

**ASX ANNOUNCEMENT**

**23 December 2020**

## Mabel Creek Project Update

### HIGHLIGHTS

- Infill gravity surveying over the Area 13 and Area 15 anomalies has been completed and modelling work has defined final drill collar positions.
- Drilling of these targets and follow up drill testing at Area 5 Prospect, where previous drilling identified Olympic Dam Style Copper-Gold alteration, is scheduled to get underway in Q1 2021

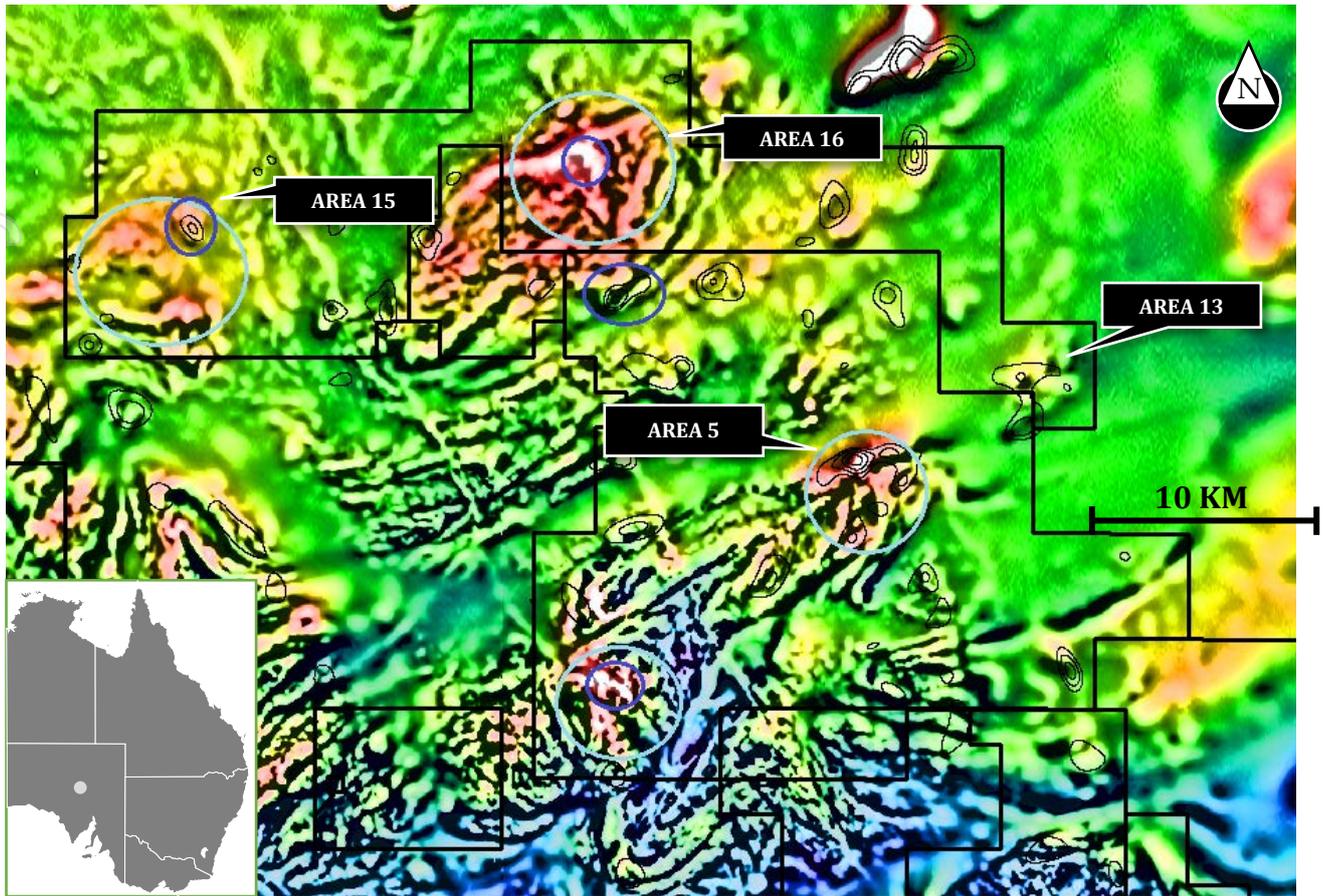
Petratherm Limited (“Petratherm” or “the Company”) (ASX: PTR) is pleased to announce that it has completed infill gravity surveying at its Mabel Creek Project Area, northeast of Coober Pedy in South Australia. The work has allowed for detailed modelling of two high priority gravity anomalies (Areas 13 & 15) which will be drill tested for Olympic Dam Style copper gold mineralisation in early 2021 (Figures 2 and 3).

The Mabel Creek Ridge is considered prospective for Olympic Dam Style Copper-Gold mineralised systems. The Project comprises four granted tenements (EL’s 6332, 6333, 6404 & 6405) totalling 2,852 km<sup>2</sup> (Figure 1). First pass drilling in March 2020 encountered pervasive Olympic Dam Style Copper-Gold alteration at the Company’s Area 5 gravity target (Figure 1, refer to PTR ASX release 30/07/20).

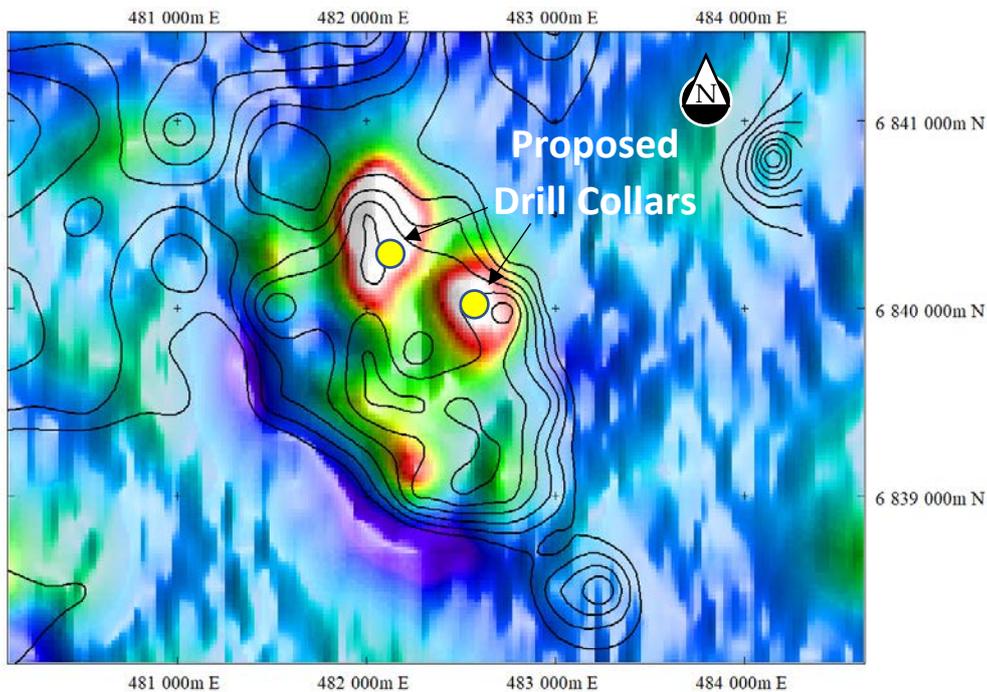
The Area 13 Target is a high magnitude gravity anomaly of approximately 6 milligals and is semi co-incident with a magnetic anomaly (Figure 3). 2D and 3D modelling suggests the dense body starts between 400 and 500 metres depth.

The Area 15 Target (Figures 1 & 2) is a discrete combined magnetic and gravity anomaly which occurs on the fringe of a broad zone which shows increased magnetic intensity that may be reflecting an area of increased hydrothermal activity. Modelling of the Area 15 body suggests it starts at between 300 and 400 metres depth.

The Company is currently arranging for final heritage surveying to be performed early in the new year, with test drilling at Area 13, 15 and follow up drilling at Area 5, scheduled to occur very soon afterwards. As previously reported (PTR ASX release 25/06/20), Petratherm has secured South Australian Government (Accelerated Discovery Initiative) grant funding to a level of \$182,000 to assist the drilling works. A preferred drilling contractor has been secured with drilling operations scheduled to commence, during the first quarter of 2021.

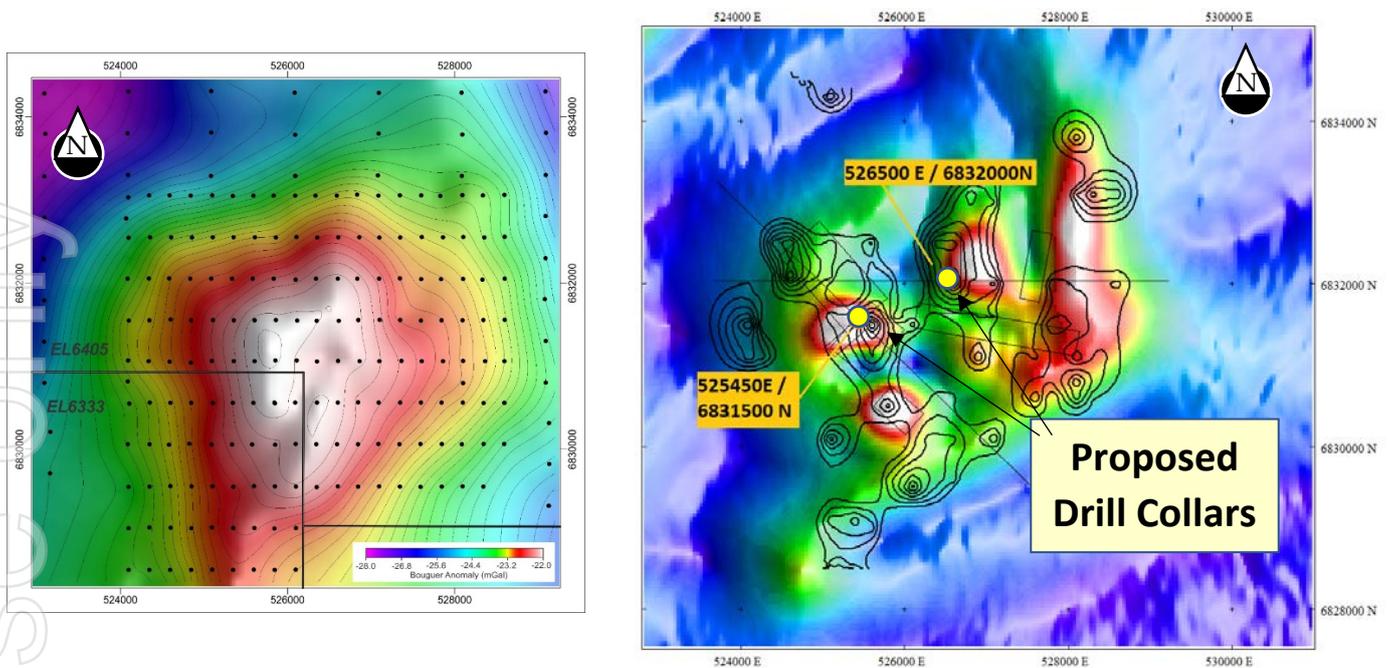


**Figure 1** Aeromagnetic image over the Eastern Mabel Creek Project Tenements. Key prospects and other residual gravity anomalies (contours) shown. The light blue circles highlight zones of increased magnetic intensity which may be indicating potential hydrothermal alteration centres.



**Figure 2** Area 15 gradient gravity contours overlain on gradient aeromagnetic image. Gravity contours define target centres (preferred drill collar positions shown - yellow dots) partially overlapping magnetic features. Depth to top of body is modelled at approximately 400 metres.





**Figure 3** Area 13 Target Bouguer Gravity Anomaly (Left) and Residual Gravity Contours overlying a VRMI Magnetic Image (Right). Area 13 is a strong gravity target of 6 milligals and has been modelled to start at approximately 400 to 500 metres depth. Proposed drill collar positions shown will test residual gravity target centres partially overlapping magnetic features.

**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.

## 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>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.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable - refer PTR ASX release 12/05/20 for previous JORC Table 1 drilling details.</li> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li>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.).</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable - refer PTR ASX release 12/05/20 for previous JORC Table 1 drilling details.</li> </ul>
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable - refer PTR ASX release 12/05/20 for previous JORC Table 1 drilling details.</li> </ul>
<b>Logging</b>	<ul style="list-style-type: none"> <li>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.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable - refer PTR ASX release 12/05/20 for previous JORC Table 1 drilling details.</li> </ul>
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable - refer PTR ASX release 12/05/20 for previous JORC Table 1 drilling details.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>sampling stages to maximise representivity of samples.</i></p> <ul style="list-style-type: none"> <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>	
<p><b>Quality of assay data and laboratory tests</b></p>	<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>• Not applicable - refer PTR ASX release 12/05/20 for previous JORC Table 1 drilling details.</li> </ul>
<p><b>Verification of sampling and assaying</b></p>	<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>• Not applicable - refer PTR ASX release 12/05/20 for previous JORC Table 1 drilling details.</li> </ul>
<p><b>Location of data points</b></p>	<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 “Mt Barry South” and 201909500002 “Mt Barry North” were used to control all field observations throughout the gravity survey.</li> <li>• Phase 2 and 3 gravity — 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</li> </ul>

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		<p>Fundamental Gravity Network (AFGN) control station 1992932018 "Airstrip Terminal – Coober Pedy SA".</p> <ul style="list-style-type: none"> <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>• <i>Data spacing for reporting of Exploration Results.</i></li> <li>• <i>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.</i></li> <li>• <i>Whether sample compositing has been applied.</i></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 was undertaken 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>• <i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i></li> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Not applicable, no drilling or sampling was undertaken</li> </ul>
<b>Sample security</b>	<ul style="list-style-type: none"> <li>• <i>The measures taken to ensure sample security.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Not applicable</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>• <i>The results of any audits or reviews of sampling techniques and data.</i></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>• <i>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.</i></li> <li>• <i>The security of the tenure held at the time of reporting</i></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</li> </ul>

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	<p><i>along with any known impediments to obtaining a licence to operate in the area.</i></p>	<p>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.</p> <ul style="list-style-type: none"> <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>
<p><b>Exploration done by other parties</b></p>	<ul style="list-style-type: none"> <li>• <i>Acknowledgment and appraisal of exploration by other parties.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Previous exploration work includes; <ul style="list-style-type: none"> <li><b>Airborne Geophysics:</b> Magnetics, Radiometrics and MCR.</li> <li><b>Ground Geophysics:</b> Magnetics and Gravity.</li> <li><b>Exploration Drilling:</b> 2 Rotary, 2 Rotary Percussion, 5 Reverse Circulation.</li> </ul> </li> </ul>
<p><b>Geology</b></p>	<ul style="list-style-type: none"> <li>• <i>Deposit type, geological setting and style of mineralisation.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Petrathern is primarily exploring for Fe-Oxide-Copper-Gold mineralisation (e.g. Olympic Dam-style) within the Peake &amp; Denison Domain of the Gawler Craton, South Australia.</li> </ul>
<p><b>Drill hole Information</b></p>	<ul style="list-style-type: none"> <li>• <i>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:</i> <ul style="list-style-type: none"> <li>○ <i>easting and northing of the drill hole collar</i></li> <li>○ <i>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i></li> <li>○ <i>dip and azimuth of the hole</i></li> <li>○ <i>down hole length and interception depth</i></li> <li>○ <i>hole length.</i></li> </ul> </li> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• No drilling has been undertaken by Petrathern for this survey although limited historical drilling exists.</li> <li>• Additional details from historic drilling are unknown.</li> </ul>
<p><b>Data aggregation methods</b></p>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>Where aggregate intercepts incorporate short lengths</i></li> </ul>	<ul style="list-style-type: none"> <li>• No drilling has been undertaken by Petrathern.</li> </ul>

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	<p><i>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.</i></p> <ul style="list-style-type: none"> <li>• <i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></li> </ul>	
<b>Relationship between mineralisation on widths and intercept lengths</b>	<ul style="list-style-type: none"> <li>• <i>These relationships are particularly important in the reporting of Exploration Results.</i></li> <li>• <i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></li> <li>• <i>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').</i></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>• <i>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.</i></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>• <i>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.</i></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>• <i>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 substances.</i></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 Daishsat Geodetic Surveyors.</li> <li>• The combined surveys comprise 2590 gravity stations, on 250 x 250m, 250 x 500m, 500 x 500m 500 x 1000m, and 1000 x 2000m grid configurations.</li> <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>Further work</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>