

14 June 2023

## Woomera Gravity Survey Identifies High-Priority Copper-Gold Targets

### Highlights

- Initial results from a precision ground gravity survey over the Arcoona Tenement at the Woomera Project has identified several targets prospective for Copper-Gold.
- Both Iron-Oxide Copper-Gold in the deep basement, and shallower sedimentary copper style gravity targets are evident in the survey data.
- 3D modelling of targets is underway with further updates to be provided on drill targets once completed.
- The Arcoona Tenement is part of PTR's larger Woomera Project Area, located in the world-class 'Olympic Copper-Gold Province' of South Australia.

**Petratherm Limited** (ASX: PTR) (**PTR** or the **Company**) is pleased to release initial gravity images from a tenement-wide gravity survey over the Arcoona Tenement (EL 6854) located in the world-class 'Olympic Copper-Gold Province' of South Australia. The tenement covers 264 km<sup>2</sup> and is part of PTR's larger Woomera Copper-Gold Project holdings.

#### ***PTR's Chief Executive Officer, Peter Reid commented:***

*"The Company is very excited to receive initial results from the Arcoona Gravity Survey, which identified several gravity anomalies prospective for Tier 1 Copper-Gold accumulations. These results build on the exciting inventory of Copper-Gold Targets PTR has already defined on its broader Woomera Project area, which are drill ready, and also recently announced SQUID EM targeting at its Mabel Creek Project."*<sup>1,2</sup>

The district is highly endowed with copper-gold and includes BHP's Oak Dam West Discovery currently undergoing expanded drilling<sup>3</sup>, as well as the world-class Carrapateena Mine. Other notable copper occurrences include Coda Mineral's Emmie IOCG discovery, and the sediment hosted copper-cobalt-silver mineral resource at Emmie Bluff in the overlying cover strata<sup>4</sup>.

The tenement is highly prospective for two styles of Copper-Gold mineralisation:

- Iron-Oxide Copper-Gold (IOCG) within older basement rock at depth (i.e. Olympic Dam, Oak Dam, Carrapateena and Prominent Hill), and
- Strata-bound style sediment hosted copper-gold accumulations in the overlying younger cover rock sequences (i.e. Emmie Bluff and Mt Gunson).

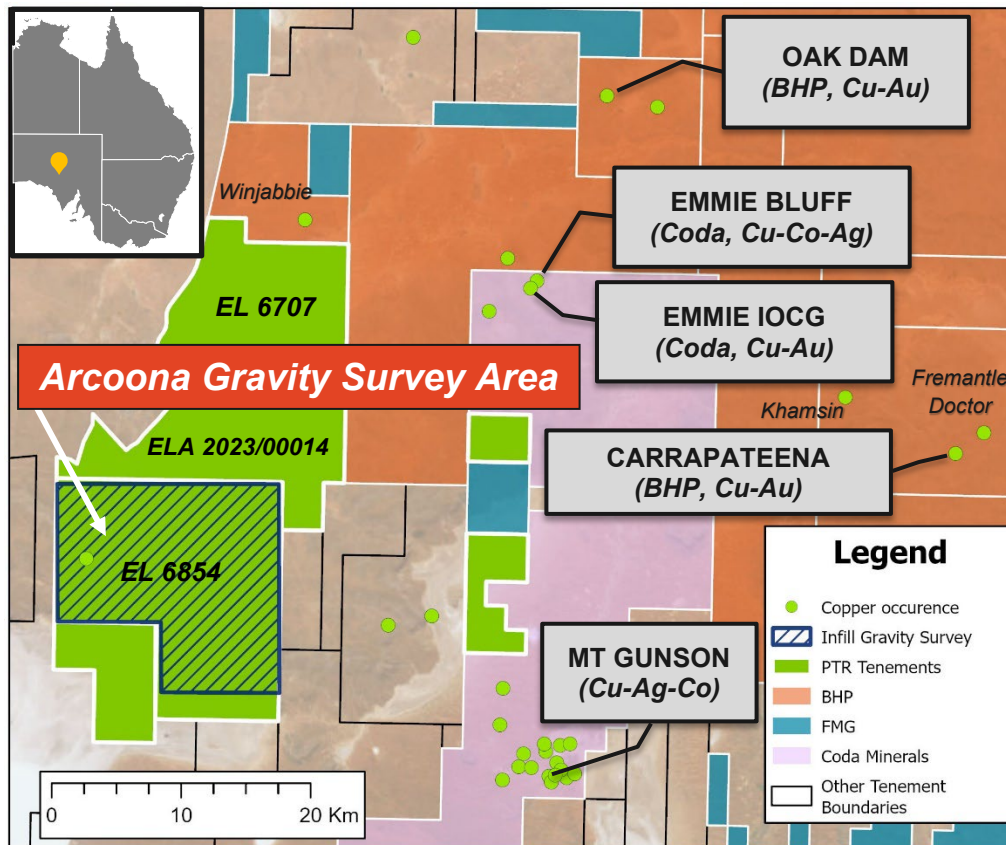
The regional gravity survey image presented in Figure 2 includes the new Arcoona gravity survey data and highlights multiple anomalous features not seen previously. The Arcoona tenement area is characterised by major northwest trending structures (Figure 3), which are interpreted to be important in localising mineralisation. Modelling is currently underway to characterise the anomalies to determine which features may be indicative of a mineralised system.

<sup>1</sup> PTR ASX Release 04/04/2022 – Woomera Tenement Granted – IOCG Drill Targets Defined

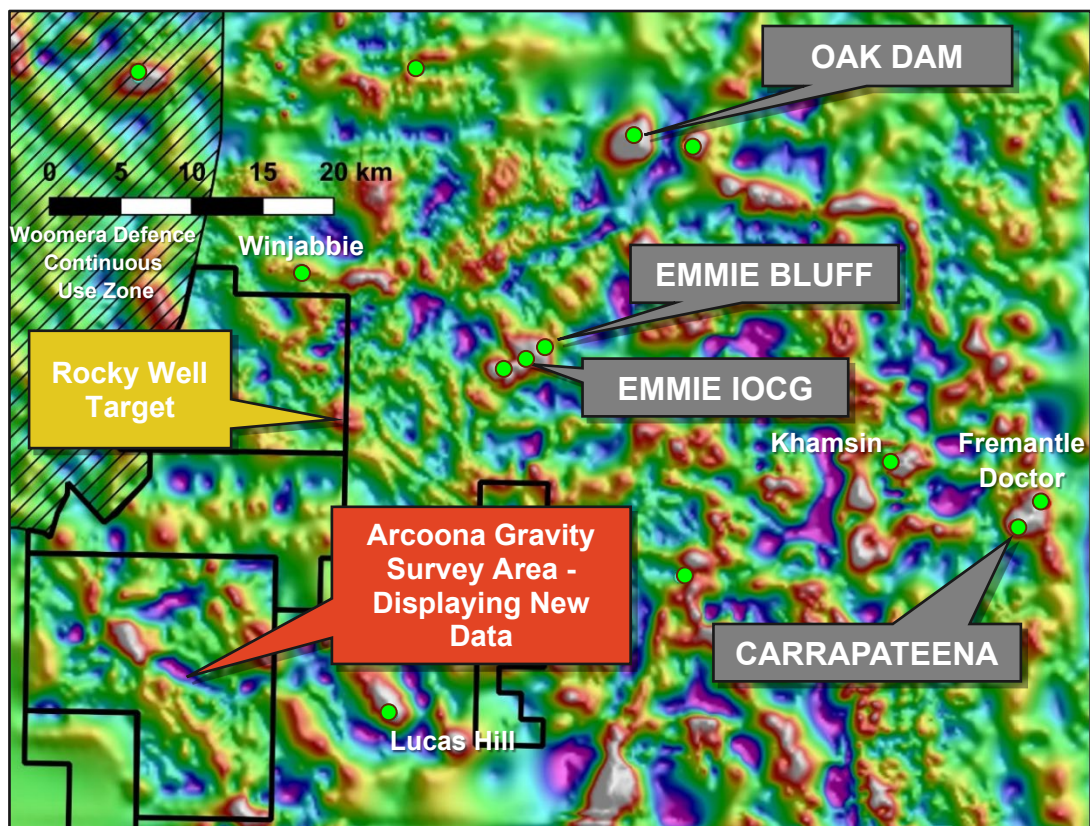
<sup>2</sup> PTR ASX Release 22/05/2023 – SQUID EM Survey Generates Significant Copper-Gold Target at Mabel Creek

<sup>3</sup> BHP ASX Release 21/04/2023 – Quarterly Activities Report

<sup>4</sup> Coda Minerals ASX Release 09/05/2023 - Presentation to RIU Sydney Conference 2023



**Figure 1 – PTR's Woomera Project, Gravity Survey Outline and Copper-Gold Mines / Prospects<sup>1</sup>**

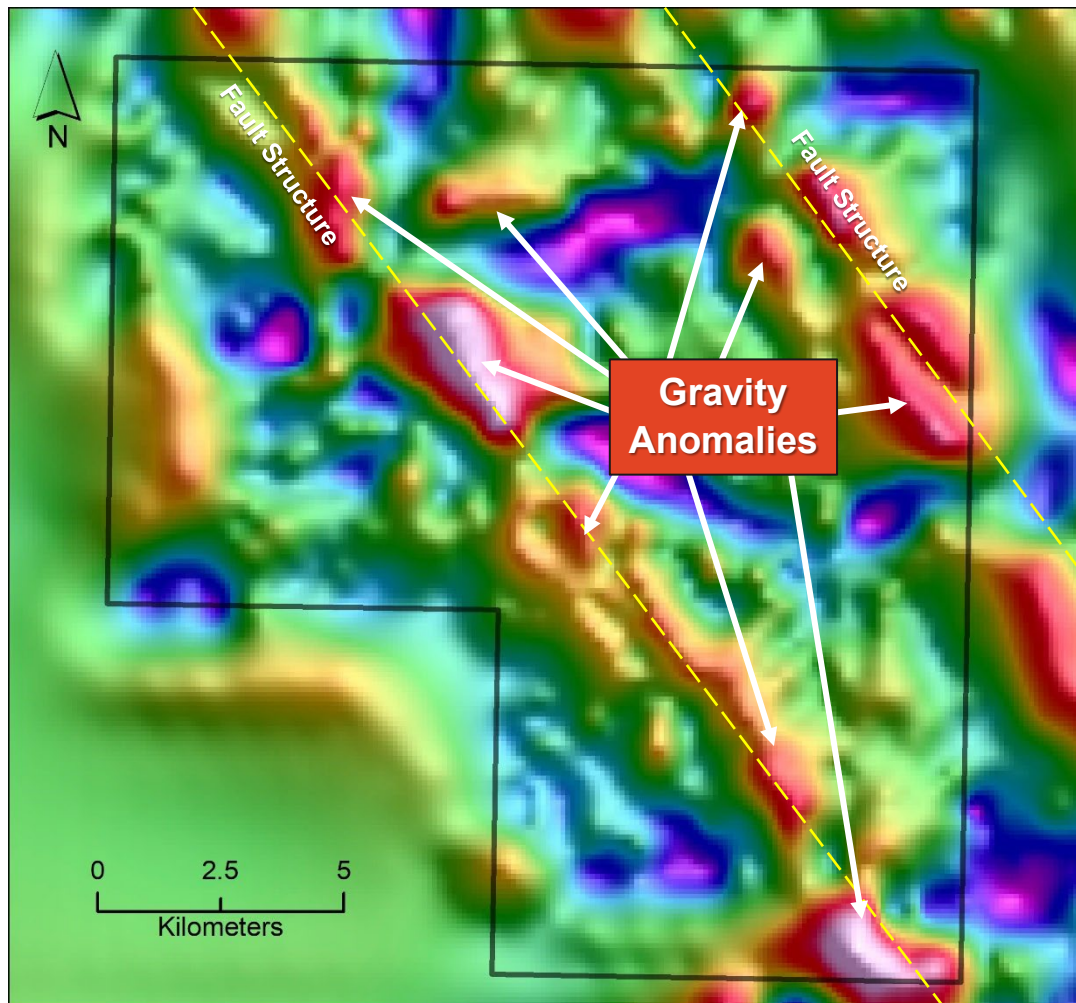


**Figure 2 – Central Olympic Province Gravity Image, PTR tenement outlines and Cu-Au Mines/Prospects. Several gravity features are evident in the Arcoona area which are undergoing further modelling to determine drill targets.<sup>1</sup>**

<sup>1</sup> See Endnote



Preliminary analyses indicate both deep basement bodies prospective for IOCG style copper sources and shallower flat bodies prospective for sedimentary copper in the cover may be present. The Company will report on geophysical targets identified for potential future drill testing once modelling work is complete.



**Figure 3 – Newly acquired Arcoona Gravity Survey data which shows several gravity features undergoing further modelling.**

PTR continues to develop priority targets on both its Mabel Creek and Woomera Projects with the intention of fast-tracking drilling operations for both of these projects in the second half of 2023.

#### Endnote

The purpose of Figures 1 and 2 is to illustrate the geographical proximity only of the Arcoona Tenement to existing Company Tenement Holdings, Copper, and Gold Occurrences.

## ENDS

This announcement has been authorised for release on the ASX by the Company's Board of Directors.

For further information:

**Peter Reid**

Chief Executive Officer

[preid@petratherm.com.au](mailto:preid@petratherm.com.au)

0435 181 705

Media and Broker Contact

**Zander Beacham**

White Noise Communications

[zander@whitenoisecomms.com](mailto:zander@whitenoisecomms.com)

0433 515 723

## About Petratherm Limited

Petratherm Limited (ASX: PTR) is a critical minerals explorer focused on the discovery of world-class copper-gold and rare earth deposits. The Company has several advanced drill ready projects in the Olympic Copper-Gold Domain of South Australia. PTR recently announced the discovery of significant concentrations of rare earths hosted in clays in the Northern Gawler Craton of South Australia which are now undergoing intensive drill testing.

Exploration drilling at the Comet Project Area has delineated two major REE occurrences. The Meteor and Artemis REE prospects both occur at very shallow depths, include high-grade blankets of mineralisation showing good lateral extent and ore thickness. Less than 10% of the project area has been explored for REE's and a systematic program of advancement of current prospects, testing of new areas and metallurgical recovery test work is ongoing.

PTR has several exciting copper-gold targets at its Mabel Creek and Woomera Projects located within the Olympic Copper-Gold Trend. Targeting work has defined several compelling Tier 1 Copper-Gold targets and PTR anticipates drill testing of targets will begin from late in 2023 calendar period.



**Figure 4 – PTR's Project Locations in South Australia**

**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 6854 (Arcoona) 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.</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. No drilling has been undertaken by Petratherm for this survey</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. No drilling has been undertaken by Petratherm for this survey.</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. No drilling has been undertaken by Petratherm for this survey</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. No drilling has been undertaken by Petratherm for this survey</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>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.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>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.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>
<b>Location of data points</b>	<ul style="list-style-type: none"> <li>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.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul style="list-style-type: none"> <li>All maps and locations are in UTM grid (GDA94 Z53). Height observation accuracy 0.023 metres. Station coordinates better than 0.005 metres accuracy.</li> <li>Scintrex CG-5 Autograv gravity meters were used for gravity data acquisition and base station control. Leica GX1230 GNSS receivers were used for gravity station positional acquisition.</li> <li>All gravity and GNSS data were acquired using Daishat UTV methods, with 2-3 crews operating concurrently onsite</li> <li>GNSS base station, numbered 1113, was utilised as primary GNSS control for the survey.</li> <li>Data was corrected for terrain effects.</li> </ul>



Criteria	JORC Code explanation	Commentary
<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>978 Ground gravity survey stations were collected on 500 x 500 metre grid.</li> <li>No drilling or sampling was undertaken</li> <li>Data spacing is insufficient to establish the degree of geological and grade continuity required for a Mineral Resource estimation.</li> <li>Regional ground gravity survey data comprises multiple surveys of highly varying station spacing ranging from 100 metres to several kilometres. Gravity survey spacing over the EL6854 area comprises 500 x 500 metre spacing.</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.</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 audits or reviews of the gravity data has been undertaken by Petratherm.</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 along with any known impediments to obtaining a licence to operate in the area.</i></li> </ul>	<ul style="list-style-type: none"> <li>EL 6854 was granted to Petratherm Ltd (100%) on the 18/10/2022 for a period of 6 years.</li> <li>EL 6854 is located over the Woomera area approximately 500 km north-northwest of Adelaide, South Australia.</li> </ul> <p><b>Native Title Claims:</b></p> <ul style="list-style-type: none"> <li>Kokatha People (Part A) SCD 2014/004</li> <li>No known impediments exist.</li> </ul>



Criteria	JORC Code explanation	Commentary
<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 regional State Government airborne magnetic and radiometric surveying.</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 exploring for Iron-Oxide Copper-Gold and sediment hosted copper mineralisation. The tenement area occurs on the Stuart Shelf within the Olympic Copper Province, South Australia.</li> </ul>
<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 for this survey.</li> <li>No recorded historical drilling for minerals has occurred on EL6854.</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>Not Applicable. 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>Not Applicable. 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</li> </ul>	<ul style="list-style-type: none"> <li>No drilling has been undertaken by Petratherm.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>Results.</i>	
<b><i>Other substantive exploration data</i></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>Open file ground gravity survey data for regional image sourced from SA Government Department for Energy and Mines. Survey specifications and quality of the historic gravity data is unknown.</li> <li>The gravity survey data underwent reprocessing and gridding by an independent geophysical consultant.</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 geophysical surveying to aid drill targeting and future drilling.</li> </ul>