

ASX ANNOUNCEMENT**31 Jan 2022**

Quarterly Activities Statement – December 2021

Highlights

- Woomera Project (ELA 2021/00066), close to Coda Mineral's Emmie Bluff IOCG discovery, includes high priority gravity targets prospective for Iron-Oxide Copper-Gold (IOCG) style mineralisation.
- The Rocky Well IOCG gravity anomaly is comparable in size to the Carrapateena IOCG gravity anomaly.
- A newly defined class of IOCG mineralisation (Stratabound IOCG's) is described herein with several large targets identified on the Woomera Project Area.
- Results from shallow RAB drilling completed in Sept-Oct 2021 identified 3 anomalous gold areas at Comet Project (EL 6443 & EL 6633), in South Australia.
- Follow-up infill RAB sampling of the Comet Project gold anomalies and significant additional regional RAB exploration drilling was completed during the period with geochemical results pending.
- Air-core / Percussion drill testing of Target 14 Gold Prospect completed in December with results pending.
- Drilling of the Comet Gold Prospect scheduled to start from late February 2022.



Summary of Operations

Petratherm (ASX-PTR) maintains a strong exploration focus for Olympic Dam Style Iron-Oxide Copper-Gold (IOCG) and high-grade gold. The Company's newly acquired Woomera Project is highly prospective for IOCG Mineralisation and is close to Coda Mineral's recent Emmie Bluff IOCG discovery. Gravity modelling work completed during the period defined several high priority IOCG drill targets. The Company is focused on achieving the necessary approvals to allow drill testing of these targets as soon as practicable.

The Company completed before the Christmas break period a major phase of infill and regional RAB drilling at the Comet Gold Project approximately 80 kilometres southwest of Coober Pedy in South Australia to explore for new gold anomalous areas. This work included drilling of the Target 14 Gold Prospect and results are due February 2022. Gold exploration works are ongoing with RC drill testing of the Comet Gold Prospect scheduled to start from late February 2022.

The Company had exploration and evaluation costs of \$169,000 relating principally to the Comet Project drilling operations during the quarter. Administration and corporate costs totalled \$112,000. The Company held \$2,693,000 cash at the end of the quarter. A summary of exploration activities during the quarter is presented below.

In accordance with ASX Listing Rules Guidance Note 23, the aggregate number of payments to related parties of the Company and its associates disclosed under section 6.1 of the Appendix 5B totalled \$29,000 and comprised of Director's fees.

Woomera (ELA 2021/00066) IOCG Project

In June, the Company secured a prospective ground position, close to Coda Minerals recent Emmie Bluff Deep Prospects Iron-Oxide Copper-Gold (IOCG) discovery (Refer to Coda Minerals (ASX: COD 09/06/21 ASX release) near Woomera in South Australia (Figure 1). The Licence Application (ELA 2021/00066), Woomera Project, covers a 209 km² area. Open file historical company reporting has additionally recorded significant historical copper drill intersections from three drill holes just north of the new tenement area (Figure2). The Company has initiated Native Title proceedings concurrently with the licence application process to ensure ground exploration works can begin quickly after the grant of the licence which is expected early in the new year.

The Winjabbie IOCG Prospect occurs just north of the new tenement area and is situated along an extension of the high gravity zone (Figures 1 & 2). Three historical vertical drill holes have been drilled at Winjabbie and all intersected broad zones of significant Iron-Oxide Copper-Gold (IOCG) style alteration with intervals of copper mineralisation. A summary of significant drill results from Winjabbie Prospect are presented below (refer to PTR ASX release 01/07/2021).

Drill hole WJD1 (WMC, 1980) – testing a magnetic anomaly returned:

62m @ 0.33% Cu from 864m.

Drill hole SAE11 (MIM,1990) - evaluating a second magnetic feature returned:

94 metres @ 0.21% Cu (interval 1005-1099 m.)

Including 7m @ 0.48% Cu from 1006 m.

Including 9m @ 0.52% Cu from 1086 m.

and,

42 metres @ 0.28% Cu (Interval 1123 – 1165 m.)

Including 5m @ 1.1% Cu from 1160 m.

Drill hole 07WJ01 (Uranium Exploration Australia, 2008) – evaluating a residual gravity anomaly just north of the WJD1 and SAE11 returned:

42 metres @ 0.34% Cu (Interval 824 – 866 m.)
Including 9m @ 0.8% Cu from 824 m.

These holes are widely spaced (ranging between 1.8 to 3 km apart, Figure 2) indicating IOCG style mineralisation occurs over a large area.

The Company has completed initial processing and gridding of historical open-file gravity data. The gravity data coverage over the Woomera Project Area is good, with several modern close spaced surveys (200 metre to 400 metre station spacing) completed by previous explorers. A prominent northwest trending zone of high gravity anomalism is evident and shown to extend over 10 kilometres in length across the tenement area (Figures 1 & 2). IOCG mineralisation, being iron rich, is associated with areas of high gravity anomalism and is one of the main direct targeting tools used by explorers. Whilst earlier exploration work by other explorers identified the prominent high gravity zone, no historical drilling has been undertaken over the tenement area.

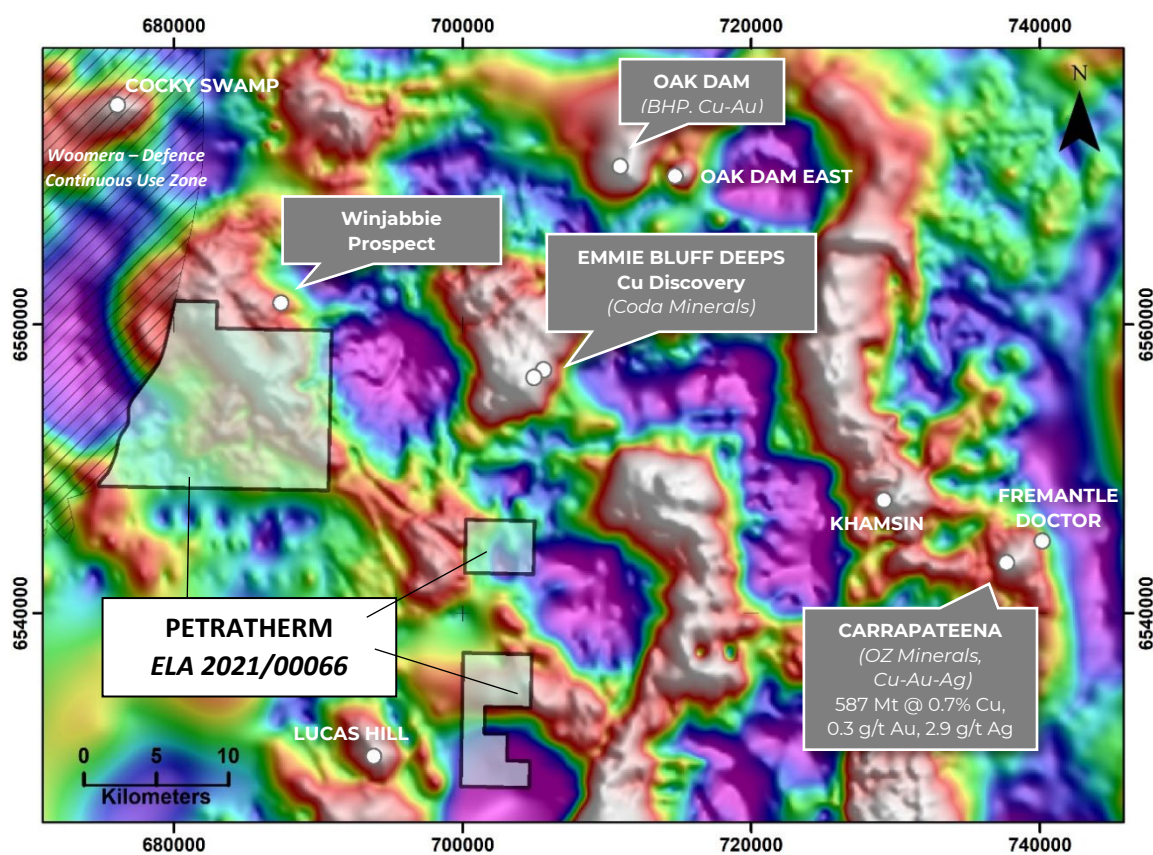


Figure 1 - Regional Location Map of Petratherm Exploration Licence Application Area (ELA 2020/00066), IOCG Mines and IOCG Prospects, overlain on a Bouguer (High Pass Filtered-15km) Gravity Image.

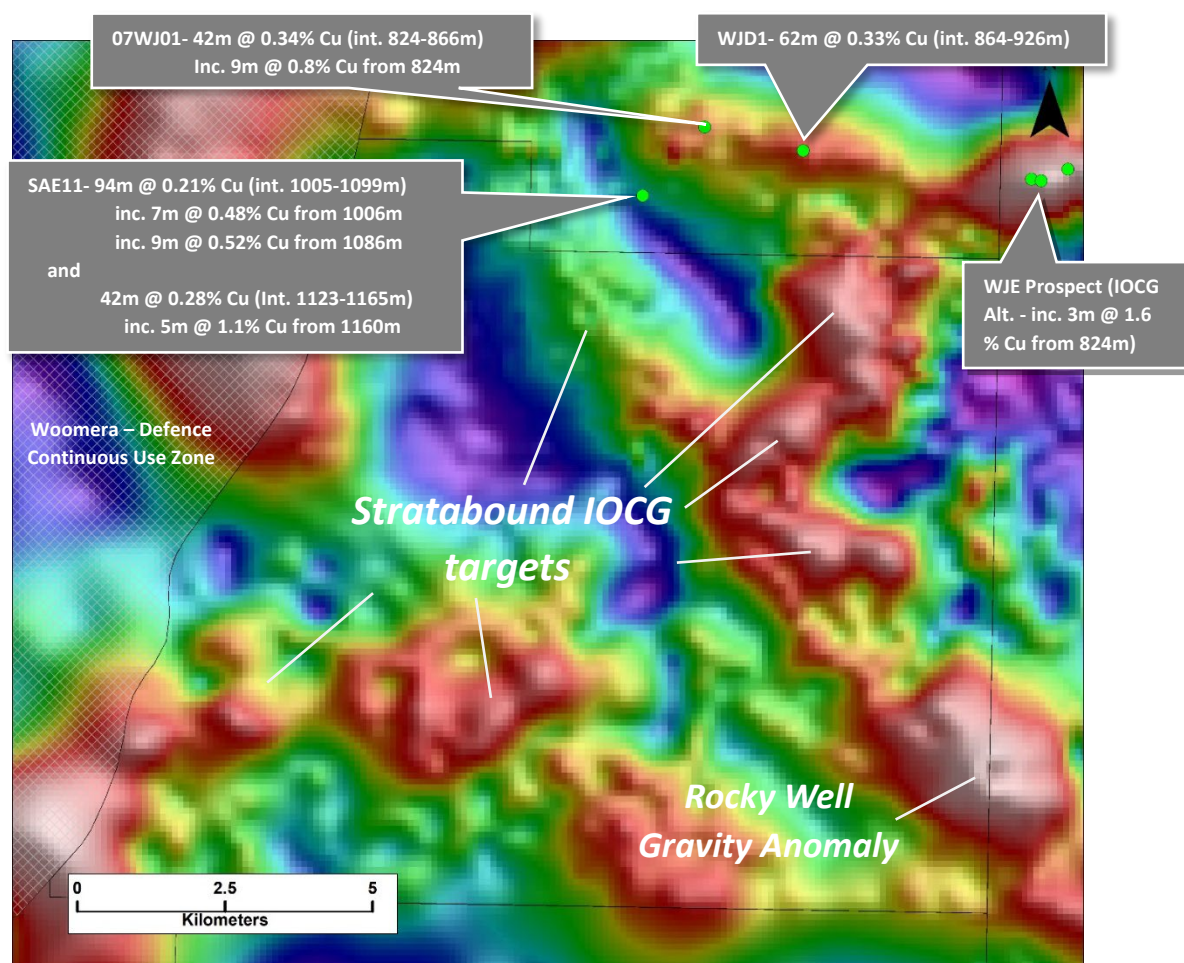


Figure 2 - Significant historical IOCG copper intersections adjacent to Petratherm's Woomera Exploration Licence Application Area (ELA 2021/00066) overlain on a Residual Gravity Image. High gravity areas (red-white zones) may indicate zones of stratabound style and breccia IOCG mineralisation

Woomera IOCG Gravity Targets

Gravity modelling work performed during the period has identified a robust gravity target (herein termed the Rocky Well Gravity Anomaly) in the south-eastern corner of the tenement area. The gravity model suggests that a dense body comparable in size and density to Oz Minerals's, world-class Carrapateena Orebody, fits the observed data (Figure 3). The target is a high priority for the Company moving forward.

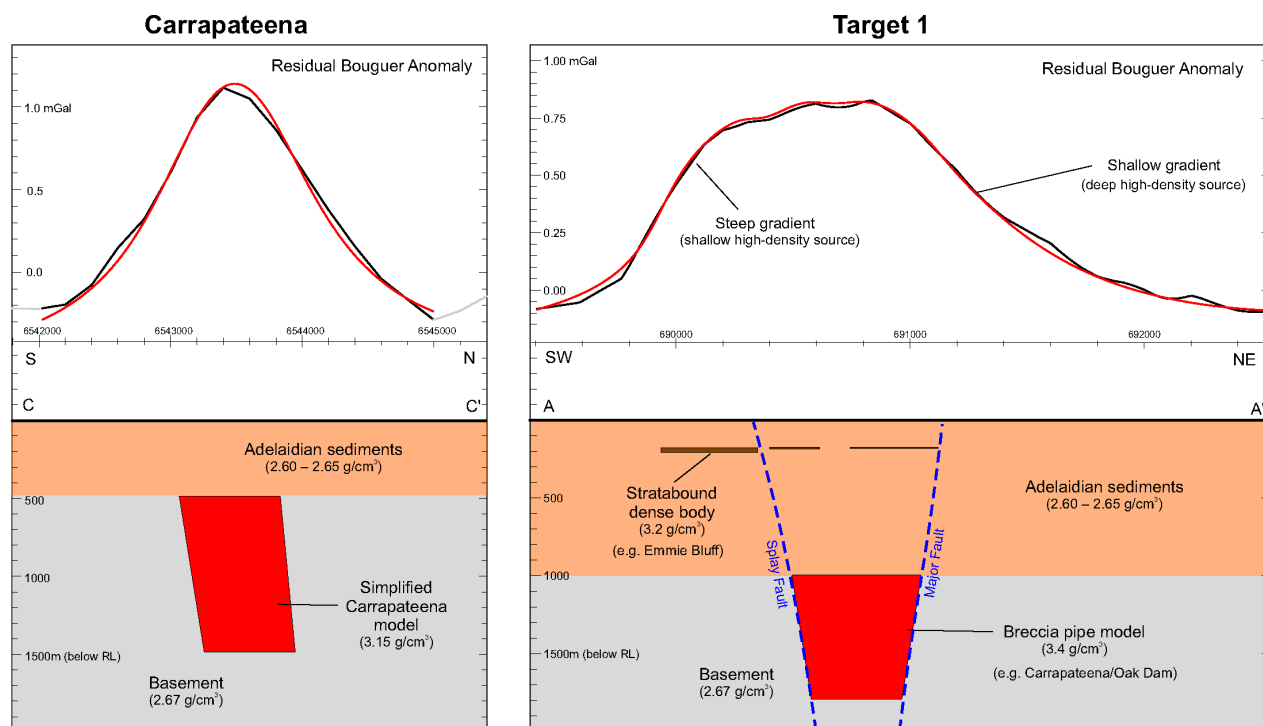


Figure 3 - Rocky Well Gravity Anomaly comparison with Oz Minerals', Carrapateena Ore Body

In addition to this “classical” IOCG gravity target, the Company’s evaluation work highlights the presence of what has been interpreted as “Stratabound Replacement Style IOCG Mineralisation” (Stratabound IOCGs) which produce flat lying sheet-like IOCG mineralised occurrences. The recent Emmie Bluff Deep IOCG discovery by Coda Minerals, 17 kilometres east of the project area, has reported high-grade copper and gold intercepts which to date appear to occur as stratabound bodies and similarly the Winjabbie IOCG mineralisation along the northern edge of the Woomera Project Area appears to be of the same general form. Importantly, high cobalt grades are also a feature of this style of IOCG mineralisation.

These mineralised bodies appear to be fault controlled, with better mineralised zones spatially associated with major faults which have acted as the principal conduit for mineralising fluids. The replacement style of ore occurs as a result of ore precipitating along reactive host rock sequence and/or where also ore fluid mixing may be occurring, triggering precipitation of ore nearer to the ancient palaeosurface. Stratabound IOCGs appear to surround or occur close to the magmatic rupture style pipes/maars which typify the classic IOCG breccia ore setting.

Petratherm postulates that “Stratabound IOCG’s” offer a new style of exploration target with large tonnage and high-grade potential. Whilst the source of the mineralising fluids are of magmatic hydrothermal origin, the Stratabound IOCGs share some key similarities to the giant stratabound copper deposits of the Central African Copper Belt and therefore require a different targeting approach. One of the key issues is that whilst they occupy a large area, they have thinner vertical extent (nominally less than 100 metres of vertical thickness) and therefore produce a more subtle gravity anomaly response. Gravity modelling undertaken

during the period highlights large areas where potential stratabound IOCG mineralisation may be occurring on the Woomera Project Tenement as shown in Figure 2.

The Company is very pleased to be able to secure a significant holding in the Woomera region, which is proving fertile for significant IOCG style mineralisation, with not only the new Emmie Bluff Deeps Discovery, but also includes BHP's recent Oak Dam West Discovery and OZ Minerals' newly operating world-class Carrapateena Cu-Au deposit (Figure 1). At this stage, the exploration licence is expected to be granted early in the 2022 calendar period which will allow ground exploration activities to get underway.

Comet Gold Project

The Comet Project (EL 6443 and EL 6633), totalling 1,190km², contains prospective Archean strata of the Northern Gawler Craton which hosts numerous gold occurrences such as the Challenger gold deposit (1.1 Moz @ 5.1g/t) and is located 30 km east from the recent high-grade Aurora Tank Gold discovery (Figure 4).

Historical surface geochemical sampling exploration techniques in the region have been impeded by shallow cover strata which masks most of the prospective basement rock geochemical response. To overcome this issue Petratherm has applied a new exploration methodology, where regional scale shallow grid drilling is being undertaken over the tenements to directly sample the top of the in-situ "saprolite" zone clays (deeply weathered basement rock which has been chemically decomposed to clay) below younger transported cover strata (refer to PTR ASX release 28/05/21 for program background). In most areas the top of saprolite zone occurs between 5 and 15 metres depth and shallow drilling is being undertaken using a light weight and cost-effective land cruiser mounted air core drill rig.

In November, results released from the ongoing regional shallow RAB drilling activities defined three new gold anomalies in the weathered basement clays (saprolite) that could be indicative of nearby gold mineralisation. The three new anomalies are shown in Figure 5 with the highest gold detected being in the vicinity of Petratherm's **Target 14** Prospect Area. The 3 anomalous values are:

- Drill Hole 658 – 4 metres @ **305 ppb Au**, from 20-24 metres
- Drill Hole 596 – 3 metres @ **21 ppb Au**, from 18-21 metres
- Drill Hole 614 – 3 metres @ **17 ppb Au**, from 18-21 metres

Drill hole number 658 featuring **305 ppb Au** expands the prospective area of interest for the **Target 14** Gold Prospect (refer to PTR ASX release 29/10/21). Drill hole 596, which returned 21 ppb Au, is also notably highly anomalous in copper, returning 419 ppm which is close to 20 times background, and may indicate the prospect also has some potential for copper mineralisation.

The saprolite sampling program has proved effective, with findings to date indicating sampling provides geochemical data with a high level of precision (low noise), eliminates superficial anomalies contained in the transported cover sediment, and most critically provides direct geochemical screening of the prospective basement rock at depth.

These assay results have yielded gold in saprolite up to 305 ppb and for comparison, the gold in saprolite above primary gold mineralisation at the nearby Comet Gold Prospect ranged between 7 to 51 ppb. Bedrock drilling below the saprolite anomaly at Comet Prospect has yielded multiple high gold intercepts of up to 6.97 g/t Au (refer to PTR ASX release 30/10/20 for summary of significant gold intercepts).



During November and December, infill RAB drill sampling over the new prospective zones along with expansion of the regional RAB grid drilling sampling program into new areas was completed. In all, 248 holes were drilled totalling 4,106 metres of drilling. Results from this phase of work are pending and expected early February 2022. The shallow grid drilling is supported by S.A Government grant funding to a level of \$147,500 on a 1 for 1 basis through the Accelerated Discovery Initiative (PTR ASX release 21/05/21).

In parallel to the regional saprolite drill targeting work the Company has engaged Bullion Drilling to conduct air core/percussion drilling of the Target 14 and Comet Gold Prospect Areas. Just prior to the Christmas period an 18-hole drill program was completed over the Target 14 Prospect Area for 1,061 metres of drilling. Geochemical results are pending and expected early February 2022.

Bullion Drilling are scheduled to remobilise to the area from late February 2022 to undertake the air core/percussion drilling of the Comet Gold Prospect Area.

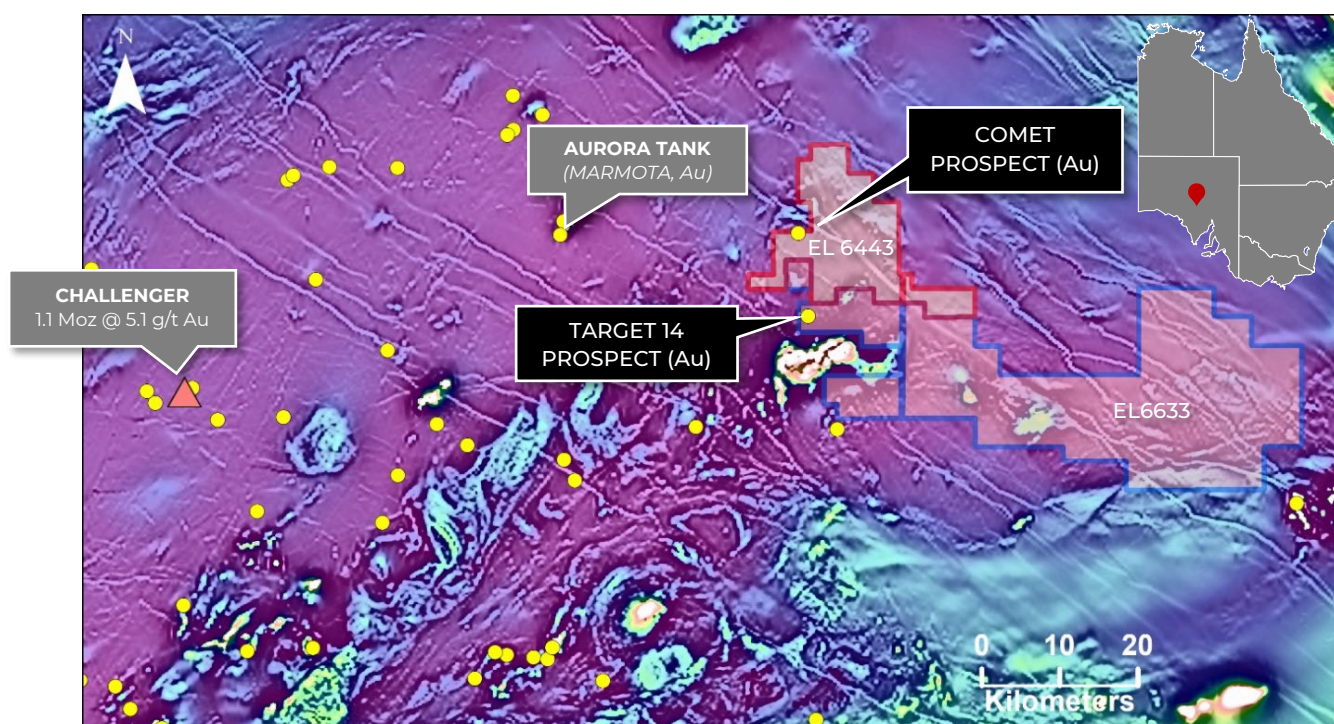


Figure 4 - Regional Location Map of Petratherm's Comet Project (comprising EL6443 and EL 6633) and gold occurrences overlain on a regional aeromagnetic image

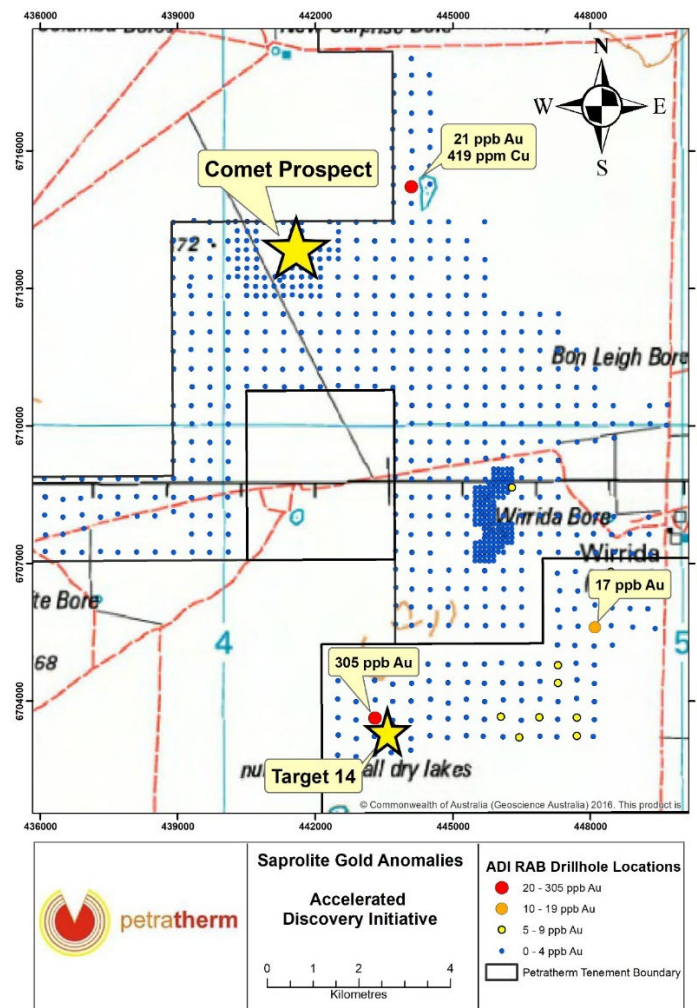


Figure 5 - Geochemical Plan highlighting the new saprolite gold anomalies.

Mabel Creek Project

The Mabel Creek Project, 50 kilometres northeast of Coober Pedy in South Australia is prospective for Iron-Oxide Copper-Gold (IOCG) and Broken Hill Type (BHT) lead-zinc-silver (Pb-Zn-Ag) mineralisation. Petratherm has a large ground position with four tenements (EL's 6332, 6333, 6404 & 6405) totalling 2,852 km² (Figure 6). Drilling to date has identified two areas (Areas 5 and 13) showing IOCG style hydrothermal alteration (refer to PTR ASX release 27/07/21).

Petrological analysis of the drill core from drilling completed in June 2021 identified granitoids which are strongly iron and light rare-earth enriched, highlighting the fertility of these target areas for iron-rich hydrothermal activity. Low levels of copper anomalism have been found to occur in flanking positions on the edges of the main gravity anomaly features at Area 5 and Area 13.

The Mabel Creek Area may represent a deeper, higher temperature crustal environment, where Iron-Sulphide Copper-Gold (ISCG) systems, a variant of IOCG deposits may be more likely to occur. ISCG ore deposits are increasingly being recognized for their potential economic importance most notably in the Cloncurry region of Queensland (i.e. Eloise Mine 10 Mt at 3.2 % Cu and 0.7 g/t Au).

At Mabel Creek, the surrounding meta sedimentary rock sequences are comparable in age and lithology to the Broken Hill region. Petratherm's drilling has encountered magnetic stratigraphy which include banded iron formation, amphibolite, garnet gneiss, and narrow zones of visible lead and zinc mineralisation like that

typically encountered at Broken Hill. Both BHT's and ISCG's have been demonstrated to be conductive and amenable to Electromagnetic (EM) targeting methods.

Petratherm is considering undertaking high powered SQUID EM surveying, which has been shown to detect conductive zones, below thick (100m to 200m) conductive cover potentially indicating high concentrations of sulphide. This work is likely to be undertaken during the first half of 2022 calendar period.

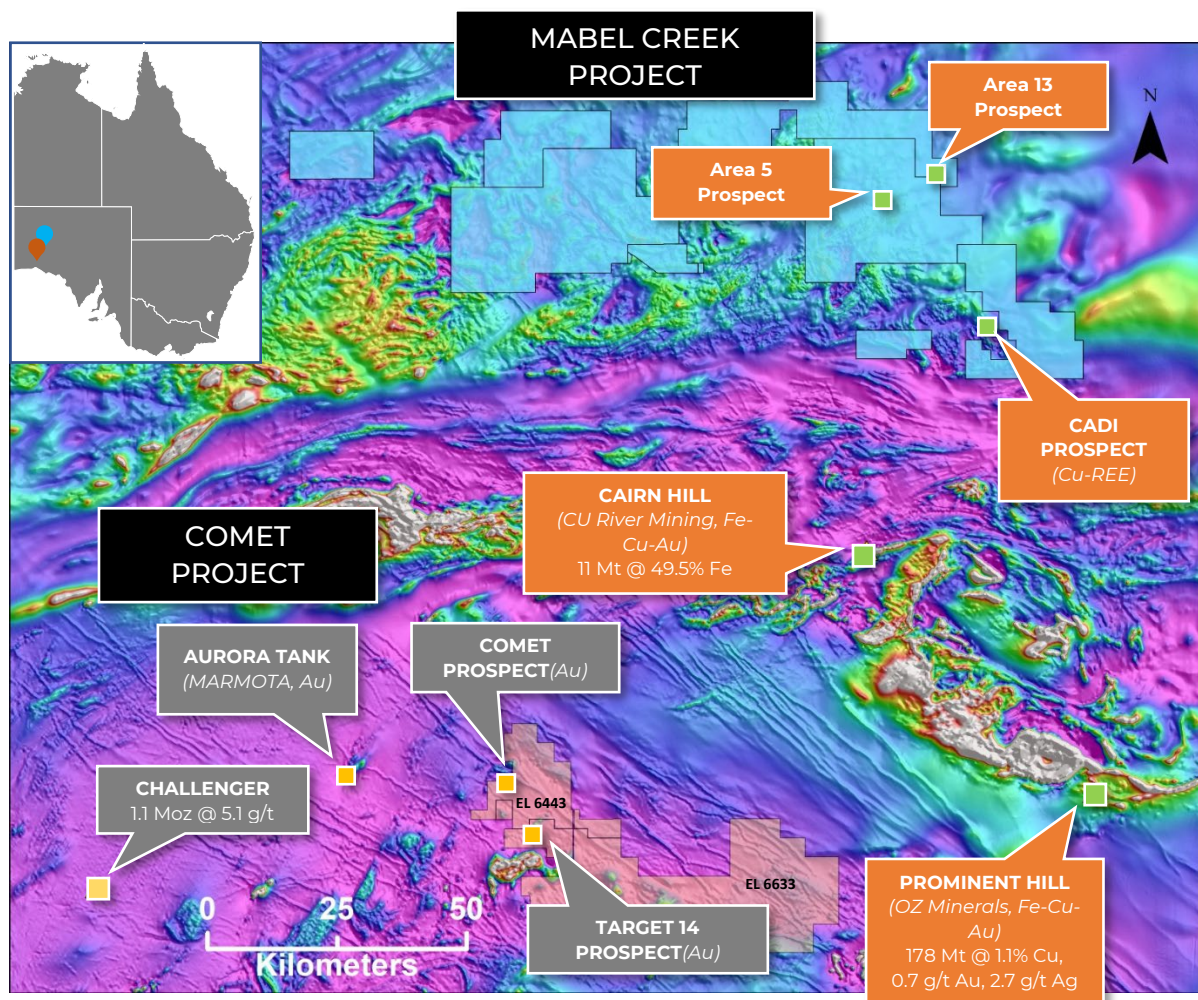


Figure 6 - Regional Location Map showing Petratherm's Mabel Creek and Comet Project Holdings, with major mines and key prospects in the area overlain on a Regional Aeromagnetic Image

For further information, please contact:

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This ASX announcement has been approved by Petratherm's Board of Directors and authorised for release by Petratherm's Chairman Derek Carter

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.