

21 November 2024

AGM – CEO Presentation

Petratherm Limited (ASX: PTR) (**PTR** or the **Company**) is pleased to release the following Company Presentation, to be delivered by Chief Executive Officer Peter Reid at the Company's 2024 Annual General Meeting on 21 November 2024.

Access AGM webcast via the following link: <https://ccmediaframe.com/?id=5WdJkUDa>

ENDS

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

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Critical Minerals and Copper Project Summary



Petratherm Limited AGM Company Presentation – 21 Nov 2024

ASX:PTR



Compliance Statements



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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 mineralization 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.

JORC INFORMATION AND COMPLIANCE NOTE:

Further details (Including JORC 2012 Code Reporting Tables, where applicable) for the information included in this Presentation can be found in the following Petratherm Limited announcements previously lodged with the ASX:

Footnotes

- 1. The purpose of the figure is to illustrate the geographical proximity **only** of the Project Area to other mineral occurrences and geographical locations.
- 2. High-Grade Titanium Rich Heavy Mineral Sands at Muckanippie – 11 September 2024
- 3. Outstanding Metallurgical Results at Muckanippie HMS Project – 19 November 2024
- 4. Wilson Advisory Report, 27 March 2024 – Copper Deficits Now Likely in 2024
- 5. Woomera Gravity Survey Defines Significant IOCG Target – 02 May 2024
- 6. Woomera Tenement Granted – 04 April 2022
- 7. Quarterly Activities Report – 30 April 2019
- 8. Significant Copper-Gold Expansion at Mabel Creek – 14 August 2023
- 9. Mabel Creek Gravity Survey Defines Significant IOCG Targets
- 10. Farm-in Agreement Expands Muckanippie Project – 18 April 2024

CAUTIONARY NOTE ON VISUAL ESTIMATE

Item	Drill hole	Interval (metres)	Nature of Mineral Occurrence	Minerals Observed	Heavy Mineral Abundance	Assay Result Expected
Slide 10	24RW049	10-11	Heavy mineral sand layer forming concordant bands within a silty sand horizon. Some minor indurated silcreted bands present.	Titanium bearing heavy minerals. No identification of the HM species can be made until further laboratory work is completed.	20% of total volume	Dec-24

Visual estimates of mineral abundance should never be considered a proxy or substitute for laboratory analyses where concentrations or grades are the factor of principal economic interest. Visual estimates also potentially provide no information regarding impurities or deleterious physical properties relevant to valuations. The photos contained herein are of a higher-grade mineralised horizon and are not necessarily indicative of the broader mineralisation in the area. Assays have been submitted for geochemical testing and results are expected in 4 to 6 weeks’ time.

Corporate Overview

Shares on Issue

303.5M

Share Price (19/11/2024)

\$0.12

Cash (19/11/24)

\$2.9M

Options

1.55M

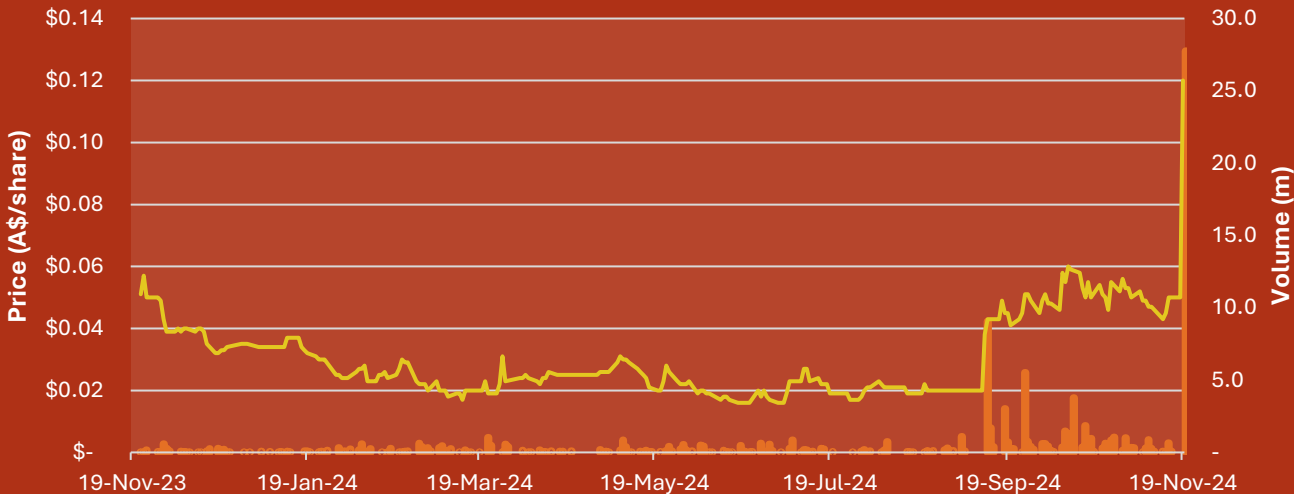
Market Cap

\$36.4M (undiluted)

Enterprise Value

\$33.5M

PTR Share Price and Volume Chart
(to 19/11/24)



Board of Directors



Derek Carter Non-Executive Chairman

Mr. Carter is a founder of the Minotaur group and a joint recipient of Explorer of the Year (AMEC) for the discovery of the Prominent Hill Copper Gold deposit. He was Chairman of Highfield Resources during the discovery and evaluation of the world-class Muga deposit and has been involved with numerous Government, Industry and ASX listed Company Boards. He is current Chairman of Hillgrove Resources. He is a geologist with over 45 years Corporate and field experience.



Peter Reid Chief Executive Officer

Mr. Reid is an exploration geologist with 30 years' experience. Part of the Minotaur team which discovered the Prominent Hill copper-gold deposit and then later heavily involved in the successful IPO spin offs of ASX listed, Mithril Resources Ltd and Petrathem Ltd. Founding CEO of Petrathem and the recipient of the Chairman's Award for his contribution to the Australian geothermal industry.



Simon Taylor Non-Executive Director

Simon Taylor is a resources industry executive with over 30 years' experience in geology, finance and corporate management at CEO and Board levels. Recently, Simon was Managing Director of Oklo Resources Limited when it was acquired by B2Gold Corp in September 2022. He is Managing Director and CEO of Stellar Resources and a Non-Executive of Director Black Canyon Resources.



Simon O'Loughlin Non-Executive Director

Founder of O'Loughlins Lawyers, an Adelaide based specialist commercial law firm. Extensive Experience of equity capital markets, ASX and ASIC rules. Has held many Non-Exec Directorships on ASX listed companies. Non-Exec Director of Stellar Resources.



Donald Stephens Non-Executive Director

Chartered Accountant and corporate advisor with over 25 years' experience in the accounting, mining and services industries, including 14 years as partner of HLB Mann Judd (SA), a firm of Chartered Accountants.

Projects Overview

Exploring for World-Class Copper-Gold & Critical Mineral Deposits in South Australia

Muckanippie Critical Minerals Project

- Major layered intrusive complex prospective for Bushveld 'Reef' Style – Gold-Platinum Group Metals and Titanium-Vanadium
- Discovery of High-grade titanium rich heavy mineral sands over a wide area
- Extensive Titanium-Vanadium mineralisation in underlying basement.
- **3,392 metre drill program completed Oct 2024**

Woomera Copper-Gold Project

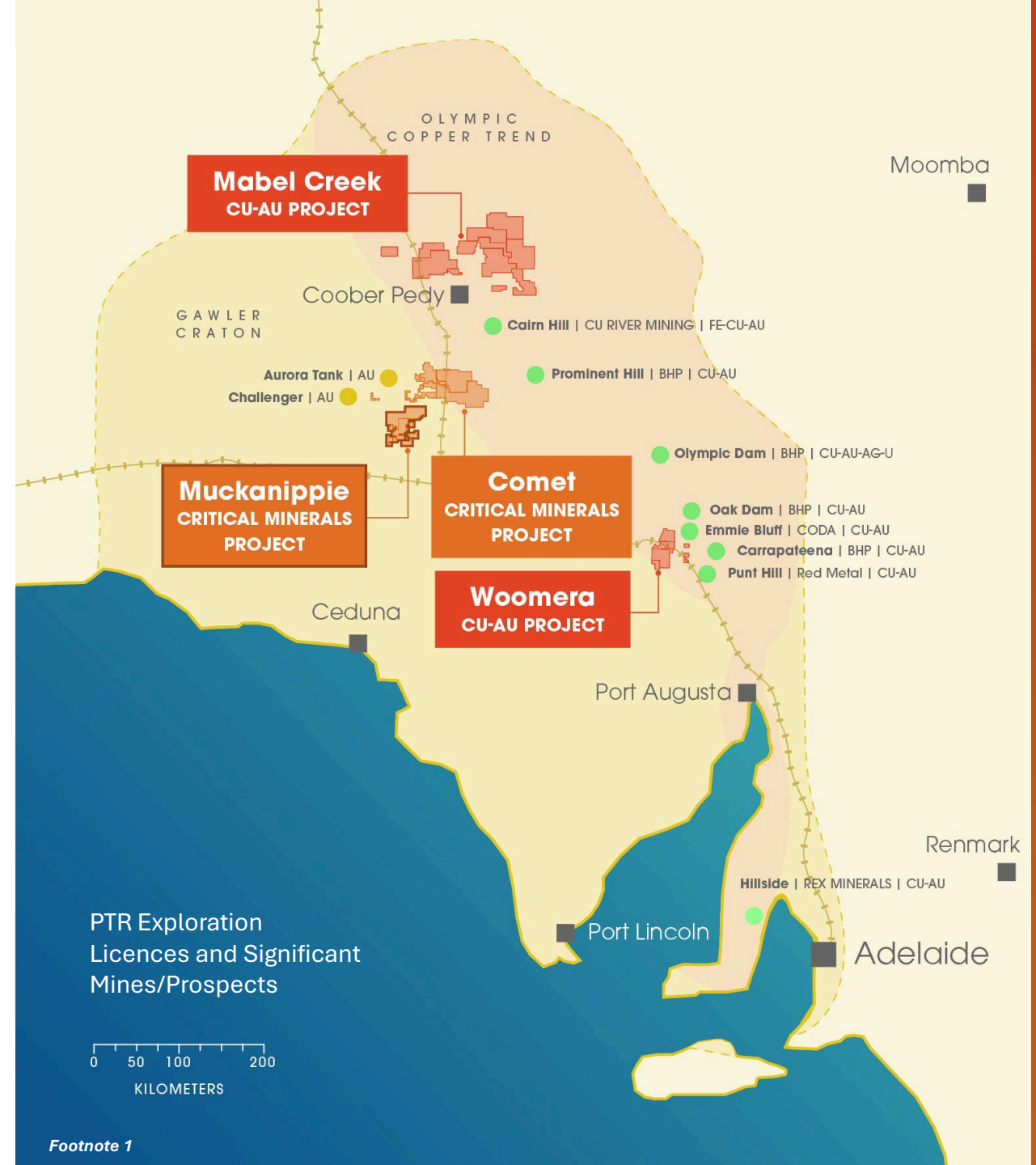
- Located in World-Class Copper-Gold Olympic Province
- High calibre Tier-1 sized drill ready targets

Mabel Creek Copper-Gold Project

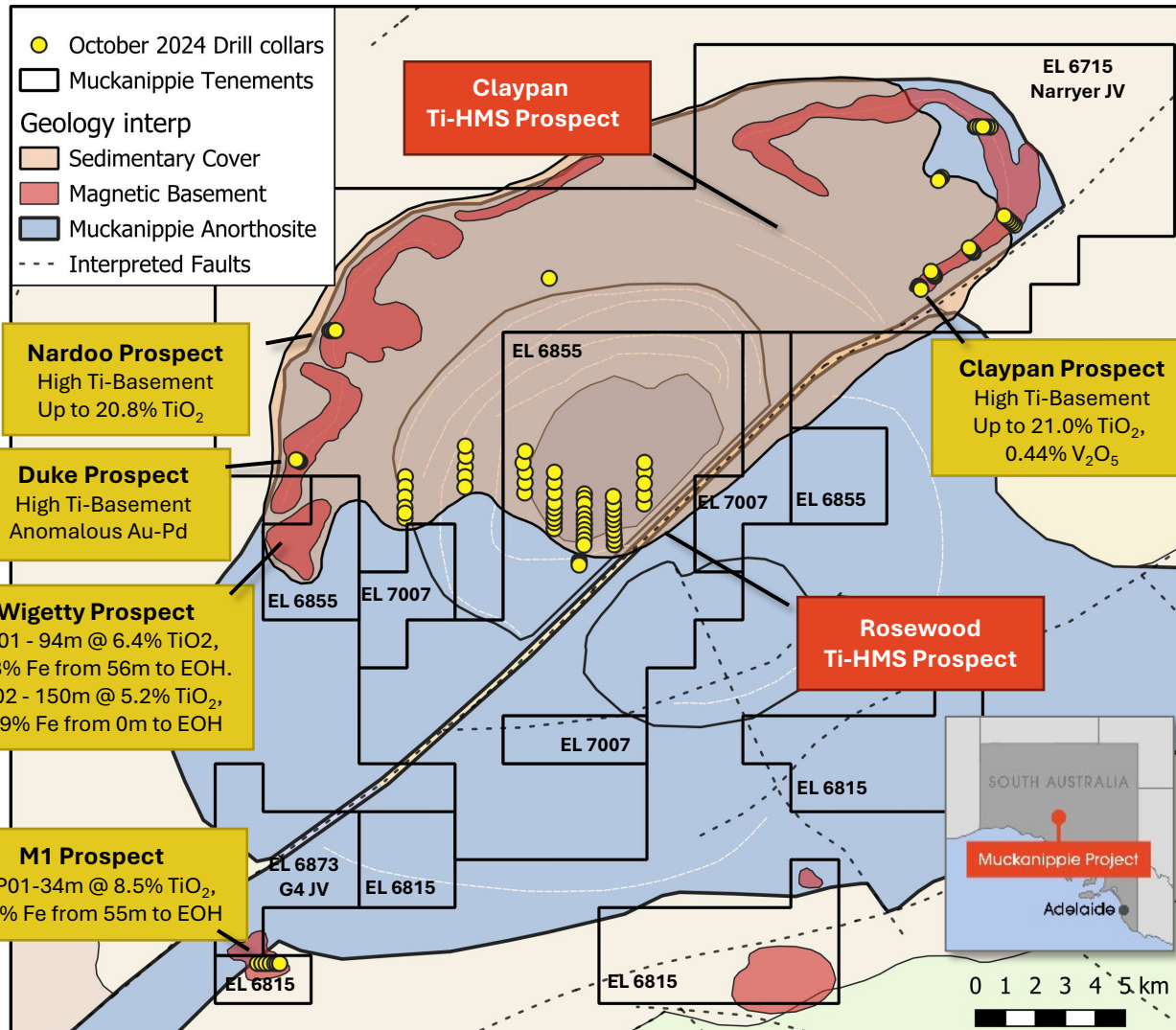
- Large holding over the northern Olympic Copper-Gold Province.
- Drilling has defined two Copper-Gold alteration systems
- Several drill ready Tier-1 sized targets

Comet Critical Minerals Project

- Exceptional clay hosted Rare Earth drill intercepts – 3 major Prospects
- Large layered intrusions – Au-PGE anomalies



Muckanippie Project: Bushveld Type Layered Intrusion



Geology Map of Muckanippie Area, Tenements and Prospects

Project Holding - **645 km²** – covering the majority ground position over the Muckanippie Suite

Muckanippie Suite - Similar geology and metal associations to the globally significant **Bushveld Complex**, South Africa

Largely un-explored due to shallow cover

Exploration targeting

- Stage 1 - Vanadium-Titanium-Iron-Phosphate
- Stage 2 - Gold-Platinum Group Metals
- **Regionally extensive high-grade Ti-V Mineralisation in basement**
- **Overlying high-grade Ti-Heavy Mineral Sands Mineralisation**

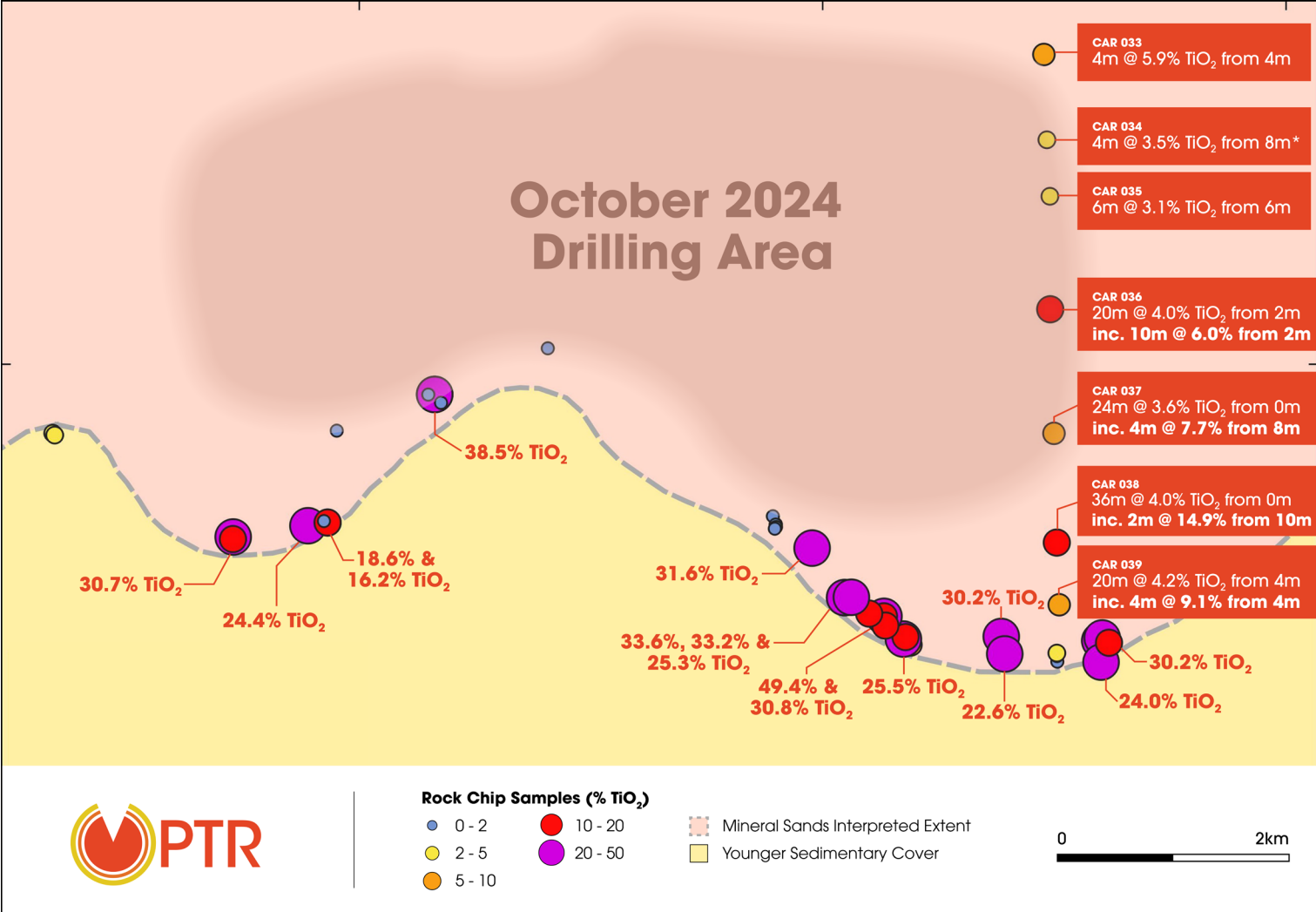
100 air core drill program (3,392m) completed in October 2024

Rosewood Prospect – Exceptional TiO_2 Samples

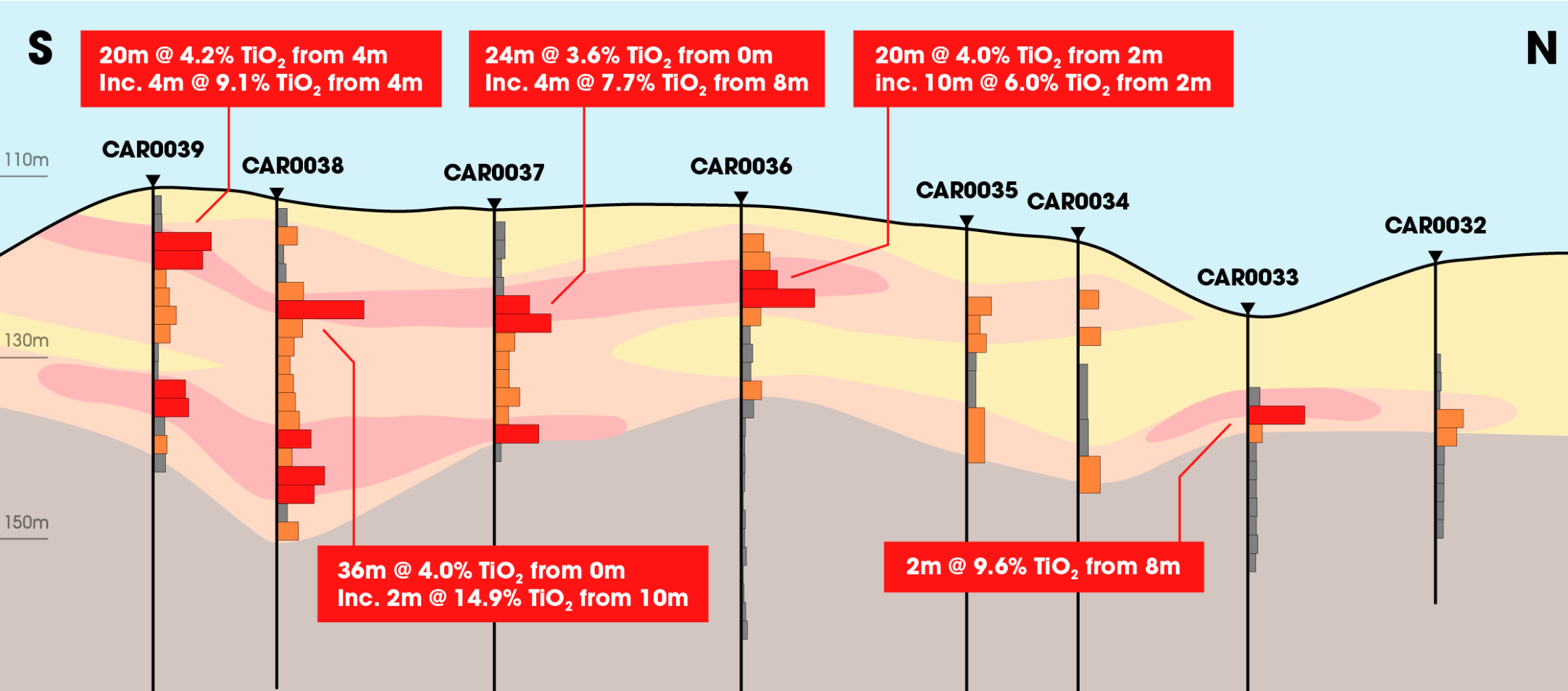


Exceptional surface sample grades ranging from 10% to 50% TiO_2 over a 9km trend.

Wide spaced drilling confirms heavy mineral sand (HMS) mineralisation extends at least 6 kilometres to the north.



Rosewood Prospect – Ti-HMS Mineralisation



Rosewood Cross Section
Vertical exaggeration = 40x

Section A-a - Showing Titanium assays from CAR drillholes at the Rosewood Prospect

Footnote 2

Rosewood Prospect - Stage 1 Exploration Target Area

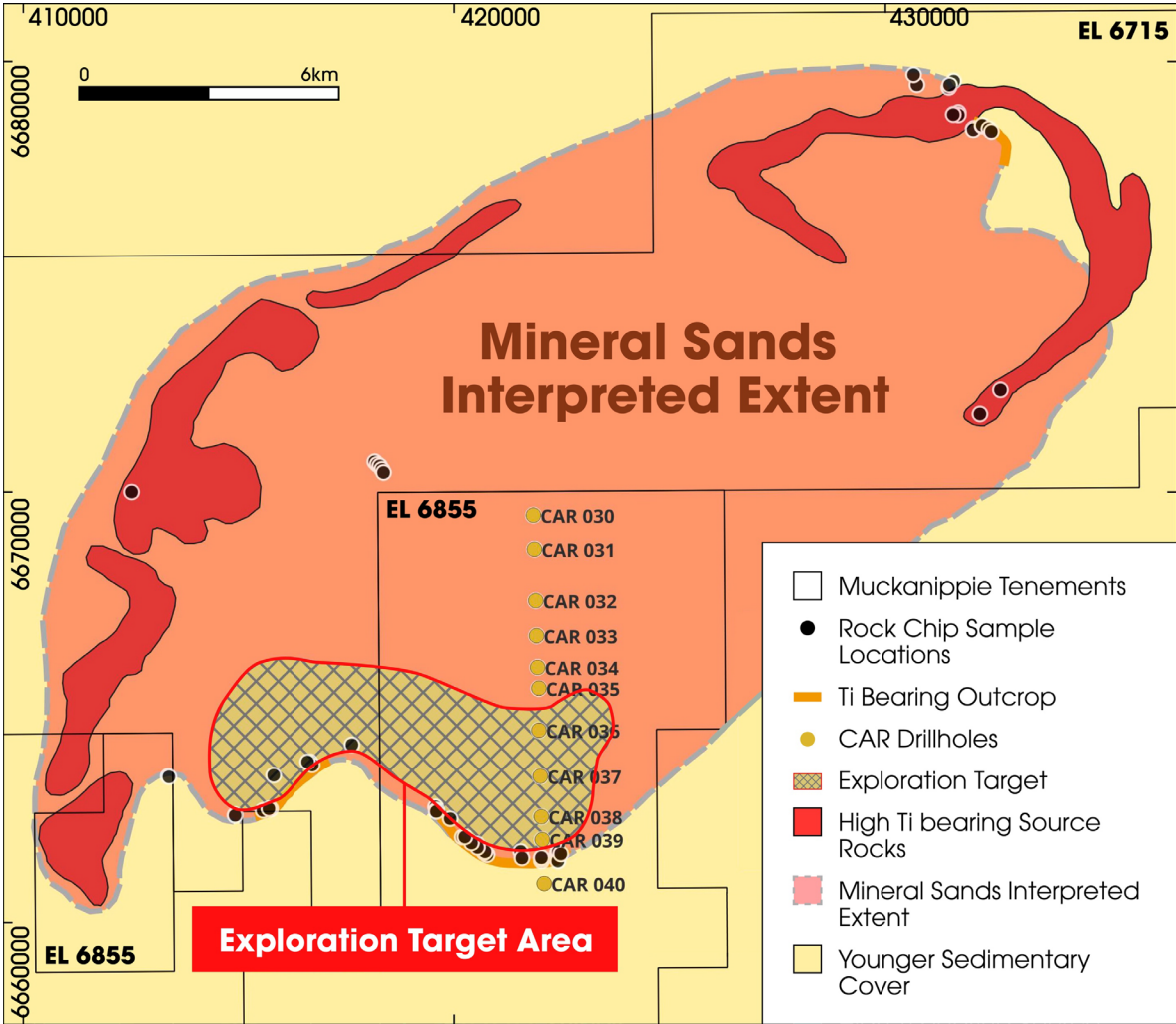


An Exploration Target for the Rosewood Prospect is defined over the initial planned drill area.

Rosewood Exploration Target

	Low	High
Tonnes (Mt)	237	377
Grade (TiO ₂ %)	5.3	7.9

Cautionary Statement: The potential quantity and grade of the Exploration Target is conceptual in nature and there has been insufficient exploration to estimate a Mineral Resource, and it is uncertain if further exploration will result in the estimation of a Mineral Resource



Footnote 2

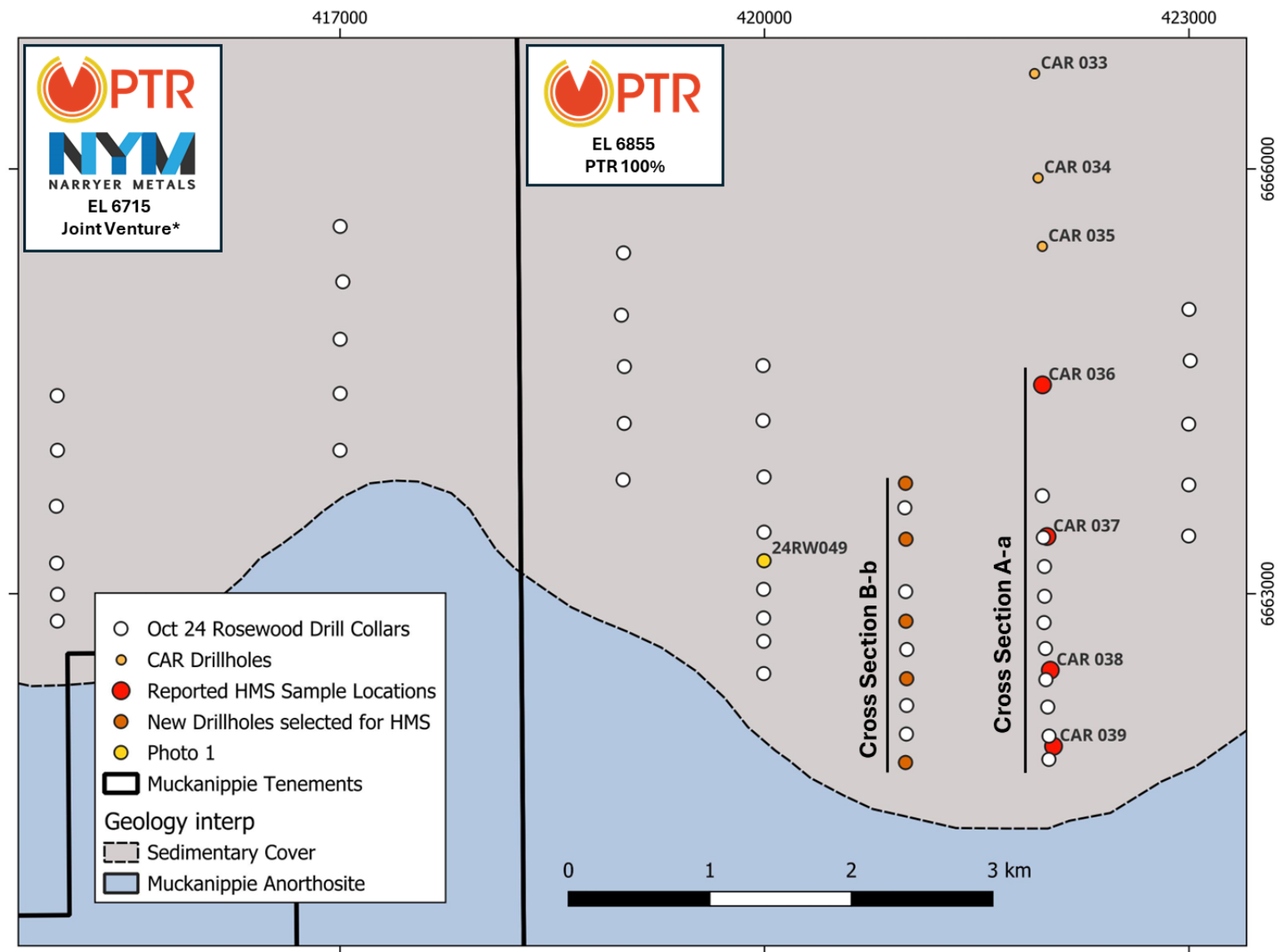
Rosewood Prospect – October Drill Campaign



50 drill holes along 7 drill traverses at 1km to 2km spacing.



Bags of samples after a days drilling at Rosewood



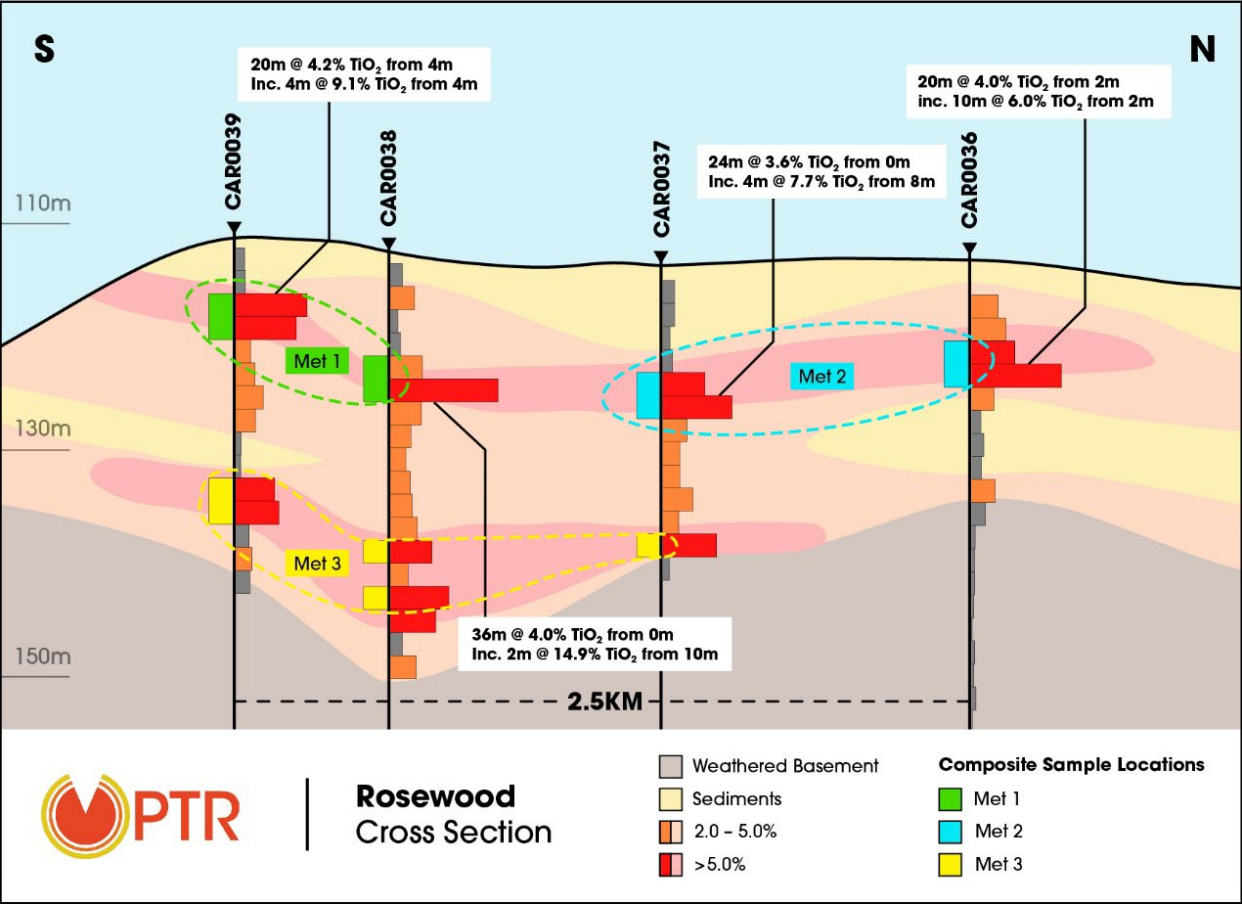
Footnotes 3 & 10

Rosewood Prospect – October 2024 Drill Campaign



LEFT - High-grade Heavy Mineral Sand Interval - (drill hole 24RW049, 10-11m). Sands become distinctively dark grey due to high heavy mineral content. RIGHT – Panning of same interval highlights Heavy Minerals. HM estimate based on visual inspection is 20% and is yet to be assayed. No identification of the mineral species can be made until laboratory work is completed. Results are expected in 4 to 6 weeks' time. Refer to Cautionary Note.

Rosewood Prospect – Heavy Mineral Content



Composite samples of historic drilling

Sample ID	HM Zone	Drill Hole	Depth (m)	Thickness (m)	HM % Original Sample	Slimes % (<0.045mm)
Met 1	Upper Zone	CAR 38	8-12	4	12.48	16.68
		CAR 39	4-8	4		
Met 2	Upper Zone	CAR 36	6-10	4	12.01	15.19
		CAR 37	8-12	4		
Met 3	Lower Zone	CAR 37	22-24	2	7.24	77.31
		CAR 38	24-26	2		
			28-30	2		
		CAR 39	22-24	2		

Section A-a (refer to slide 9) showing location of HMS trial samples from CAR drill holes at Rosewood Prospect

Rosewood Prospect – Heavy Mineral Mineralogical Assessment



Heavy Mineral Assay Results

Sample Nos.	HMC %	TiO ₂ (%)	V ₂ O ₅ (%)	ZrO ₂ (%)
Met 1	12.48	63.4	0.28	0.18
Met 2	12.01	65.0	0.30	0.15
Met 3	7.24	64.5	0.35	0.38

High titanium mineral content of the HM fraction with results reporting approximately 65% TiO₂, indicating a significant portion of higher value Ti Minerals are present



Heavy Mineral - Mineralogy

Mineral or Mineral Group	MET 1 Mass %	MET 2 Mass %	MET 3 Mass %
Rutile*	21	21	19
Pseudorutile*	69	68	70
Anatase	4	5	7
Goethite	-	-	3
Kandite group	5	3	< 1
Quartz	1	2	1

X-Ray Diffraction analyses of HM fraction indicates 19-21% Rutile, 4-7% Anatase and 68-70% Pseudo-rutile.

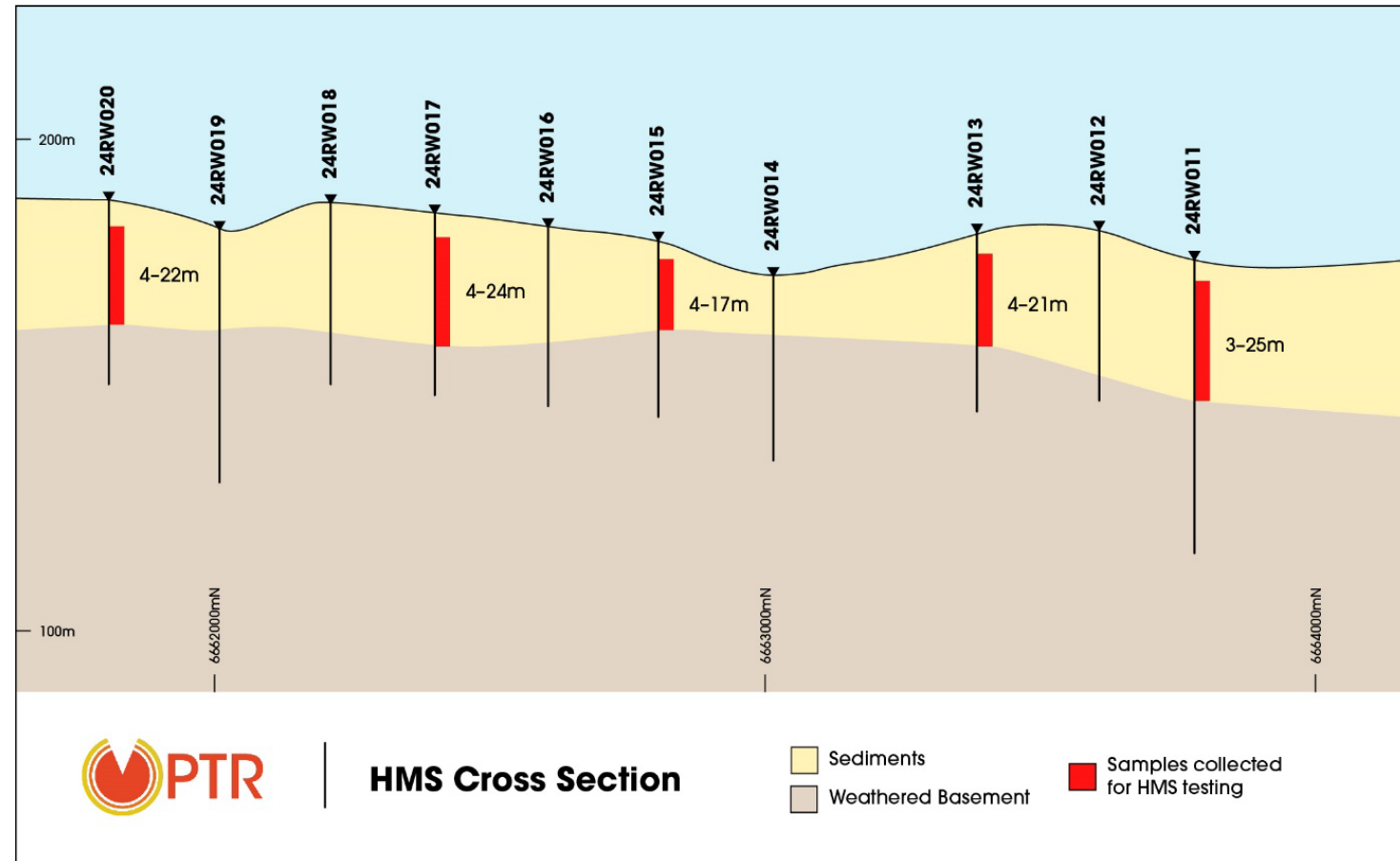
Drilling Operations at Rosewood Prospect

Footnote 3

Muckanippie Project – Steady Stream of Results over Coming Weeks and Months



- Initial Heavy Mineral Separation Results from Rosewood – Dec 2024
- Composite 3 metre drill geochemistry from recent drill campaign – Dec 2024
- Heavy Mineral Ore Studies – Jan-Mar 2025
- Other drill line Heavy Mineral Separation Results – Jan – Feb 2025
- ***In-fill and extensional drilling from ~ Feb 2025***

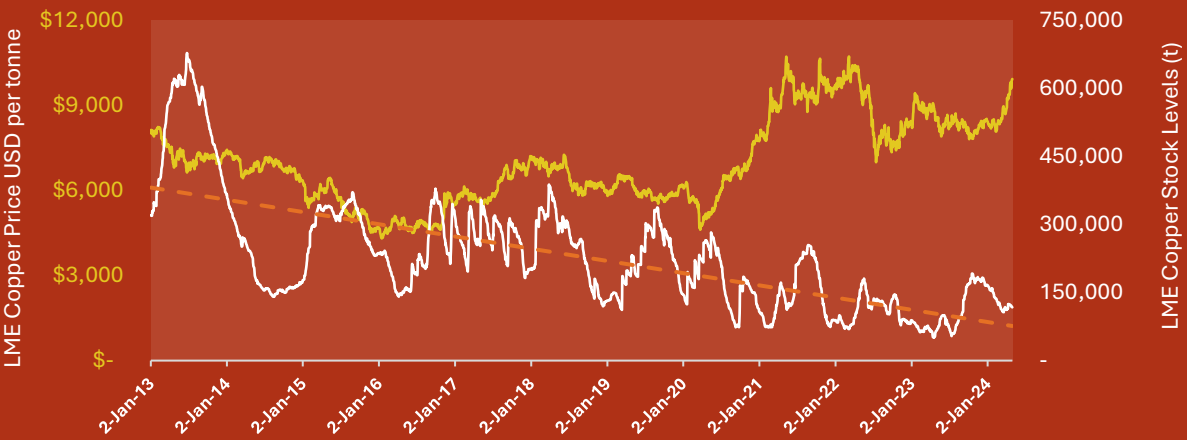


Section B-b (refer to slide 9) showing samples from current drilling recently dispatched for Heavy Mineral analysis.

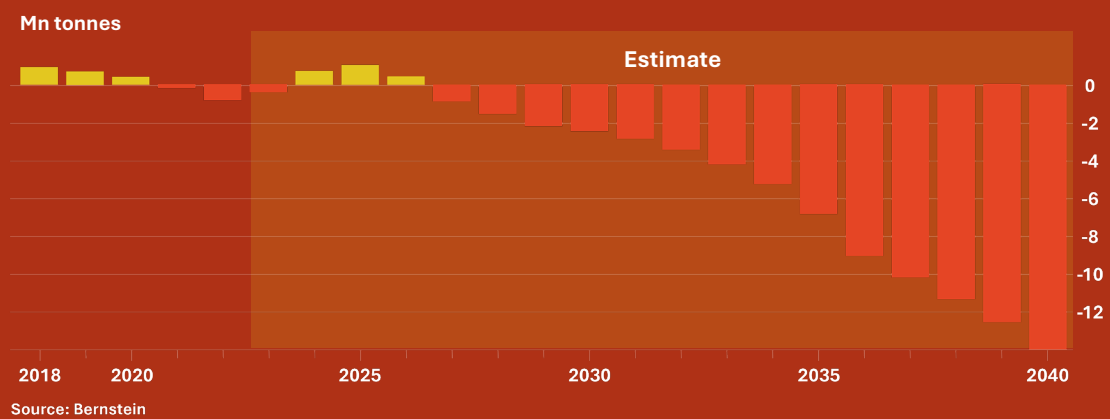
Insufficient Copper Supply



LME Copper Price and Stock Levels



Big shortfall in copper supply predicted to open up from 2027



Source: Bernstein

Reducing Production + Higher Costs

- Global production cuts from major copper producers has seen a sharp reduction in near-term supply.
- Escondida’s average copper head grade has declined from **1.6% in 2008 to 0.9% in 2023**, coinciding with its unit **cash costs doubling from ~US\$1/lb to >US\$2/lb**.

Higher Demand

- **Copper supply shortfall is forecasted from 2027 onwards**, as demand rapidly outstrips supply to meet net zero scenarios.
- A standard internal combustion engine (ICE) has an estimated 23kg of copper. **In an EV there is typically 3 to 4 times the amount of copper required.**

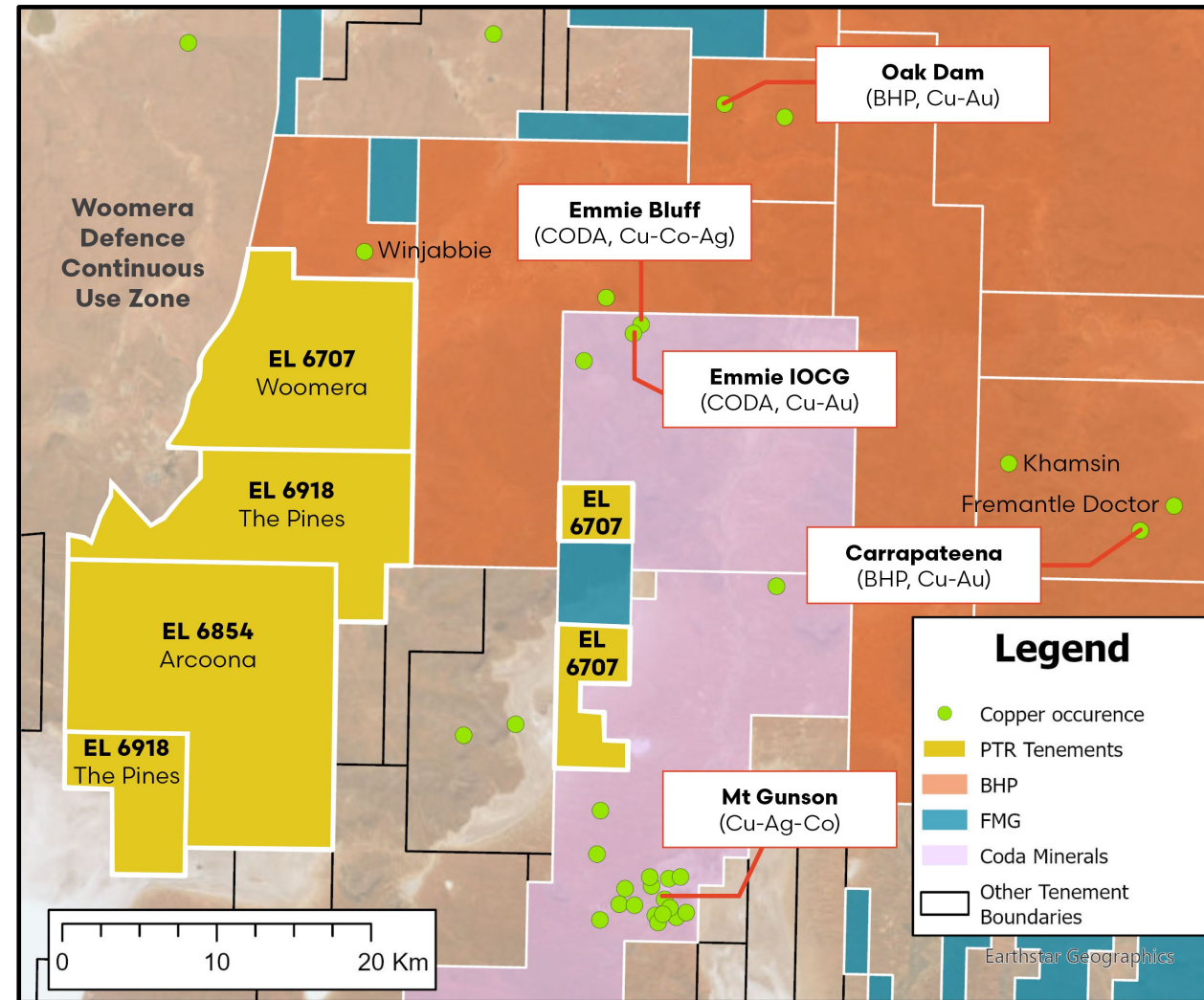
Footnote 1

Footnote 4

Woomera IOCG Project

Highly Prized Tenure – In Area of Major IOCG Mineralisation

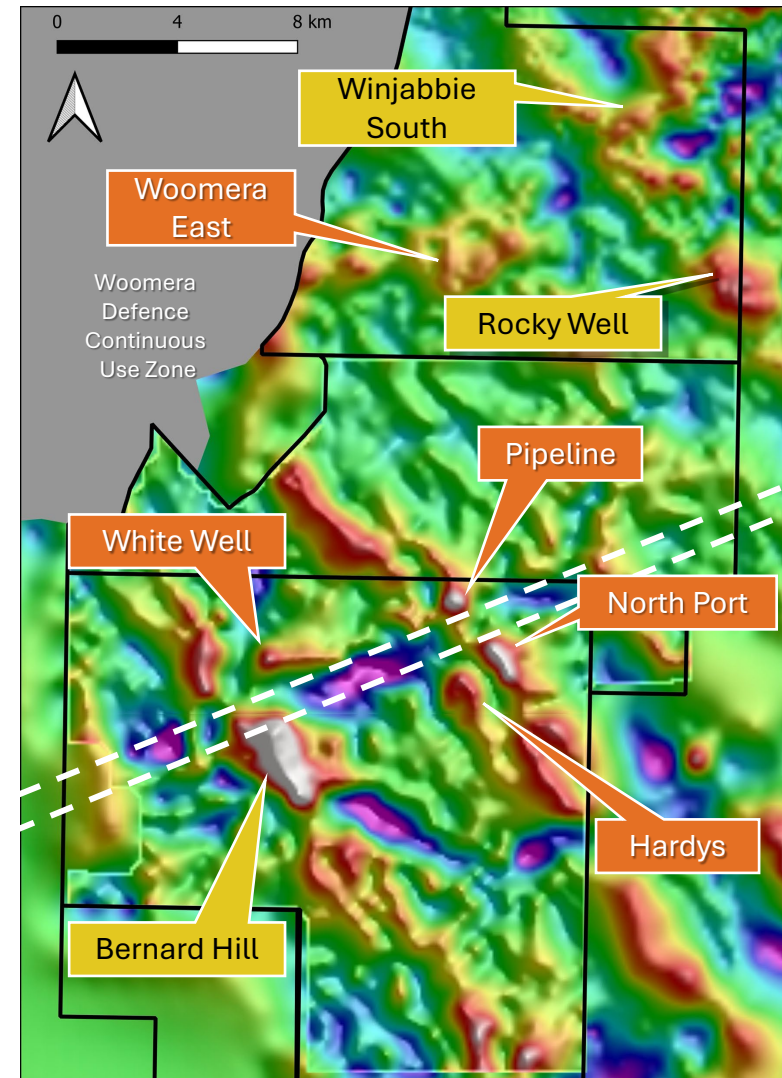
- Multiple high priority gravity targets – **Target Styles – IOCG, Stratabound IOCG and Sedimentary Copper.**
- Native Title Mining Exploration Agreement Completed.
- Recently completed (March 2024) gravity surveys now give complete coverage across the project – previously very poor
- **Inventory of drill ready Tier-1 sized Copper-Gold Targets.**



PTR Exploration Licences, IOCG Mines/Prospects

Three Distinct Styles of Mineralisation

- 1 IOCG Breccia Bodies**
Rocky Well & Bernard Hill
Cu-Au-Ag-U (i.e. Olympic Dam/
Carrapateena/Oak Dam & Prominent Hill)
- 2 Stratabound IOCG's**
Winjabbie South
Cu-Au-Co (i.e. Emmie IOCG, Punt Hill & Hillside)
- 3 Sedimentary Copper**
Cu-Ag-Co in overlying cover rocks (i.e.
Mt Gunson & Emmie Bluff – potentially
remobilised from IOCG basement below).



Gravity data

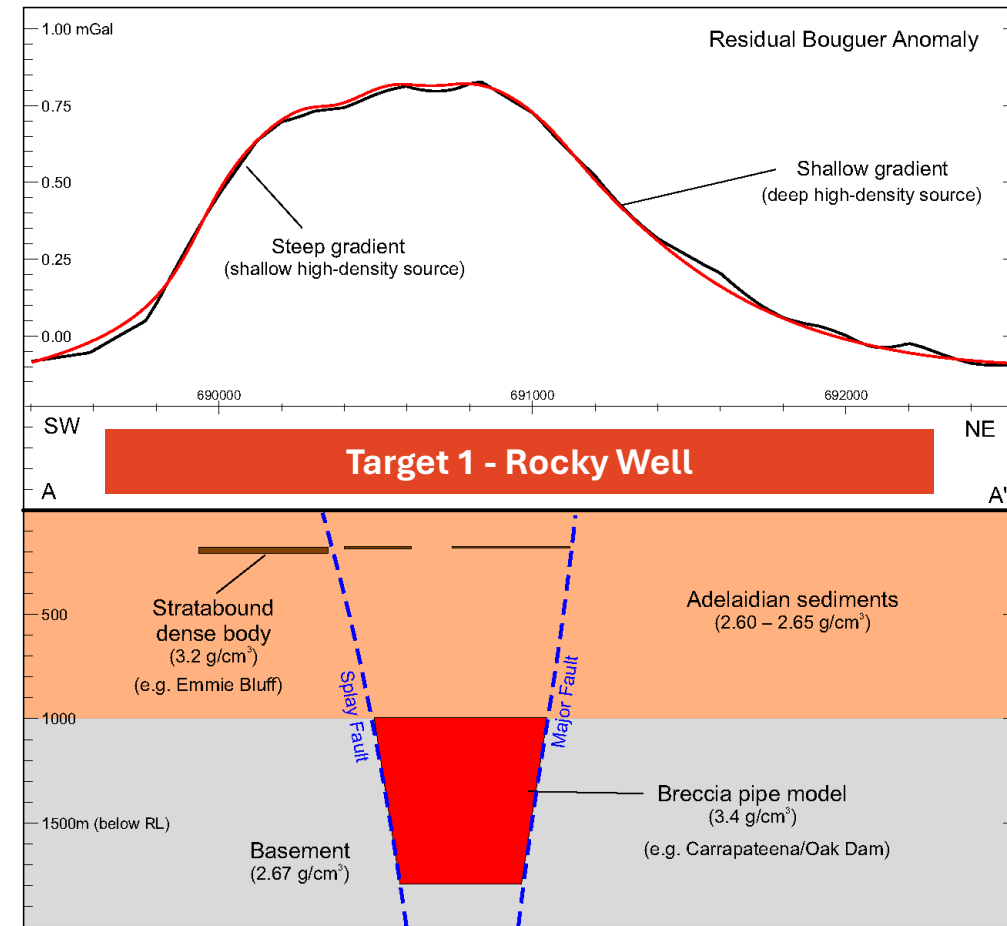
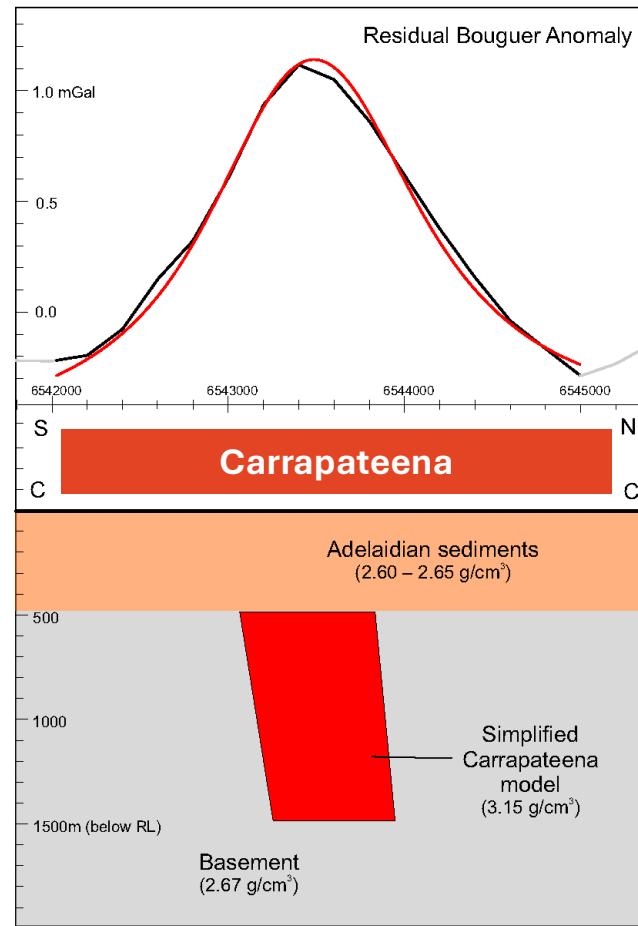
Woomera – IOCG Breccia Bodies – Rocky Well Target



Rocky Well Gravity Anomaly Comparison with Carrapateena Gravity Anomaly

Rocky Well Target is an IOCG Breccia Body Style – Displays a Comparable gravity response to the Carrapateena Orebody.

Steep gravity gradient on west side of Rocky Well may indicate additional shallow Sedimentary mineralisation in the overlying cover strata. (i.e. Emmie Bluff, Mt Gunson Style Cu-Ag-Co mineralisation potential)

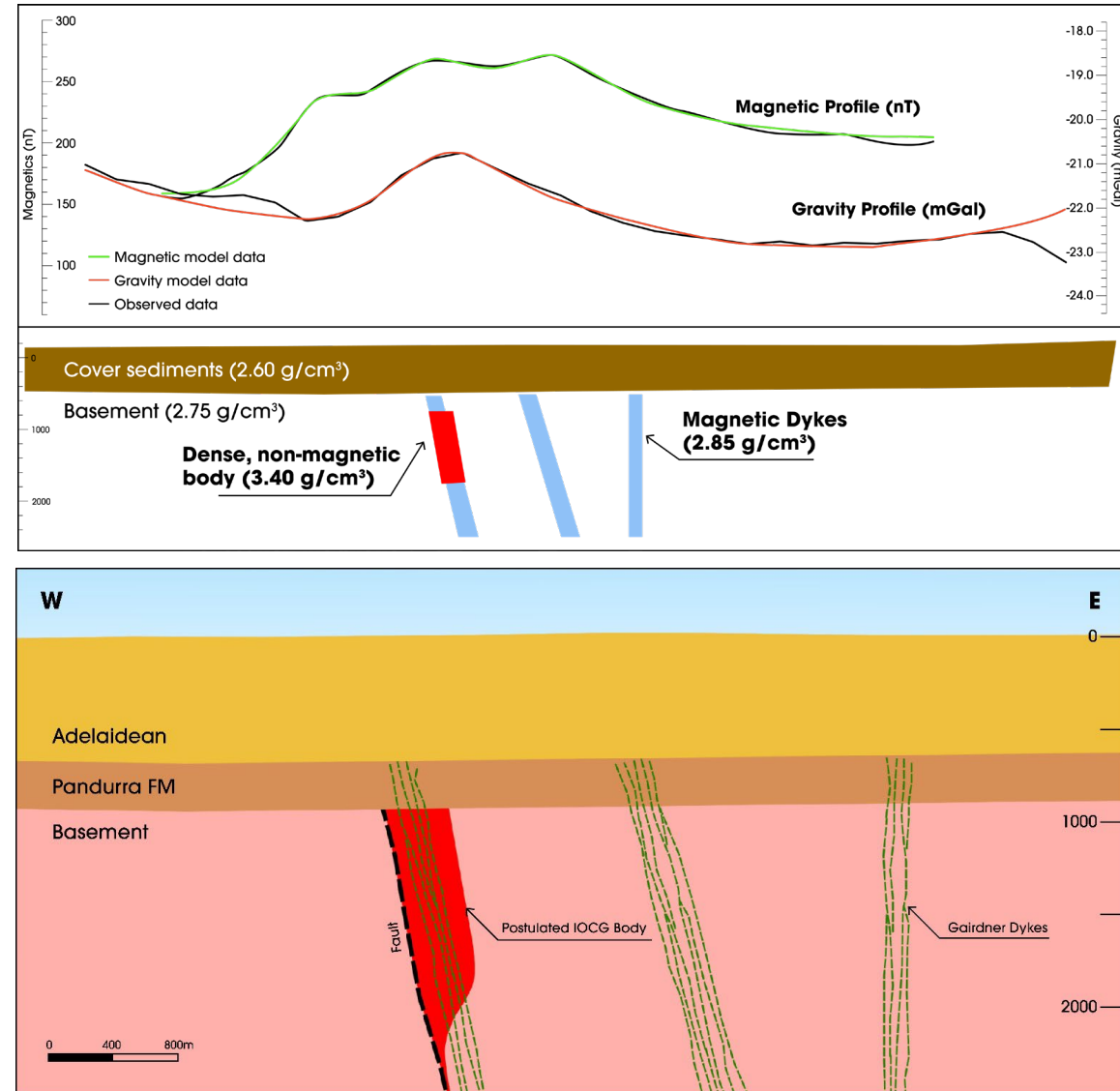


Woomera – IOCG Breccia Bodies – Bernard Hill Target



Bernard Hill Model Geological Interpretation

- Use magnetic modelling to identify and constrain mafic (Gairdner) dykes.
- Apply known (from historic drill core) SG data of cover, basement and intrusive rocks to the model and compare with measured gravity data.
- Add additional dense bodies to correct discrepancies (using constraints on body depth, density etc.).
- Modelled body has an SG of 3.4. g/cm³ – equal to published data from Oak Dam, Carrapateena and Prominent Hill IOCG Bodies.
- **Body dimensions are 400m wide by 2800m length, with depth extent of 1000m, target depth 850m.**

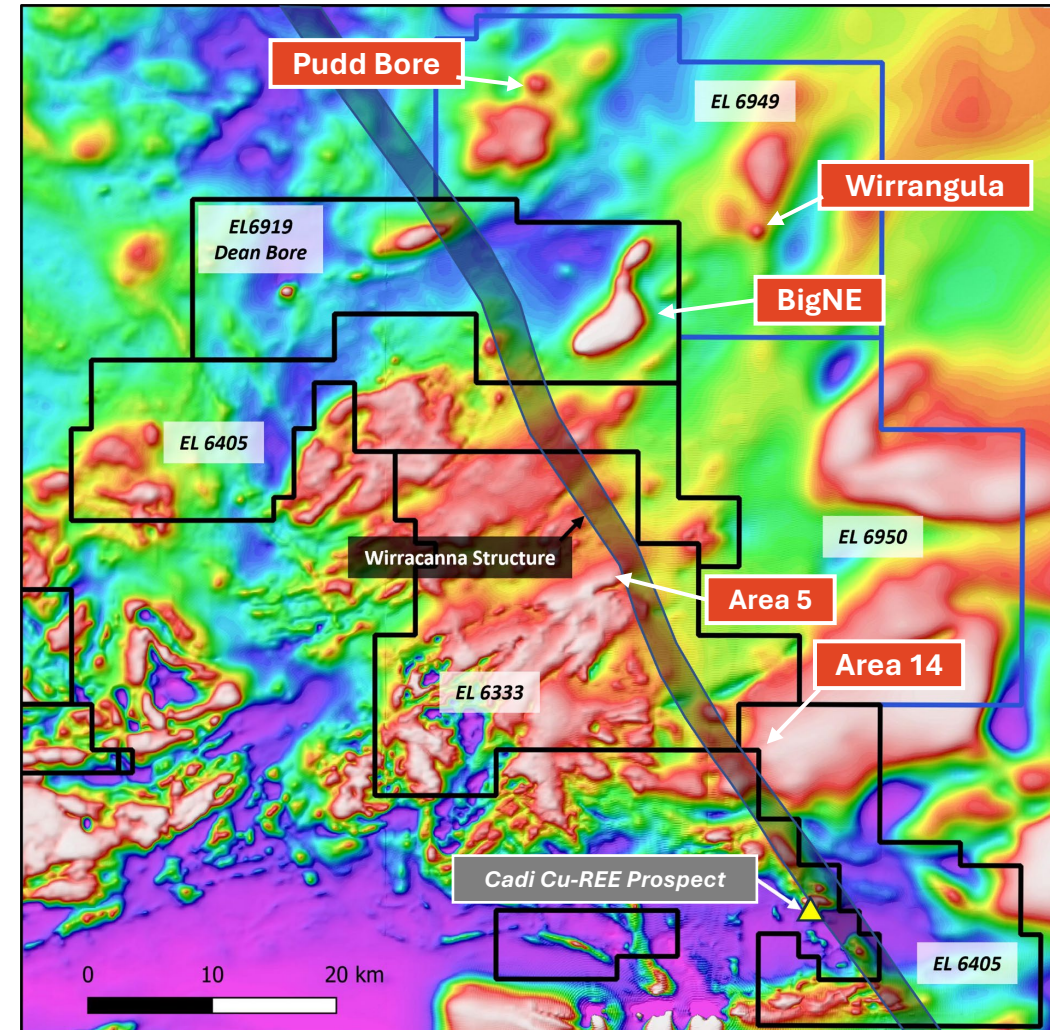


Mabel Creek IOCG Project



World-Class Olympic Copper Gold Province

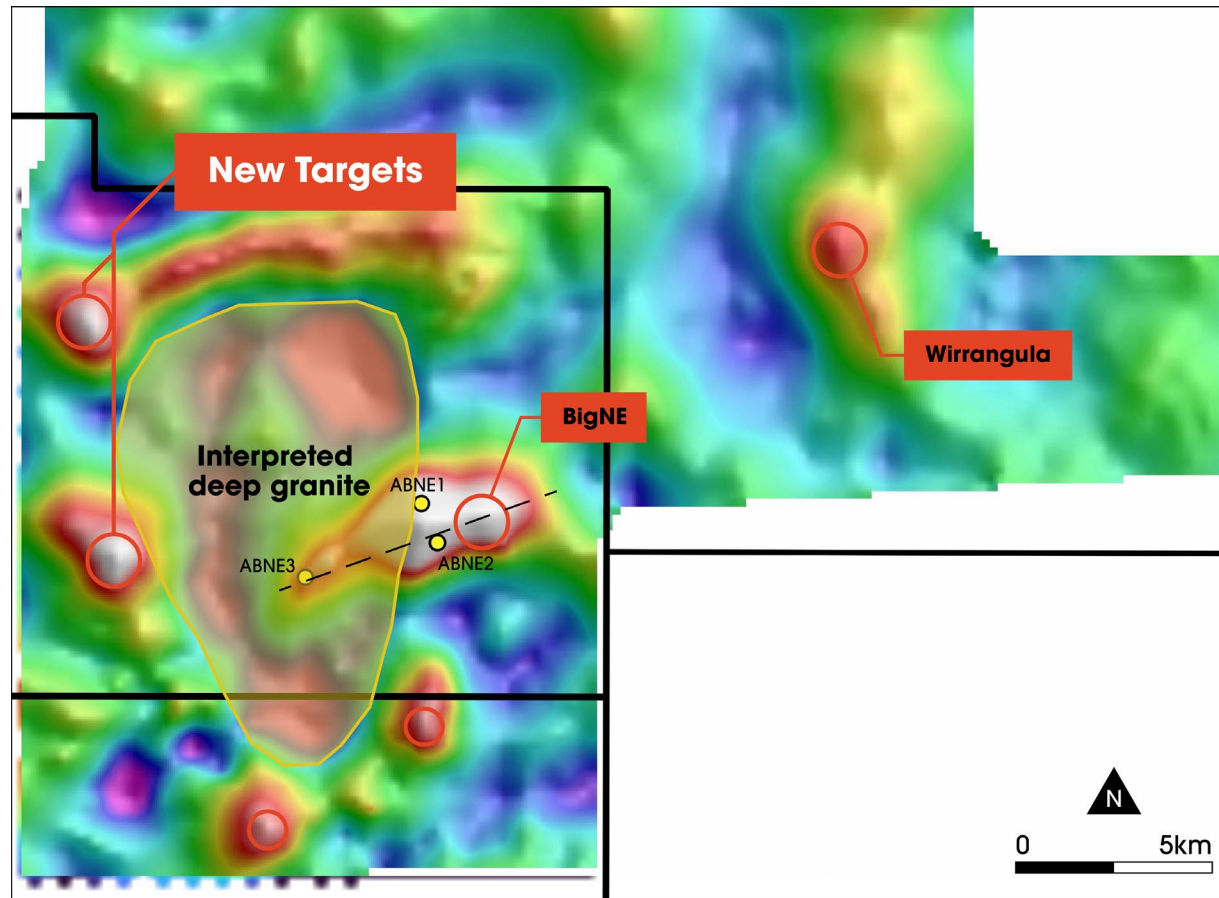
- Northern Olympic Province - **Large holding of 3,798km²**.
- Iron Oxide-Copper-Gold (IOCG) alteration/mineralisation at 3 Prospect Sites (BigNE, Cadi and Area 5) highlight fertility of the region.
- Cadi Prospect:
 - NC9202 - **44m @ 0.10% Cu**, 0.5% Ce + La from 148m
 - 99WS003 - **16m @ 0.57% Cu** & 0.17% Ce + La from 184m to end of hole
- Major copper players – **RIO, BHP & FMG** in surrounding areas.
- Mines Department has recently quarantined the surrounding areas – **NO NEW APPLICATIONS UNTIL JULY 2026**
- Significant parts of the project still with no gravity coverage



Magnetic Image of Eastern Mabel Creek Project Area –
Targets and New Tenement areas

Mabel Creek – New Gravity Targets

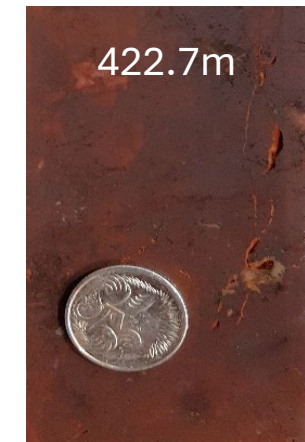
2024 gravity surveys identify 6 new targets close to strong IOCG alteration



Bouguer Gravity Anomaly Image

BigNE Prospect

- Historic drilling intersected late iron rich alteration/brecciation, consistent with IOCG alteration.
- Anomalous copper up to 0.32% over short intervals
- Eastern side is a gravity only target and not drill tested

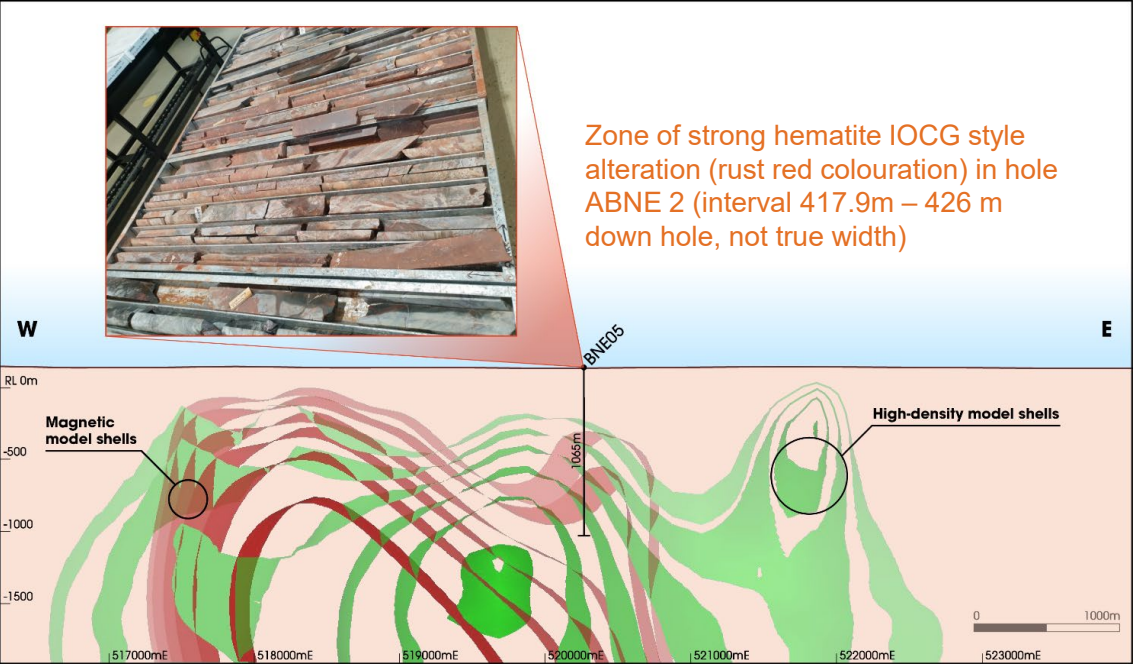


Zone of strong hematite IOCG style alteration (rust red colouration) in hole ABNE 2 (interval 417.9m – 426 m)

Copper-Gold: BigNE Drill Ready Targets

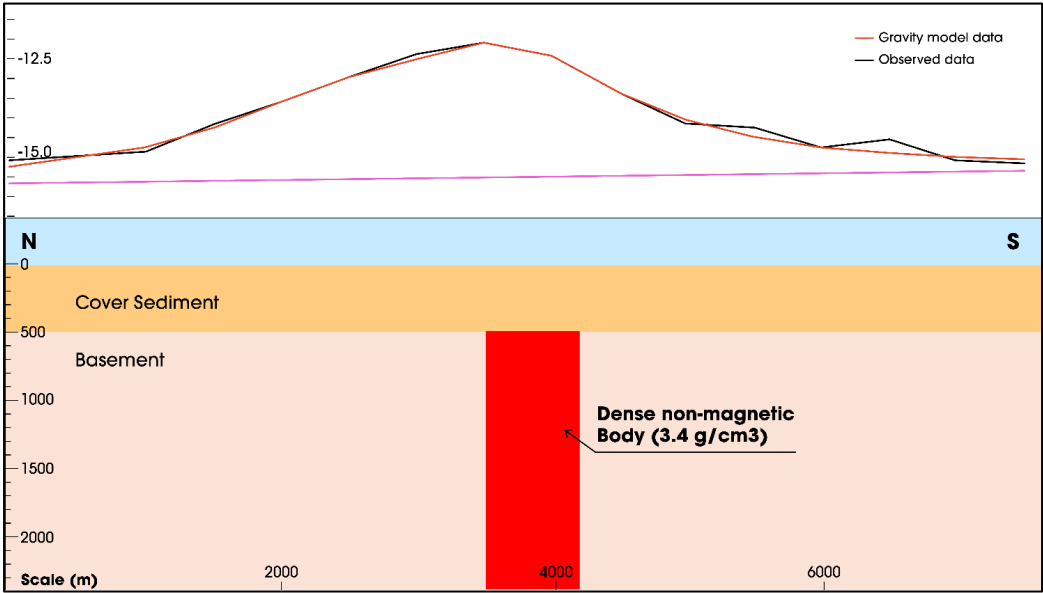


BCG1 Target



Section A – BCG01 target 3D magnetic and gravity inversions with existing drilling.

BCG02 Target



Section B - Gravity model for BCG2 target.

Investment Summary



Muckanippie
Titanium Rich
HMS Discovery



World Class
Cu-Au Targets



Favourable
Location



Exploration
Upside





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