

20 January 2025

## Pure High-Value Titanium Mineral Assemblage Confirmed at Rosewood

### Highlights

- Initial Heavy Mineral (HM) assemblage analysis from Rosewood Prospect has identified **exceptionally pure high value titanium ores and no deleterious minerals**.
- 3 mineralised zones identified to date from the new data, with **10 of 12 samples analysed reporting greater than 97.9% Valuable Heavy Mineral Content (VHM)**.
- HM samples from Main Zone average **25.3% rutile product (high-titanium leucoxene and rutile) with average TiO<sub>2</sub> grade of 93.0%**.
- Remaining ore from Main Zone comprises **pseudorutile with a high TiO<sub>2</sub> content averaging 75.4% TiO<sub>2</sub>**.
- **Potential for Zircon mineralisation** north of existing drilling.
- Heavy Mineral Content **results from a further 45 drill holes** spanning an approximate 2 kilometre by 8 kilometre area at Rosewood **expected in about 3 weeks**.
- Very positive results justify next phase of metallurgical test work.
- Titanium is on the critical minerals list for Australia, US and EU and has uses in electric vehicles and battery storage, wind technology, pigments, and as an alloy in steel and superalloys.

### Petratherm CEO, Peter Reid, commented:

*“The initial mineralogy results from the Rosewood Prospect are outstanding. Muckanippie continues to surprise, and this grass roots discovery is now emerging as a high-quality project with enormous potential to be a significant source of high value Titanium minerals and transformational for the Company.*”

*“This outcome is a key step forward for the Muckanippie Titanium Project and the Company is now working hard on the next phase of ore characterisation. In parallel, we look forward to the next phase of step out exploration drilling at Rosewood.*”

*We now eagerly await the heavy mineral results from a further 45 drill holes and look forward to providing these as they come to hand.”*

**Petratherm Limited** (ASX: PTR) (“**PTR**” or “**the Company**”) is pleased to announce results from initial mineralogical analysis of Rosewood Prospect Heavy Mineral (HM) samples. In December the Company announced results from a first round of HM separation test work from our maiden drilling program at the Rosewood Prospect within the Company’s Muckanippie Project in the northern Gawler Craton, South Australia (Figure 3). Results were extremely encouraging with all holes intersecting interpreted fluvio-deltaic marine sediments with HM concentrations ranging from 6.8% to 19.1% over 10 to 22 metre intervals<sup>1</sup>.

<sup>1</sup> PTR ASX release 04/12/2024 – Drill Results Confirm Major HMS Discovery at Rosewood.

A total of 12 samples of these HM concentrates were submitted to Diamantina Laboratories in Perth for mineralogical modal analysis to determine the nature of the heavy minerals present. Modal analysis uses a combination of polarizing light microscopy (reflective light and transmitted light) and point counting to identify and quantify the minerals present measured as weight percentages. Samples were selected from high, medium and low grade HM concentrates and from different geological horizons to help characterize the ore zones and identify geological patterns.

Results from this work are extremely encouraging, with the majority of samples returning >97.9% Valuable Heavy Minerals (VHM) in the form of titanium oxides with no deleterious minerals present (Tables 1,2 & 3). Titanium oxides observed included rutile, leucoxene (composed mainly of agglomerations of rutile and anatase) and pseudorutile (a highly altered ilmenite, upgraded in its titanium content). Further to this work Field Emission Scanning Electron Microscopy (SEM) analysis was undertaken on thirty titanium oxide grains from each of the 12 samples. This work was used to confirm the results of the modal analysis and to quantify the TiO<sub>2</sub> content of the various titanium oxide species observed (Plate 1). Rutile product contents reported in this release are the sum of rutile, anatase and high-titanium leucoxene contents.

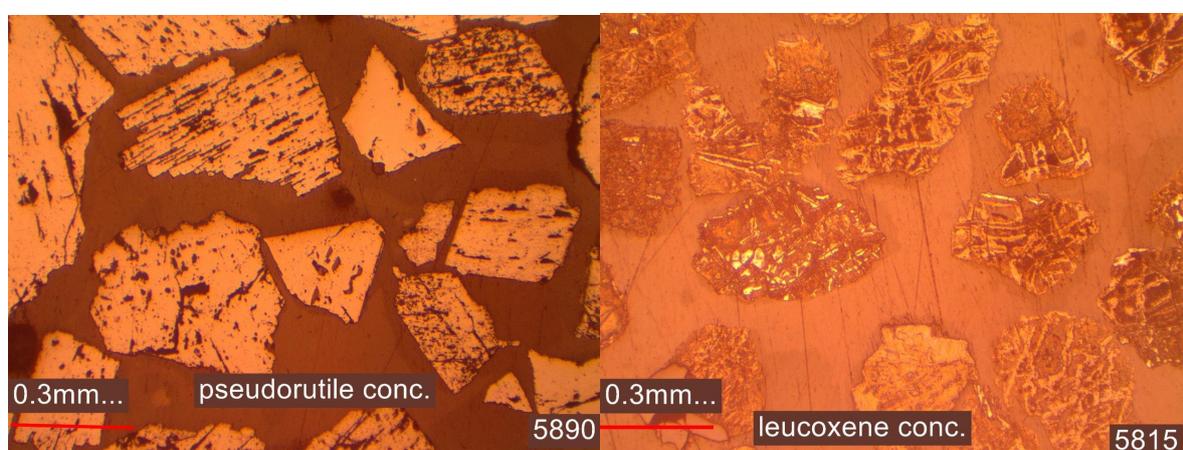


Plate 1 - Photomicrographs of the two principal ores at Rosewood. Pseudorutile (left) and high titanium leucoxene (right).

Using a combination of the modal analysis, SEM work and geological logging, three main zones have been identified at the Rosewood Prospect and are discussed below.

### Main Zone

Seven of the 12 samples submitted for mineralogy analysis were selected from the Main Zone of HM mineralisation (Figure 1). On the section where the samples were obtained, the Main Zone occurs over a strike length of 1.6 kilometres and is open to the north. This zone was also intersected in historical CAR drill holes 1 kilometre to the east (Figure 2). HMS results from PTR drilling to the west and east are pending. On this section the Main Zone HM mineralisation ranges from 10 metres to 17 metres thickness and averages 9.1% HM content<sup>1</sup>. Six of the seven samples submitted for mineralogy analysis returned extremely high VHM contents ranging between 97.9% and 98.9%. The only sample outside of this range returned 79.5% VHM content with most of the 'other' material being composed of iron oxide minerals.

Encouragingly, in the Main Zone, the rutile product content grades returned are very high, ranging between 9.0% and 64.2%, and averaging 25.3% (Table 1). SEM analysis of these grains returned a TiO<sub>2</sub> grade of 93.0%, which is extremely close to that of pure rutile. Most of the other VHM in the Main Zone is composed of pseudorutile, which averages 69.5% of the HM content. Also encouragingly, the pseudorutile is high in TiO<sub>2</sub>, averaging 75.4% TiO<sub>2</sub>. Forty three of the pseudorutile grains returned TiO<sub>2</sub> contents greater than 80%. Further work is required to determine if these grains can be separated from the other pseudorutile grains to produce a separate ore concentrate. Minor zircon (2.9%) was also present in one of the samples.

**TABLE 1: Main Zone Mineral Assemblage Results**

Main Zone							
Sample	CRE5858	CRE5848	CRE5851	CRE5854	CRE5833	CRE5806	CRE5810
Drill hole	24RW017	24RW015	24RW015	24RW015	24RW013	24RW011	24RW011
Interval (m)	7-8	10-11	13-14	16-17	12-13	6-7	10-11
VHM	98.2%	98.2%	79.5%	98.9%	97.9%	97.9%	98.1%
Rutile Product	20.1%	9.0%	22.5%	64.3%	17.9%	12.5%	30.8%
Pseudorutile	78.1%	89.2%	55.4%	34.4%	79.3%	85.3%	64.4%
Zircon	0.0%	0.0%	1.6%	0.1%	0.7%	0.1%	2.9%
Other	1.8%	1.8%	20.5%	1.1%	2.1%	2.1%	1.9%

	Number of Analyses	Average	
		TiO <sub>2</sub> %	Fe <sub>2</sub> O <sub>3</sub> %
Rutile Product	18	93.0	3.4
Pseudorutile	189	75.4	20.4

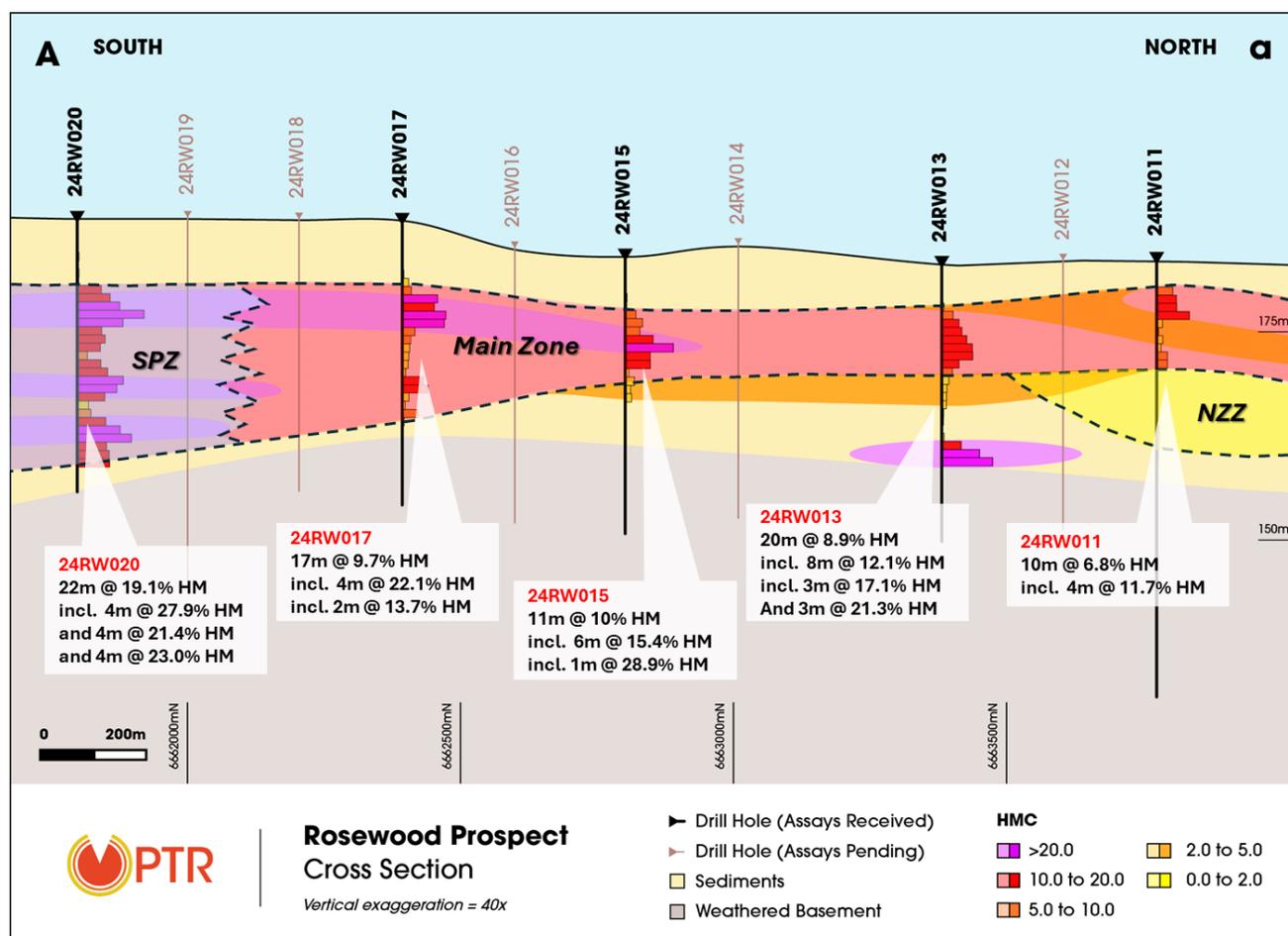


Figure 1 – Rosewood Geological Cross Section A-a showing HM intercepts<sup>1</sup> and mineral assemblage zones – South Pseudorutile Zone (SPZ), Main Zone & North Zircon Zone (NZZ)

### South Pseudorutile Zone

South of the Main Zone is the South Pseudorutile Zone (SPZ). Three samples were selected from this zone, all from drill hole 24RW020. This drillhole returned a very thick, high grade HM result of 22 metres at 19.1% HM. All samples returned very high VHM grades, primarily composed of pseudorutile (83.6-97.7%) with the remainder almost exclusively rutile product.

**TABLE 2: South Pseudorutile Zone Mineral Assemblage Results**

South Pseudorutile Zone			
Sample	CRE5890	CRE5883	CRE5903
Drill hole	24RW020	24RW020	24RW020
Interval (m)	19-20	12-13	29-30
VHM	99.3%	99.7%	88.1%
Rutile Product	1.6%	4.0%	4.4%
Pseudorutile	97.7%	95.7%	83.6%
Zircon	0.0%	0.0%	0.1%
Other	0.7%	0.3%	11.9%

	Number of analyses	Average	
		TiO <sub>2</sub> %	Fe <sub>2</sub> O <sub>3</sub> %
Rutile Product	3	92.1	6.8
Pseudorutile	87	65.1	33.8

### North Zircon Zone

At the northern end of the traverse and below the Main Zone there is a zircon-bearing sediment which is represented in drill hole 24RW011. This unit is finer grained and has a relatively low HM content (8 metres averaging 0.85% HM content). Despite the low HM grades, this unit is of interest due to the high zircon values. The two samples from this zone returned 20.9% and 14.5% zircon, as well as high rutile product (77.8% and 26.0% respectively). This zone is open to the north and further drilling is required to test for higher HM grades nearby.

**TABLE 3: North Zircon Zone Mineral Assemblage Results**

North Zircon Zone		
Sample	CRE5815/18	CRE5822
Drill hole	24RW011	24RW011
Interval (m)	15-20	22-23
VHM	99.0%	98.7%
Rutile Product	77.8%	26.0%
Pseudorutile	0.2%	58.2%
Zircon	20.9%	14.5%
Other	1.0%	1.3%

	Number of analyses	Average	
		TiO <sub>2</sub> %	Fe <sub>2</sub> O <sub>3</sub> %
Rutile Product	22	93.9	1.7
Pseudorutile	37	66.0	30.7

### Next steps

Confirmation of high value titanium oxides at the Rosewood Prospect is a significant milestone in the advancement of the project. These results justify the next phase of metallurgical assessment which will include using existing HM concentrates and bulk primary samples to undertake benchtop and small scale HM recovery investigations. These will include magnetic and electrostatic separation of HM concentrates, similar to those used in existing HM mining operations, to determine what titanium oxides products can produced for further marketing and evaluation.

HM content assay results from a further 45 drill holes from Rosewood Prospect, across seven widely spaced drill traverses covering an expanded area of approximately 8 kilometre x 2 kilometre are expected in about 3 weeks' time.

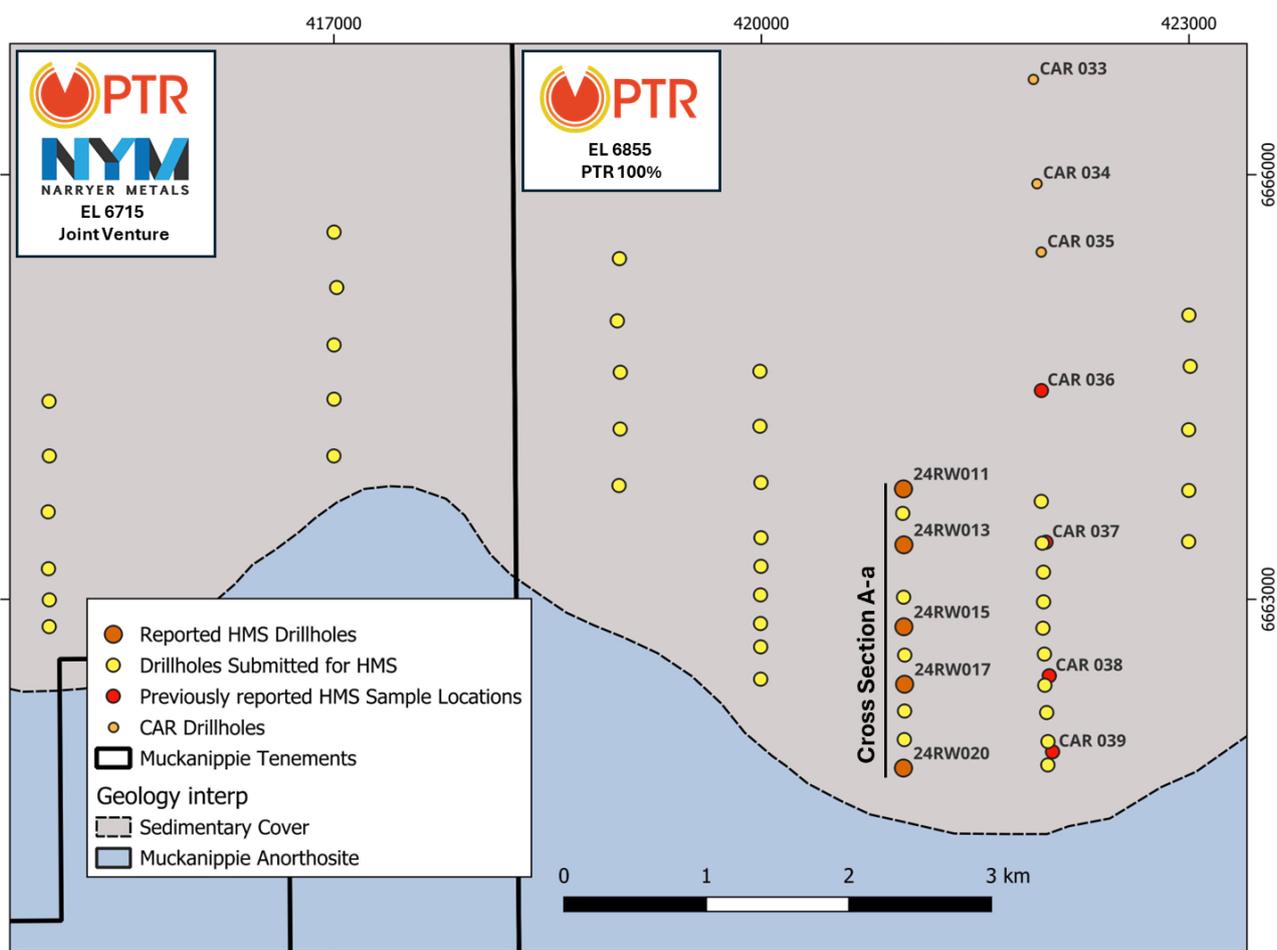


Figure 2 – Rosewood Prospect drilling and cross-section location. Heavy Mineral Assay Results from a further 45 drill holes pending.

## ENDS

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

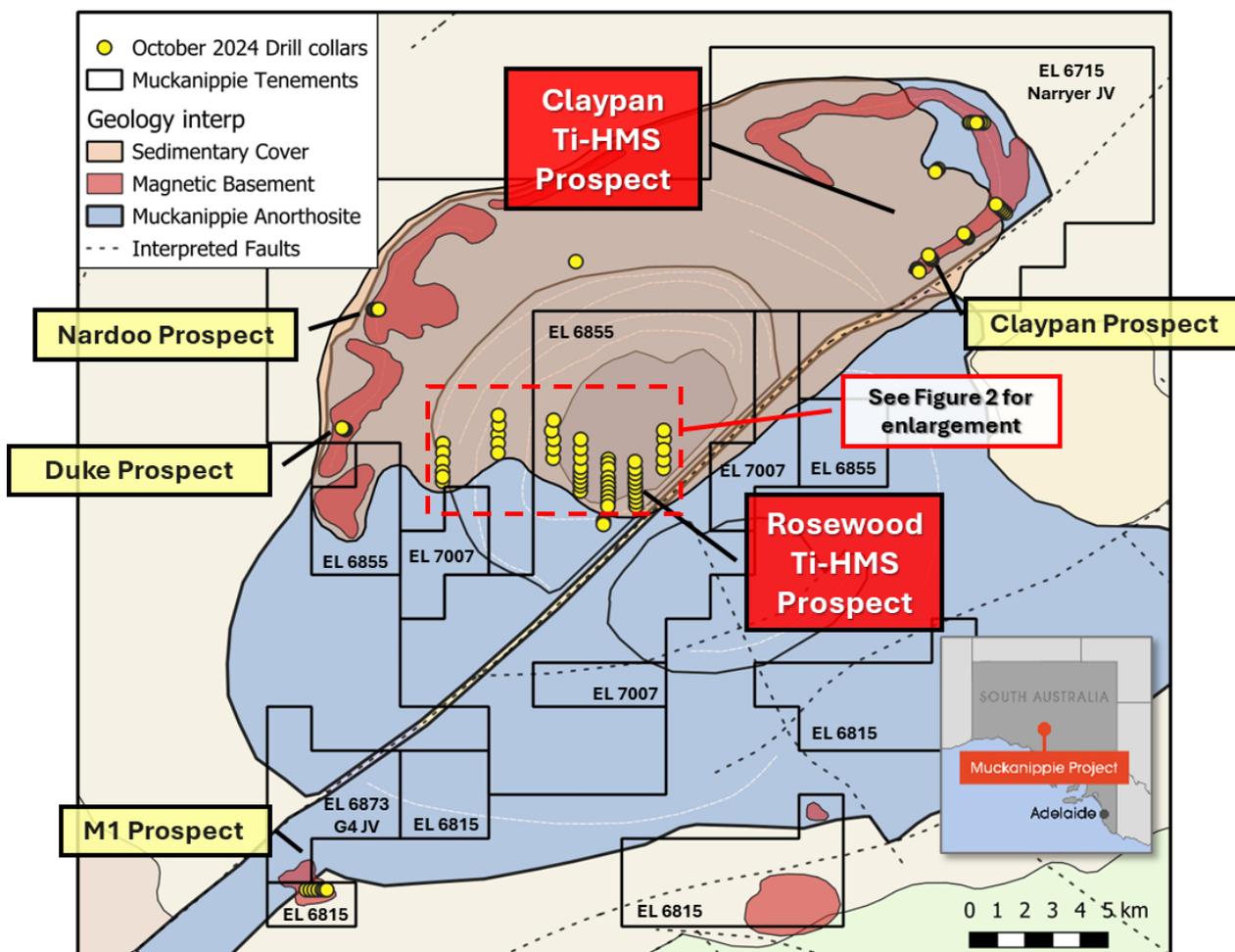


Figure 3 – Geology Map of Muckanippie Project Area, Tenements, Prospect Names and 2024 drill collars. The Project contains both 100% owned Petratherm tenure and the JV tenements, EL 6715 (Narryer Metals Limited, ASX:NYM)<sup>2</sup> and EL6873 (G4 Metals)<sup>3</sup>

For further information:

**Peter Reid**

Chief Executive Officer  
 preid@petratherm.com.au  
 0435 181 705

Media and Broker Contact

**Jason Mack**

White Noise Communications  
 jason@whitenoisecomms.com  
 0400 643 799

**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 Limited. 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.

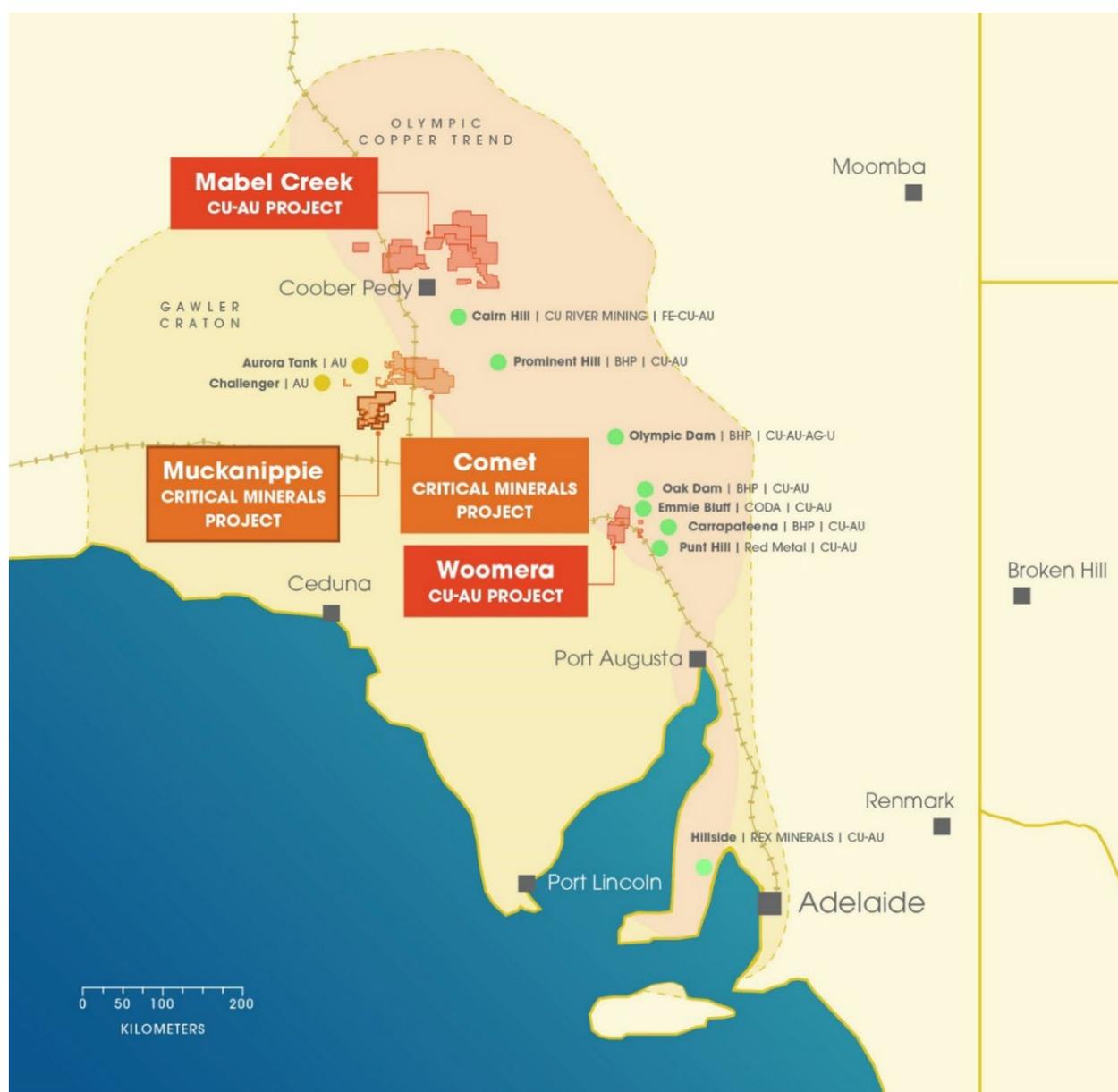
<sup>2</sup> ASX Announcement 18 April 2024 – Farm-in Agreement Expands Muckanippie Project

<sup>3</sup> ASX Announcement 29 Feb 2024 – Farm-In Agreement Executed – Muckanippie Project Expansion

## About Petratherm Limited

Petratherm Limited (ASX: PTR) is a copper and critical minerals explorer focused on the discovery of world-class deposits in both frontier and mature mineral provinces. The Company has two major exploration projects in the world-class Olympic Copper-Gold Province of South Australia. Work in the region has uncovered Iron-Oxide Copper-Gold style alteration/mineralisation at both its Mabel Creek and Woomera Project Areas. Geophysical targeting work has defined several compelling Tier-1 Copper-Gold targets which the Company is aiming to drill test during the 2025 calendar period.

In addition, PTR has a major project holding in the northern Gawler Craton of South Australia. Recent exploration has uncovered significant concentrations of titanium rich heavy mineral sands (HMS) over large areas. The mineral sands are associated with the weathering of a major intrusive complex, the Muckanippie Suite, which has been found to be highly prospective for other critical minerals including Platinum Group Elements, Vanadium, and Titanium. This is an early-stage Greenfields project with exceptional upside potential.



*PTR's Project Locations in South Australia*

EL6815, EL6855, EL6715, EL6873 & EL7007 (Muckanippie 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 (e.g. 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 (e.g. '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 (e.g. submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<p><b>Drilling</b></p> <ul style="list-style-type: none"> <li>5 drillholes have been selected for Heavy Liquid Separation (HLS) testing, from recently completed Petrathern Drilling.</li> <li>1 metre samples were split from the drill rig using a cone splitter attachment to the cyclone.</li> <li>A riffle splitter was subsequently used to split 1 metre samples for HLS testing. Results are contained in the main body of this report.</li> <li>Samples were dried, weighed and soaked.</li> <li>De-slime using 2mm and 38um Endecott sieves.</li> <li>Standard HM separation conducted HLS on - 2mm /+0.038mm sand using Tetrabromoethane (TBE), discarding floats.</li> <li>Historic drill hole information has been sourced from open file public records managed by the South Australian Department of Primary Industries and Resources.</li> <li>Additional details from historic drilling are unknown.</li> </ul> <p><b>Mineral Assemblage Analysis</b></p> <ul style="list-style-type: none"> <li>12 Samples selected from high, medium and low grade HM content assays and from different geological horizons to characterise ore zones and identify geological patterns</li> <li>Mineralogical modal analysis was undertaken by Diamantina Laboratories using polarizing light microscopy and point counting to identify and quantify the minerals present measured as weight percentages</li> <li>Field Emission Scanning Electron Microscopy (SEM) was undertaken on 30 titanium oxide grains from each of the 12 samples to quantify the TiO<sub>2</sub> content of the various titanium mineral species observed.</li> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li>Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of</li> </ul>	<ul style="list-style-type: none"> <li>Historic CAR exploration drilling reported was RC. Additional details from historic drilling are unknown.</li> <li>Petrathern has completed air core</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).</i>	drilling.
<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 recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Air core drilling methods were utilised throughout the duration of the program.</li> <li>• Hole diameters are 78mm.</li> <li>• A Geologist was on site for every drill hole to ensure that sample recoveries were appropriate. Excellent recoveries were recorded.</li> <li>• 1m sample intervals were collected in buckets and a 1 metre split sample taken using a cone splitter attached to the drill cyclone into pre-numbered calico bags</li> </ul>
<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>• All samples were geologically logged by the on-site geologist.</li> <li>• Geological logging is qualitative.</li> <li>• Representative chip trays containing 1 m geological sub-samples were collected.</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>• Samples averaging 1.6 kg were collected for laboratory assay, using a cone splitter.</li> <li>• It is considered representative samples were collected.</li> <li>• Samples were dried, weighed and soaked. De-slime using 2mm and 38um Endecott sieves. Standard HM separation conducted HLS on - 2mm /+0.038mm sand using Tetrabromoethane (TBE), discarding floats.</li> <li>• The nature, quality and appropriateness of sample preparation has been achieved.</li> <li>• Duplicate check samples have been introduced into the sample stream by the Laboratory.</li> <li>• Standard samples were introduced into the sample stream by the laboratory also completed standard assays.</li> <li>• Laboratory analytical charge sizes are standard sizes and considered adequate for the material being assayed.</li> </ul> <p><b>Mineral Assemblage Analysis</b></p> <ul style="list-style-type: none"> <li>• 12 Samples were selected from high, medium and low grade HM content assays and from different geological</li> </ul>

Criteria	JORC Code explanation	Commentary
		<p>horizons to characterise ore zones and identify geological patterns</p> <ul style="list-style-type: none"> <li>• Modal and SEM sampling sizes are appropriate to characterise mineral species present and their concentrations for the intervals analysed.</li> <li>• Results from the mineral assemblage study should only be considered an initial guide and significant additional work needs to be undertaken to determine titanium mineral products and concentrations over the broader mineralised intervals at Rosewood.</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 (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</i></li> </ul>	<ul style="list-style-type: none"> <li>• For the HLS work, internal quality control was carried out by Diamantina Laboratories. QC samples, in the form of standards and repeats were inserted at a rate of approximately 1 in 20.</li> </ul> <p><b>Mineral Assemblage Analysis</b></p> <ul style="list-style-type: none"> <li>• SEM analysis is considered to be accurate to within 1% of recorded concentration.</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>• Verification of intercepts has been undertaken by an independent consultant geologist, who has visually assessed drill samples and examined the laboratory data.</li> <li>• All data used is from primary sources.</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 a GPS with a lateral accuracy of <math>\pm 5</math> metres and a topographic accuracy of <math>\pm 5</math> metres.</li> </ul>
<p><b>Data spacing and distribution</b></p>	<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</i></li> </ul>	<ul style="list-style-type: none"> <li>• Petratherm has completed drilling however results are currently pending.</li> <li>• Data spacing is insufficient to establish the degree of geological and grade continuity required for a Mineral Resource estimation.</li> <li>• No compositing was used</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>applied.</i>	
<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>Drill holes reported were completed every 400 metre to 600 metre along a single 2 kilometre traverse.</li> <li>The mineralisation in drillholes and mapped in outcrop is interpreted to be recent flat lying fluvio- deltaic marine sediments.</li> <li>Historic drilling is vertical and gives a true reflection of grade and thickness however cannot provide a complete picture of continuity between holes to due to the wide spacing between holes. Figure 2 must be considered a guide. Additional infill drill hole results are pending.</li> </ul>
<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>Samples were taken directly from the field to Petrathern's warehouse and then couriered to Diamantina Laboratories in Perth.</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>There is currently a review into the methods used to improve HM recoveries.</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>EL6815 was granted 100% to Petrathern Limited on 12/08/2022 for a period of 6 years.</li> <li>EL 6855 was granted 100% to Petrathern Limited on 18/10/22 for a period of 6 years.</li> <li>EL 7007 was granted 100% to Petrathern Limited on 15/08/24 for a period of 6 years.</li> <li>EL6873 was granted to G4 Metals Pty. Ltd. on 18/11/2022 for a period of 6 years. Petrathern Ltd may earn up to a 70% interest via a 2 Stage Farm-in with further provisions, dependent on elections, to earn up to a 100% equity in the project. Refer to PTR ASX release 29/02/2024.</li> <li>EL6715 was granted on 06/04/2022 to Leasingham Metals Pty. Ltd. a, wholly owned subsidiary of ASX listed Narryer Metals Ltd. for a period of 6 years. Petrathern Ltd may earn up to an 70% interest, via a 2 Stage Farm-in with further provisions, dependent on elections, to earn up to an 80% equity in the project. Refer to PTR ASX release</li> </ul>

Criteria	JORC Code explanation	Commentary
		<p>18/04/2024</p> <ul style="list-style-type: none"> <li>The tenements are located approximately 120 km south south-west of Coober Pedy overlapping Bulgunnia, Mulgathing and Commonwealth Hill Pastoral Stations.</li> <li>The tenements are located within the Woomera Prohibited Area (Green Zone).</li> <li><b>Native Title Claims:</b> SCD2011/001 Antakirinja Matu-Yankunytjatjara.</li> <li>The tenements are 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;</li> <li><b>Surface Geochemical Sampling:</b> Calcrete</li> <li><b>Airborne Geophysics:</b> Magnetics &amp; Radiometrics.</li> <li><b>Ground Geophysics:</b> Prospect scale Magnetics, Gravity and EM.</li> <li><b>Exploration Drilling:</b> Open file records indicate 296 RAB / Air core, 2 sonic &amp; 51 RC reconnaissance and prospect scale holes drilled over Project Group.</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>Petratherm is exploring for Ti-Fe-V-P, rare earths, and Au-PGM associated with the Muckanippie Suite. Targets include primary basement mineralisation and secondary enrichments as HMS placers in overlying younger cover strata.</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>Petratherm has completed drilling however the majority of drill results are currently pending.</li> <li>Refer to PTR ASX release 04/12/2024 – Drill Results Confirm Major HMS Discovery at Rosewood for JORC Table 1 information, HM intercept and collar tables.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li><i>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. 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 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></li> <li><i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></li> </ul>	<ul style="list-style-type: none"> <li>Refer to PTR ASX release 04/12/2024 – Drill Results Confirm Major HMS Discovery at Rosewood for JORC Table 1 information, HM intercept and collar tables.</li> </ul>
<b>Relationship between mineralisation 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 (e.g. ‘down hole length, true width not known’).</i></li> </ul>	<ul style="list-style-type: none"> <li>The mineralisation viewed in drillholes and outcrop is interpreted to be recent, flat lying fluvio-deltaic marine sediments. Historic drilling is vertical and should give a true reflection of thickness and a reasonable guide continuity between holes.</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>See Figures in main body of release attached.</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>Petratherm has completed drilling of 100 drill holes at a number of Prospects on the Muckanippie Project (see Figure 3).</li> <li>These initial drill hole results are from 5 holes completed along a single 2km drill traverse at the Rosewood HMS Prospect.</li> <li>A further 45 drill holes from Rosewood will be analysed for HMs and assays will be reported once they come to hand.</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>No other substantive exploration data has been collected by Petratherm.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b><i>Further work</i></b>	<ul style="list-style-type: none"><li><i>The nature and scale of planned further work (e.g. 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.</li><li>Extensive mineralogical and metallurgical test work will be conducted on current drill samples to determine grade, mineralogy and nature of the heavy mineral mineralisation at Rosewood.</li><li>Further infill and extension drilling is likely to occur in the near future.</li></ul>