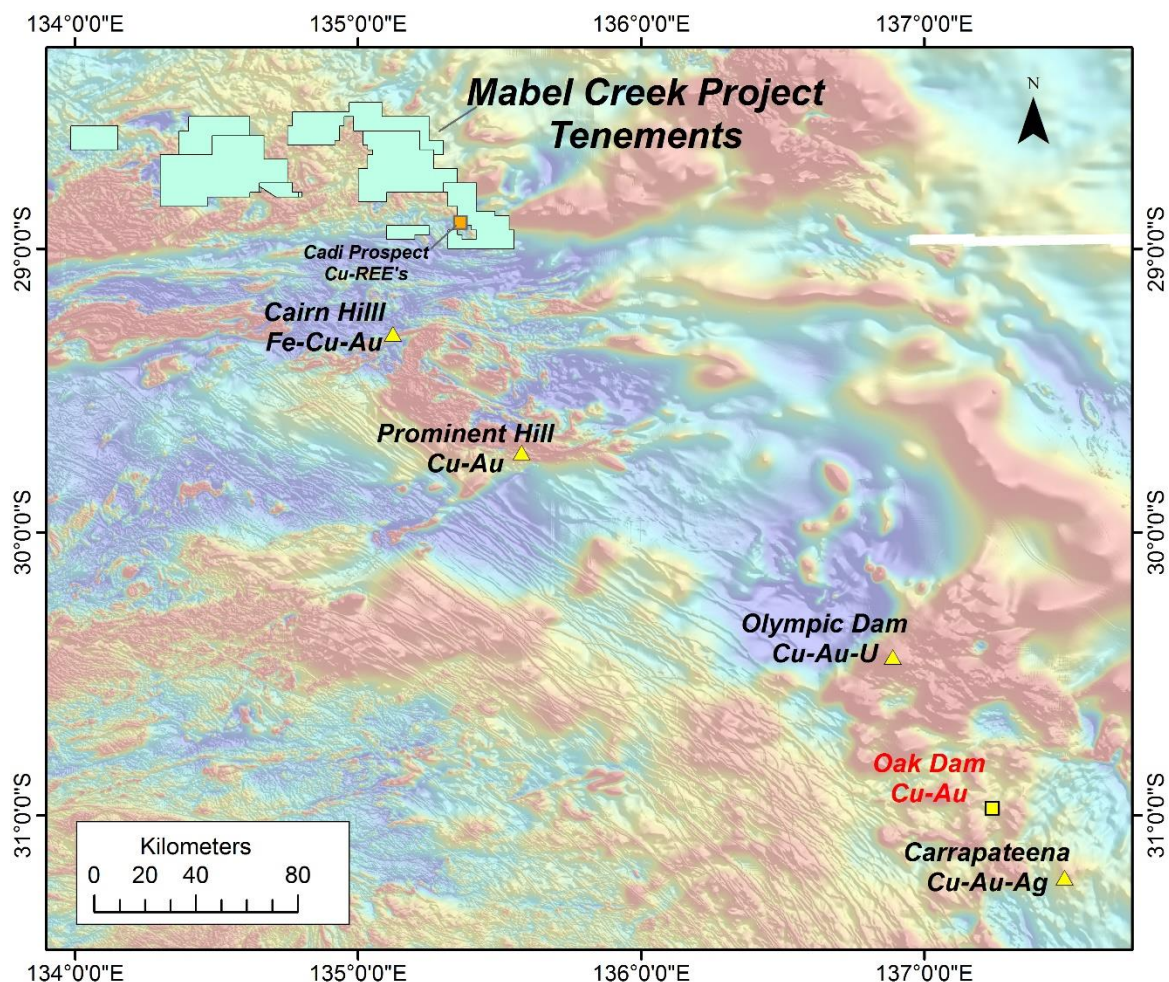
The Company has continued to strategically develop a project portfolio in world-class mineral provinces. Two further licences (EL's 6404 & 6405) over the Mabel Creek Ridge, Prospective for Olympic Dam Style Copper and Gold (IOCG) were awarded, increasing the Company's land holdings to 2,852km<sup>2</sup> (Figure 1), and in Victoria, the Yunegroon Project tenement (EL 6897), prospective for gold and base metals was granted. During the period, the Company's ground exploration works focused on advancing several IOCG copper and gold targets, to drill ready status.

During the quarter, Petratherm Limited ("the Company/ Petratherm") had exploration and evaluation costs of \$181,000 primarily relating to gravity surveying and Native Title negotiations and heritage surveying at the Mabel Creek Project and evaluation of new project opportunities. Administration costs totalled \$115,000, primarily relating to, reporting & compliance, office costs and directors' fees. The Company held \$3,607,000 cash at the end of the quarter. The Company reduced other lower priority project holdings, with an application to surrender EL 6229 (Gilles Downs) lodged. A summary of ground activities during the period is presented below.

### **Mabel Creek Project (EL's 6332,6333,6404 & 6405) – 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).

BHP's recent Oak Dam Project (Figure 1) update continues to confirm significant IOCG mineralisation. 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). This is a timely reminder that a cluster of 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. There is excellent potential for further IOCG discoveries particularly in the northern areas where only limited historic exploration has occurred.

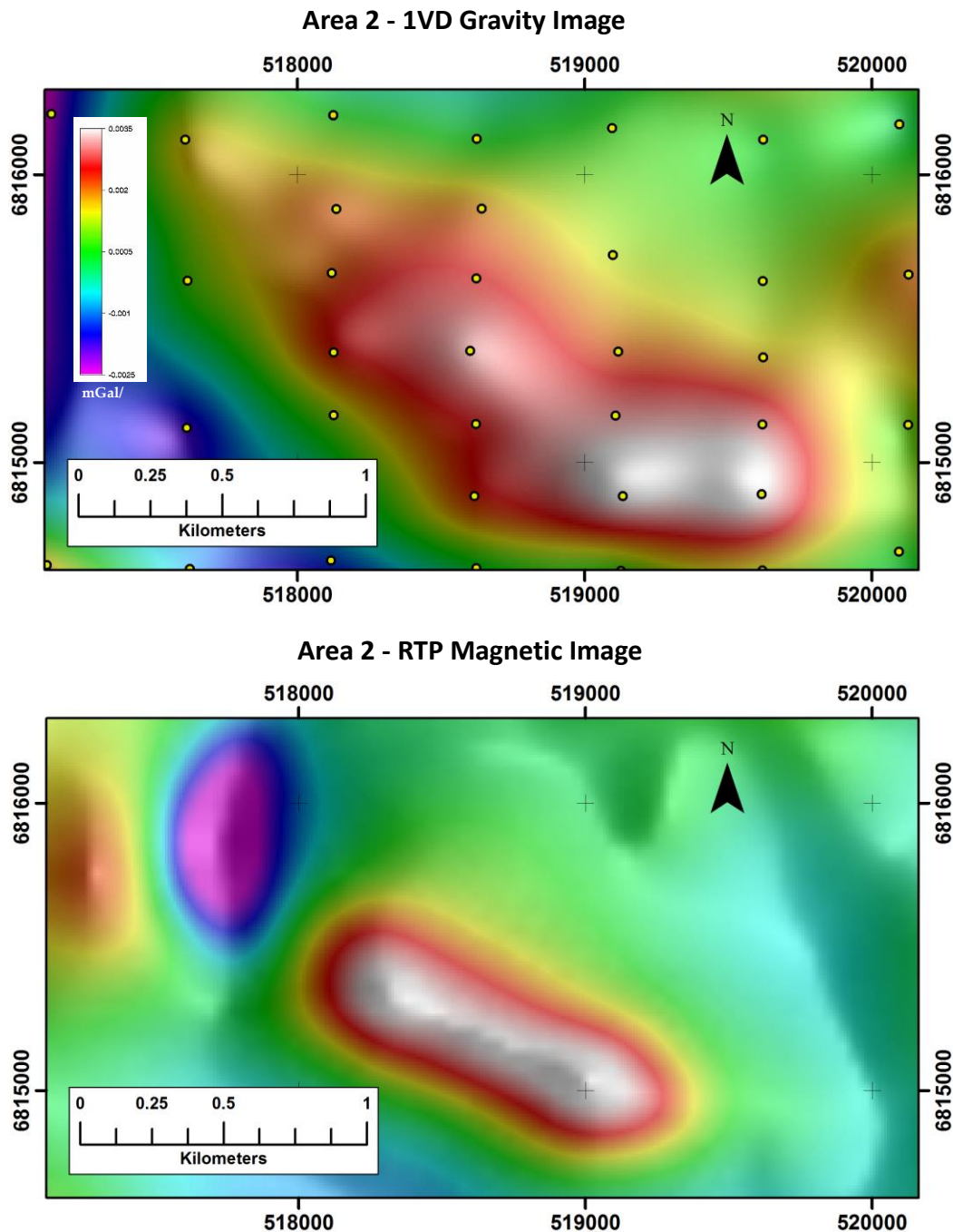


**Figure 1-** Location map of Mabel Creek Project Tenements, IOCG mines and related prospects, overlying a regional reduced to pole aeromagnetic image (compiled from Sth. Aust. Government data).

In August the Company completed a gravity survey over an eastern portion of its Mabel Creek Project tenement holdings. In total 1,124 gravity readings were taken to infill 7 areas which had some previous evidence of gravity

and/or magnetic anomalism. Several high-amplitude gravity anomalies ( $\sim 3\text{Mgal}$ ) have been defined, with modelled depths ranging from 130m to 600m.

The Area 2 target is a gravity anomaly of approximately 3 milligals within a broader zone of regional higher gravity. Figure 2 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.



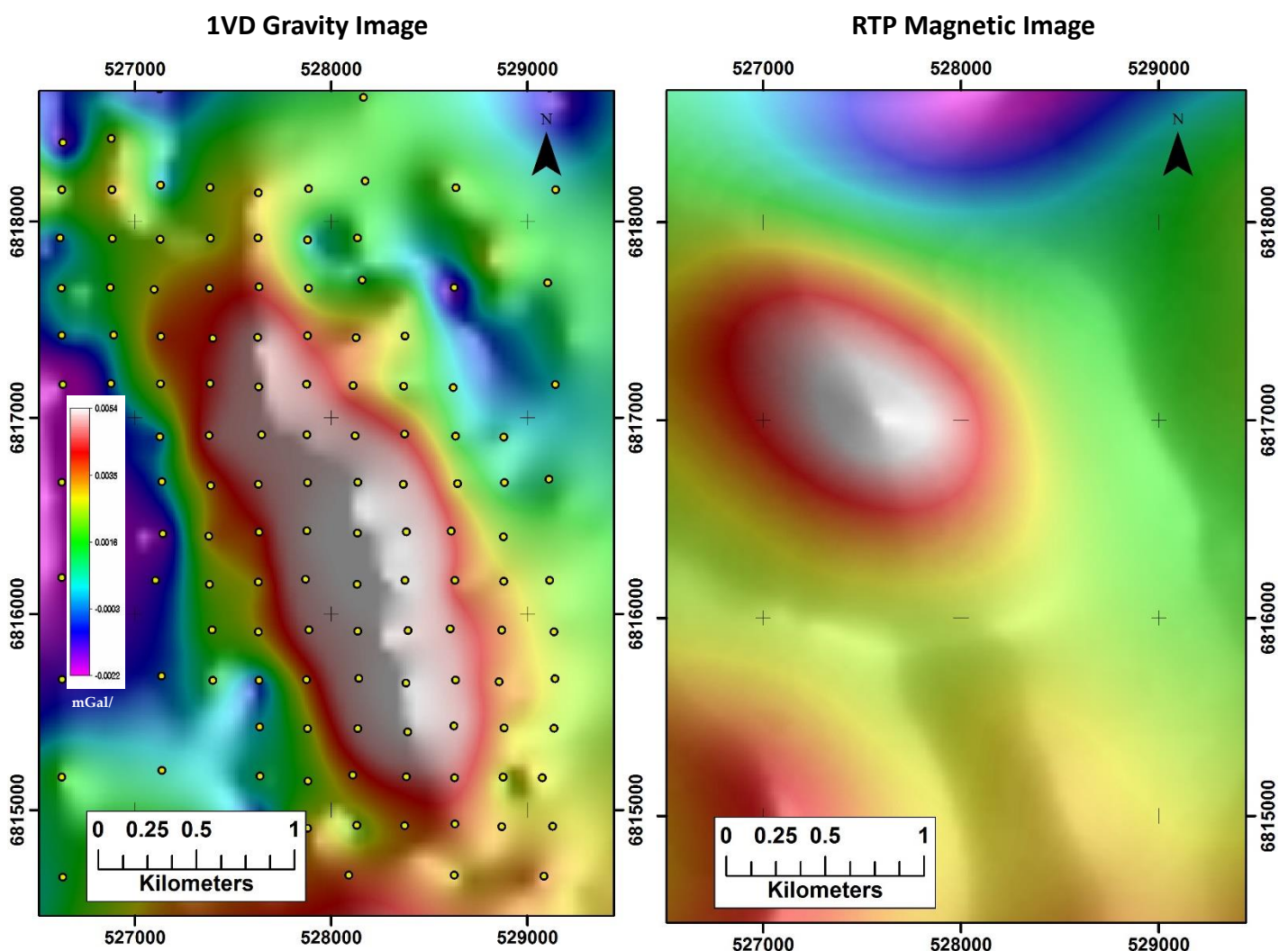
**Figure 2** - Area 2 Anomaly – 1VD Gravity Image (top) and RTP Magnetic Image (bottom). Gravity stations yellow dots. Gravity anomaly is an approximate 3 milligal anomaly within a larger area of increased gravity anomalism. Note discrete high intensity magnetic body partly coincides with gravity target.

The Area 3 Anomaly is a discrete, NNW trending, high-amplitude gravity anomaly, approximately 2.5 kilometres in length and approximately 3 milligals in magnitude (Figure 3). The target has a comparable size and magnitude of gravity to the Prominent Hill copper-gold deposit. The 3D model suggests the top of the body is at about 160m depth and may be associated with a partly coincident magnetic body extending at depth (Figure 4).

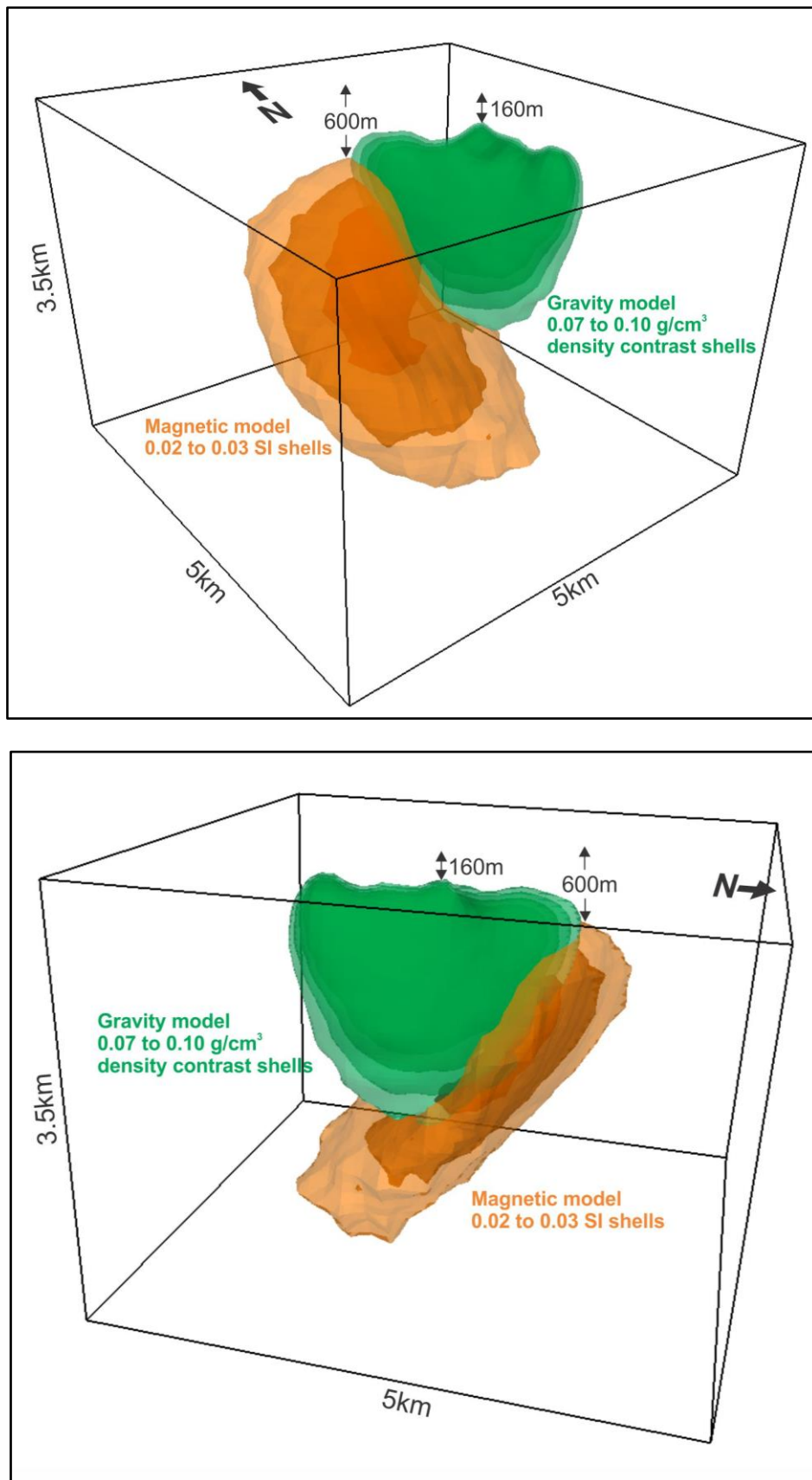
The Area 5 Anomaly is a broad multi-peak, high-amplitude gravity anomaly, which is semi-coincident with a moderately strong (500nT) magnetic anomaly. The 3D model indicates the top of the gravity anomaly occurs at a depth of around 130m (Figure 5).

Significantly, 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). Both 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.

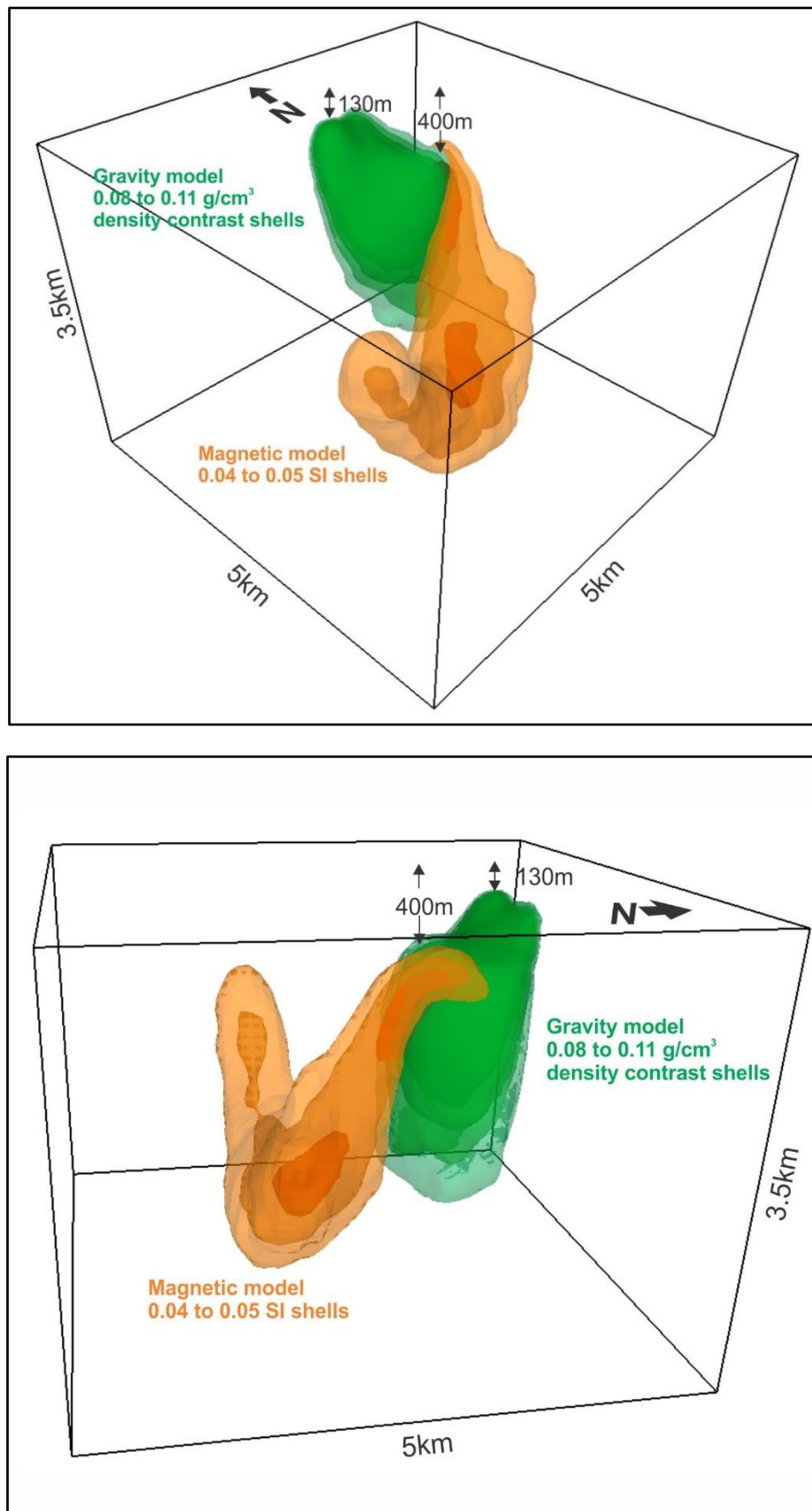
To date, on the Gawler Craton of South Australia, economic concentrations of copper and gold have only been associated with non-magnetitic, haematite enriched bodies, and hence these gravity targets are a priority for drill testing. Also, of note, the inversion models demonstrate a high average density contrast ( $\geq 0.1 \text{ g/cm}^3$ ) for each body which may also be indicative of an IOCG style system.



**Figure 3** - Area 3 Anomaly – 1VD Gravity Image (left) and RTP Magnetic Image (right). Gravity stations yellow dots. Gravity anomaly is approximately 3 milligals in magnitude and mostly not magnetic.



**Figure 4** - 3D Inversion Models of Area 3 Anomalies showing the relationship between the magnetic and gravity bodies.



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

Petratherm have recently completed heritage access to extend the initial gravity survey across the western portion of the Mabel Creek Project. Upon completion of the second phase of gravity surveying, which got underway just after the reporting period in October, gravity anomalies will be defined and ranked with existing targets ahead of drill testing.

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

In early October, just after the reporting period, the Company's Yuengroon Project Tenement (EL 6897) was granted by the Victoria State Government (figure 6). 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 6). 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 6) 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).

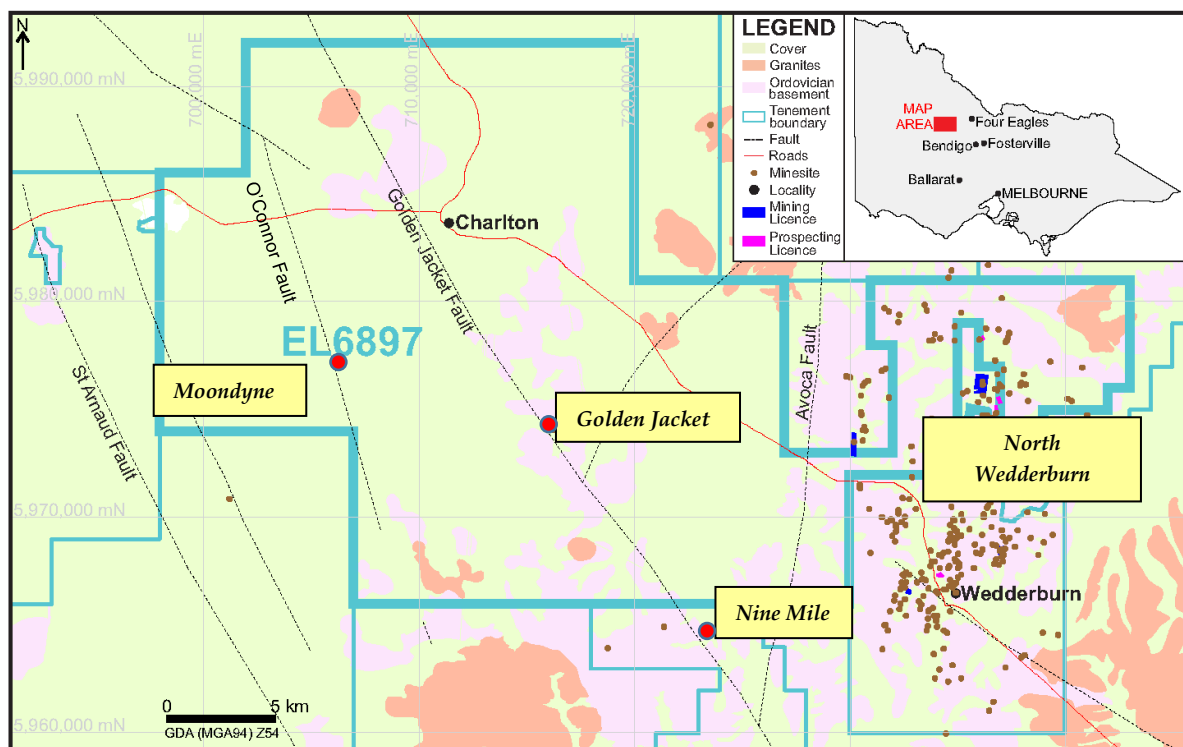
#### Moondyne Gold Prospect

Further west the historic Moondyne Mine Area is spatially linked with the O'Connor Fault (Figure1) 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.

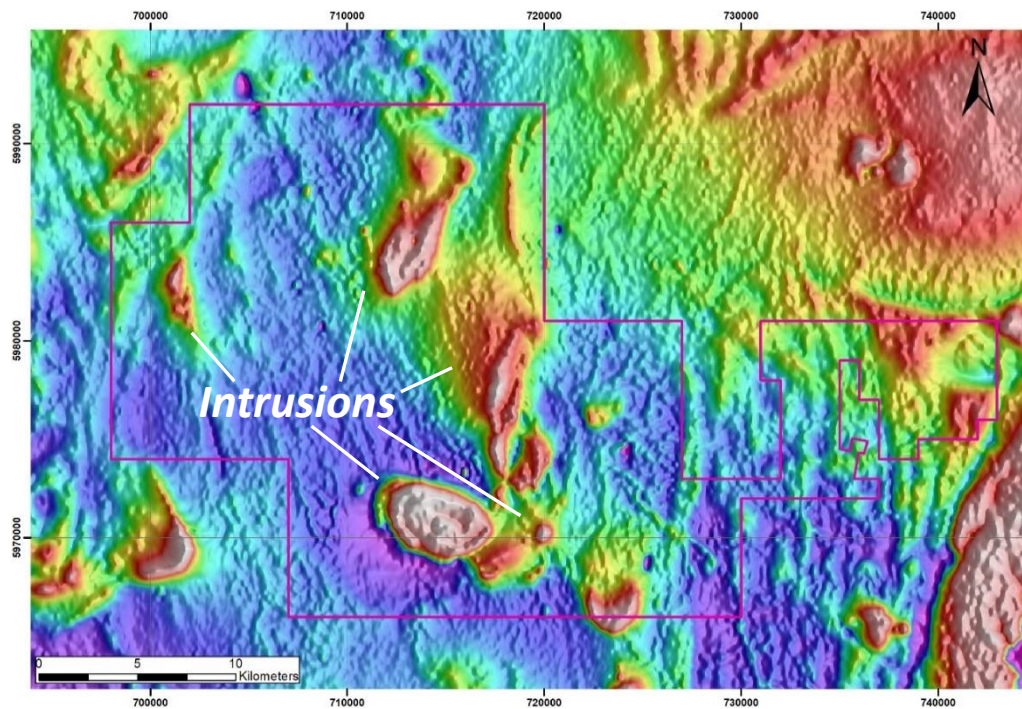
## Base Metal Potential

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 7). In the light of the recent success of ASX listed Stavely 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.

Over the last 6 months, prior to granting of the licence, Petratherm has been busy undertaking land access preparations. To date, the landholder consultation process has opened up two prospective corridors on the tenement currently totalling 150 km<sup>2</sup> along the Golden Jacket and O'Connor Fault trends which will allow ground exploration activities to start immediately. The prospective corridors are mostly under shallow cover making the ground conducive to XRF soil geochemistry as the first targeting tool (Figure 8). This work, along with vein mapping and sampling where outcrop exists, will be used to identify anomalous sites for later potential drill testing.



**Figure 6 – EL6897 (Yuengroon) Location Map, showing historical mine sites and known major faults.**



**Figure 7** – 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 8** – Petratherm Geologist, Emmett D’Urso, undertaking soil and rock chip sampling around historical Wedderburn Goldfield Area, Victoria.



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 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.

## Appendix 5B

### Mining exploration entity and oil and gas exploration entity quarterly report

**Name of entity**

PETRATHERM LIMITED

**ABN**

17 106 806 884

**Quarter ended ("current quarter")**

30 September 2019

| Consolidated statement of cash flows |   | Current quarter<br>\$A'000 | Year to date<br>(12 months)<br>\$A'000 |
|--------------------------------------|---|----------------------------|--|
| <b>1.</b>                            | <b>Cash flows from operating activities</b>           |                            |  |
| 1.1                                  | Receipts from customers                               |                            |  |
| 1.2                                  | Payments for  |                            |  |
|                                      | (a) exploration & evaluation                          | (181)                      | (181)                                  |
|                                      | (b) development                                       |                            |  |
|                                      | (c) production  |                            |  |
|                                      | (d) staff costs                                       |                            |  |
|                                      | (e) administration and corporate costs                | (115)                      | (115)                                  |
| 1.3                                  | Dividends received (see note 3)                       |                            |  |
| 1.4                                  | Interest received                                     | 13                         | 13                                     |
| 1.5                                  | Interest and other costs of finance paid              |                            |  |
| 1.6                                  | Income taxes paid                                     |                            |  |
| 1.7                                  | Research and development refunds                      |                            |  |
| 1.8                                  | Other (Joint Venture Repayments)                      |                            |  |
| <b>1.9</b>                           | <b>Net cash from / (used in) operating activities</b> | <b>(283)</b>               | <b>(283)</b>                           |

|           |   |  |  |
|-----------|---|--|--|
| <b>2.</b> | <b>Cash flows from investing activities</b> |  |  |
| 2.1       | Payments to acquire:                        |  |  |
|           | (a) property, plant and equipment           |  |  |
|           | (b) tenements (see item 10)                 |  |  |
|           | (c) investments                             |  |  |

| Consolidated statement of cash flows |   | Current quarter<br>\$A'000 | Year to date<br>(12 months)<br>\$A'000 |
|--------------------------------------|---|----------------------------|--|
|                                      | (d) other non-current assets                          |                            |  |
| 2.2                                  | Proceeds from the disposal of:                        |                            |  |
|                                      | (a) property, plant and equipment                     |                            |  |
|                                      | (b) tenements (see item 10)                           |                            |  |
|                                      | (c) investments                                       |                            |  |
|                                      | (d) other non-current assets                          |                            |  |
| 2.3                                  | Cash flows from loans to other entities               |                            |  |
| 2.4                                  | Dividends received (see note 3)                       |                            |  |
| 2.5                                  | Other (provide details if material)                   |                            |  |
| 2.6                                  | <b>Net cash from / (used in) investing activities</b> | -                          | -                                      |

|           |   |   |   |
|-----------|---|---|---|
| <b>3.</b> | <b>Cash flows from financing activities</b>                                 |   |   |
| 3.1       | Proceeds from issues of shares  |   |   |
| 3.2       | Proceeds from issue of convertible notes                                    |   |   |
| 3.3       | Proceeds from exercise of share options                                     |   |   |
| 3.4       | Transaction costs related to issues of shares, convertible notes or options |   |   |
| 3.5       | Proceeds from borrowings  |   |   |
| 3.6       | Repayment of borrowings   |   |   |
| 3.7       | Transaction costs related to loans and borrowings                           |   |   |
| 3.8       | Dividends paid  |   |   |
| 3.9       | Other (provide details if material)   |   |   |
| 3.10      | <b>Net cash from / (used in) financing activities</b>                       | - | - |

|           |  |       |       |
|-----------|--|-------|-------|
| <b>4.</b> | <b>Net increase / (decrease) in cash and cash equivalents for the period</b> |       |       |
| 4.1       | Cash and cash equivalents at beginning of period                             | 3,890 | 3,890 |
| 4.2       | Net cash from / (used in) operating activities (item 1.9 above)              | (283) | (283) |

| Consolidated statement of cash flows |  | Current quarter<br>\$A'000 | Year to date<br>(12 months)<br>\$A'000 |
|--------------------------------------|--|----------------------------|--|
| 4.3                                  | Net cash from / (used in) investing activities (item 2.6 above)  | -                          | -                                      |
| 4.4                                  | Net cash from / (used in) financing activities (item 3.10 above) | -                          | -                                      |
| 4.5                                  | Effect of movement in exchange rates on cash held                | -                          | -                                      |
| 4.6                                  | <b>Cash and cash equivalents at end of period</b>                | <b>3,607</b>               | <b>3,607</b>                           |

| 5.  | Reconciliation of cash and cash equivalents<br>at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts | Current quarter<br>\$A'000 | Previous quarter<br>\$A'000 |
|-----|--|----------------------------|-----------------------------|
| 5.1 | Bank balances  | 607                        | 790                         |
| 5.2 | Call deposits  | 3,000                      | 3,100                       |
| 5.3 | Bank overdrafts  |                            |                             |
| 5.4 | Other (provide details)  |                            |                             |
| 5.5 | <b>Cash and cash equivalents at end of quarter (should equal item 4.6 above)</b>   | <b>3,607</b>               | <b>3,890</b>                |

| 6.  | Payments to directors of the entity and their associates   | Current quarter<br>\$A'000 |
|-----|--|----------------------------|
| 6.1 | Aggregate amount of payments to these parties included in item 1.2                                   | 31                         |
| 6.2 | Aggregate amount of cash flow from loans to these parties included in item 2.3                       | -                          |
| 6.3 | Include below any explanation necessary to understand the transactions included in items 6.1 and 6.2 |                            |
| 6.1 | Directors' remuneration  |                            |

**7. Payments to related entities of the entity and their associates**

**Current quarter  
\$A'000**

7.1 Aggregate amount of payments to these parties included in item 1.2

-

7.2 Aggregate amount of cash flow from loans to these parties included in item 2.3

-

7.3 Include below any explanation necessary to understand the transactions included in items 7.1 and 7.2

|  |
|--|
|  |
|--|

**8. Financing facilities available**

*Add notes as necessary for an understanding of the position*

**Total facility amount  
at quarter end  
\$A'000**

**Amount drawn at  
quarter end  
\$A'000**

8.1 Loan facilities

-

-

8.2 Credit standby arrangements

-

-

8.3 Other (please specify)

-

-

8.4 Include below a description of each facility above, including the lender, interest rate and whether it is secured or unsecured. If any additional facilities have been entered into or are proposed to be entered into after quarter end, include details of those facilities as well.

|  |
|--|
|  |
|--|

**9. Estimated cash outflows for next quarter**

**\$A'000**

9.1 Exploration and evaluation

578

9.2 Development

-

9.3 Production

-

9.4 Staff costs

-

9.5 Administration and corporate costs

97

9.6 Other (provide details if material)

-

**9.7 Total estimated cash outflows**

**675**

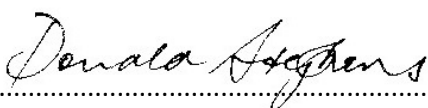
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## Mining exploration entity and oil and gas exploration entity quarterly report

| 10.  | Changes in tenements (items 2.1(b) and 2.2(b) above)                                  | Tenement reference and location | Nature of interest  | Interest at beginning of quarter | Interest at end of quarter |
|------|---|---------------------------------|---------------------|----------------------------------|----------------------------|
| 10.1 | Interests in mining tenements and petroleum tenements lapsed, relinquished or reduced |                                 | Refer to Appendix 1 |                                  |                            |
| 10.2 | Interests in mining tenements and petroleum tenements acquired or increased           |                                 | Refer to Appendix 1 |                                  |                            |

**Compliance statement**

- 1 This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
- 2 This statement gives a true and fair view of the matters disclosed.

Sign here:   
(Director and Company secretary)

Date: 31 October 2019

Print name: DONALD STEPHENS

**Notes**

1. The quarterly report provides a basis for informing the market how the entity's activities have been financed for the past quarter and the effect on its cash position. An entity that wishes to disclose additional information is encouraged to do so, in a note or notes included in or attached to this report.
2. If this quarterly report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, *AASB 6: Exploration for and Evaluation of Mineral Resources* and *AASB 107: Statement of Cash Flows* apply to this report. If this quarterly report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standards apply to this report.
3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.

**Changes in Interests in Mining Tenements  
For Quarter Ended 30 September 2019**

|      |   | <b>Tenement<br/>Reference</b> | <b>Nature of Interest</b>                     | <b>Interest at<br/>beginning<br/>of Quarter</b> | <b>Interest<br/>at end of<br/>Quarter</b> |
|------|---|-------------------------------|---|---|---|
| 10.1 | Interests in mining tenements relinquished, reduced or lapsed | EL 6229                       | Application to surrender lodged on 21/07/2019 | 100%  | 0%  |
| 10.2 | Interests in mining tenements acquired or increased           | EL 6404                       | Exploration licence granted 12/09/2019        | 0%  | 100%                                      |
|      |   | EL 6405                       | Exploration licence granted 12/09/2019        | 0%  | 100%                                      |

**ASX Additional Information**

List of mining tenements as at 30 September 2019

| <b>Tenement No.</b> | <b>Project Area</b>      | <b>Area (km2)</b> | <b>Registered holder/<br/>Applicant</b> | <b>Company Interest</b> |
|---------------------|--------------------------|-------------------|---|-------------------------|
| GEL 156             | Paralana                 | 489               | MNGI Pty Ltd                            | 79%                     |
| EL 5306             | Walparuta                | 26                | Petratherm Ltd                          | 100%                    |
| EL 6332             | Mt Willoughby            | 838               | Petratherm Ltd                          | 100%                    |
| EL 6333             | Mt Barry                 | 641               | Petratherm Ltd                          | 100%                    |
| EL 6404             | Mt Willoughby - extended | 456               | Petratherm Ltd                          | 100%                    |
| EL 6405             | Mt Barry - extended      | 917               | Petratherm Ltd                          | 100%                    |