

19 February 2025

RIU Explorers Conference Presentation – *The Muckanippie Titanium Project Discovery*

Petratherm Limited (ASX: PTR) (“**PTR**” or “**the Company**”) is pleased to release the following Company Presentation for the RIU Fremantle Explorers Conference (18-20 February 2025). Petratherm’s exploration Manager Mr Barry van der Stelt will today present an update on PTR’s recent high-grade heavy mineral sand (HMS) discovery at its Muckanippie Project area southwest of Coober Pedy in South Australia.

Exploration has uncovered significant concentrations of titanium rich heavy mineral sands (HMS) over large areas. Results from 45 drill holes at Rosewood confirm titanium rich Heavy Mineral Sand Mineralisation extends over at least a 15 square kilometre area and remains open¹. Mineralisation is open to the north in all drill traverses, as well as to the west and east, with some of the most significant and thickest high grade intercepts occurring at the end of current drill traverses requiring follow-up extension drilling¹. Mineralogy results to date indicate Rosewood HM sands have on average >95% Valuable Heavy Mineral content, composed primarily of high value titanium ores – rutile product (high-titanium leucoxene and rutile) and pseudorutile².

The mineral sands are sourced from the weathering of a major intrusive complex, the Muckanippie Suite, which is highly enriched in titanium minerals and offers potential for additional titanium deposits hosted within the saprolite and basement horizons separate to the Rosewood HMS Discovery. This is an early-stage greenfields project with exceptional upside potential.

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

ENDS

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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 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.

¹ PTR ASX release 06 February 2025 – Drilling Confirms Potential for World-Class Titanium Project

² PTR ASX release 20 January 2025 – Pure High-Value Titanium Mineral Assemblage at Rosewood

The Muckanippie Suite - *Unravelling Critical Mineral Potential*



Conference Presentation February 2025 *RIU*
Explorers Conference Fremantle WA

ASX:PTR



Compliance Statements



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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. Muckanippie Tenement Granted – 14 November 2022
3. Farm-in Agreement Expands Muckanippie Project – 18 April 2024
4. High-Grade Titanium Rich Heavy Mineral Sands at Muckanippie – 11 September 2024
5. Outstanding Metallurgical Results at Muckanippie HMS Project – 19 November 2024
6. Drill Results Confirm Major HMS Discovery at Rosewood – 04 December 2024
7. Pure High-Value Titanium Mineral Assemblage at Rosewood – 20 January 2025
8. Drilling Confirms Potential for World-Class Titanium Project – 06 February 2025

Corporate Overview

Shares on Issue

309.2M

Share Price (17/02/2025)

\$0.285

Cash (31/12/24)

\$2.5M

Options

1.55M

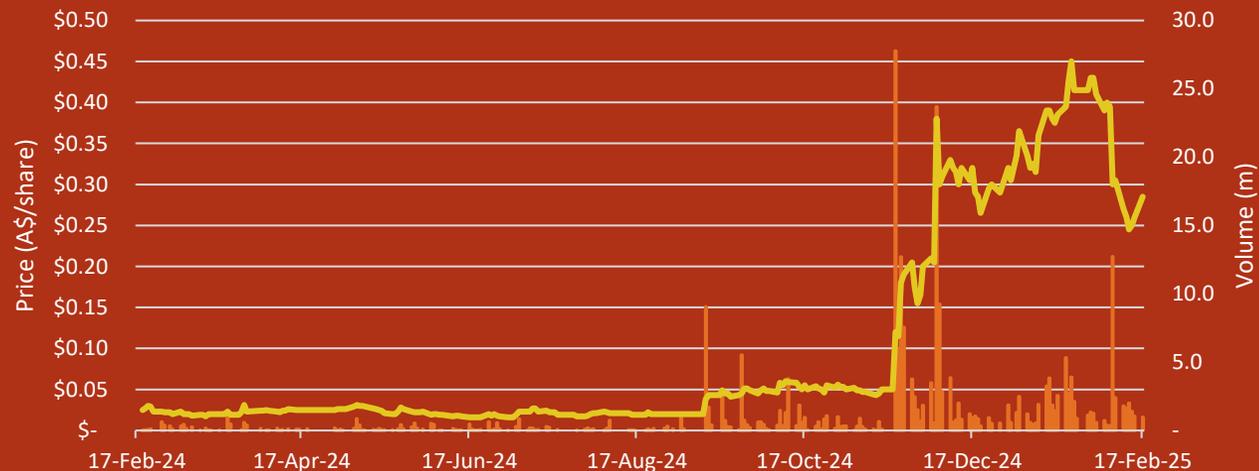
Market Cap

\$88.1M (undiluted)

Enterprise Value

\$85.6M

PTR Share Price and Volume Chart



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 Petratherm Ltd. Founding CEO of Petratherm 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. Most recently, Simon was Managing Director of Oklo Resources Limited when it was acquired by B2Gold Corp in September 2022. He is the Non-Executive Chairman 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

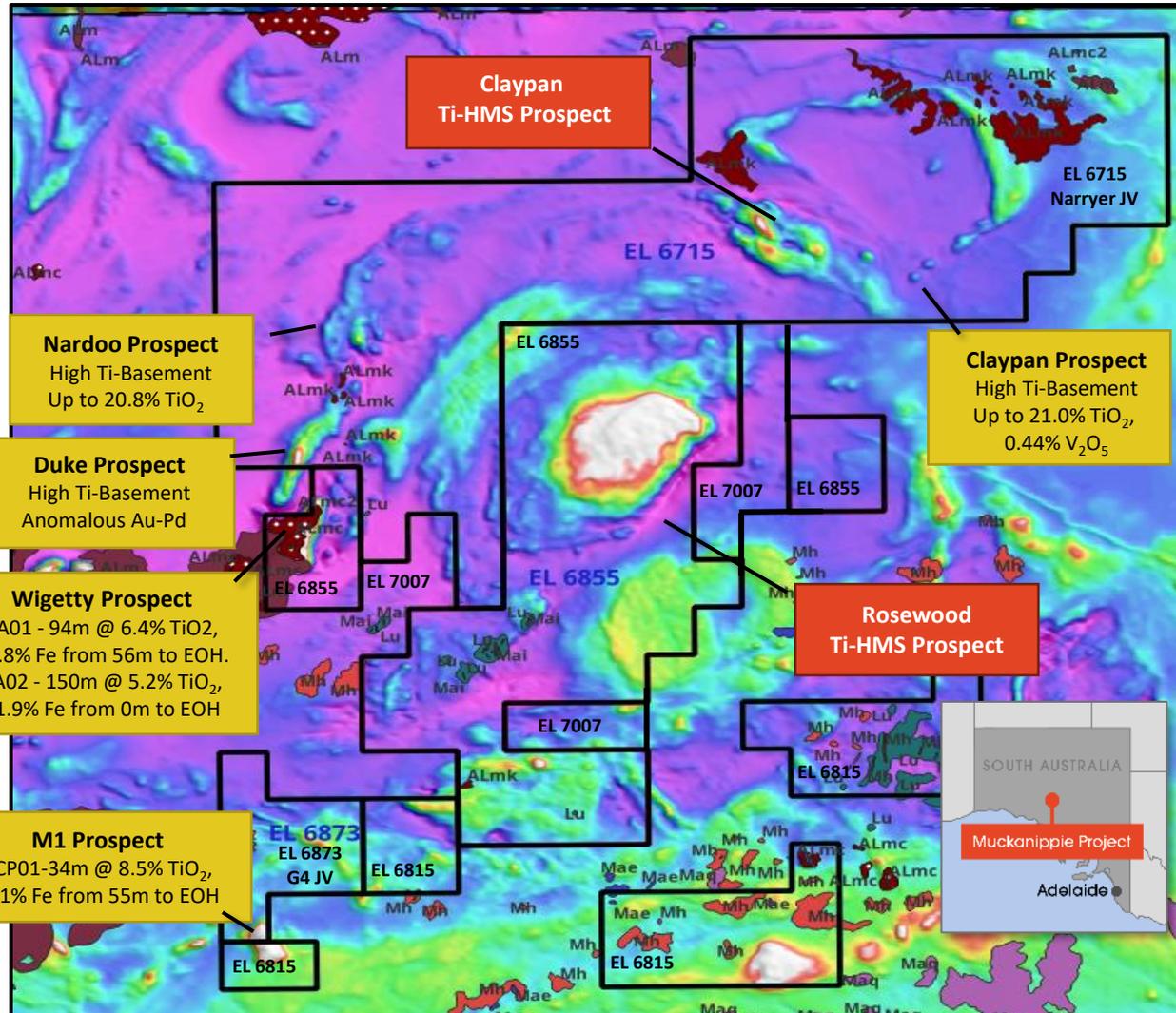
- Exceptional clay hosted Rare Earth drill intercepts – 3 major Prospects
- Large layered intrusions – Au-PGE anomalies



Footnote 1



Muckanippie Project: Bushveld Type Layered Intrusion



Magnetic image and basement geology map of Muckanippie Area, Tenements and Ti 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

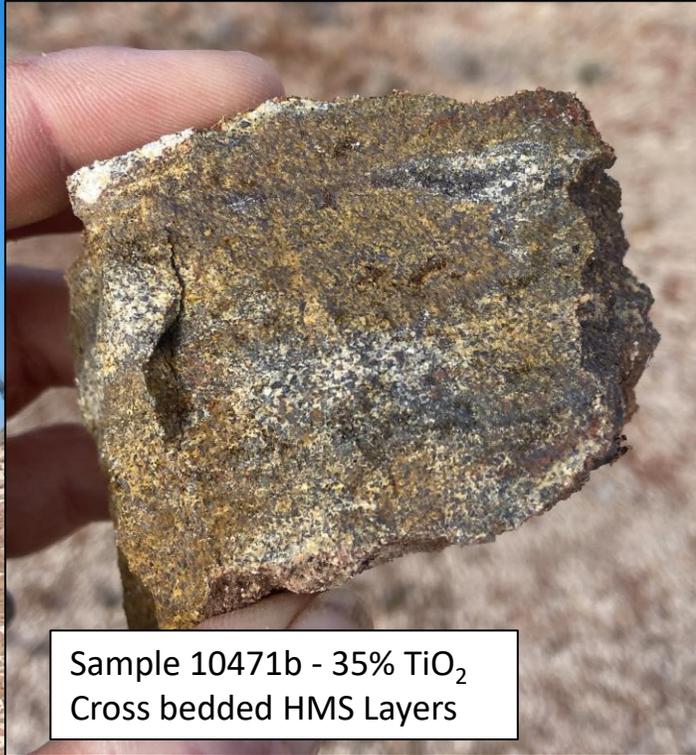
Largely un-explored due to shallow cover

U-Pb Geochron - 1871 Ma ± 4Ma ?

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**

Rosewood Prospect – Outcropping Mineralisation



Sample 10471b - 35% TiO₂
Cross bedded HMS Layers



Low escarpment at Rosewood Prospect showing tertiary silcrete cap and exposures of underlying HMS horizon. Surface outcrop is partly silicified, however sands become free running from 2-6 metres depth

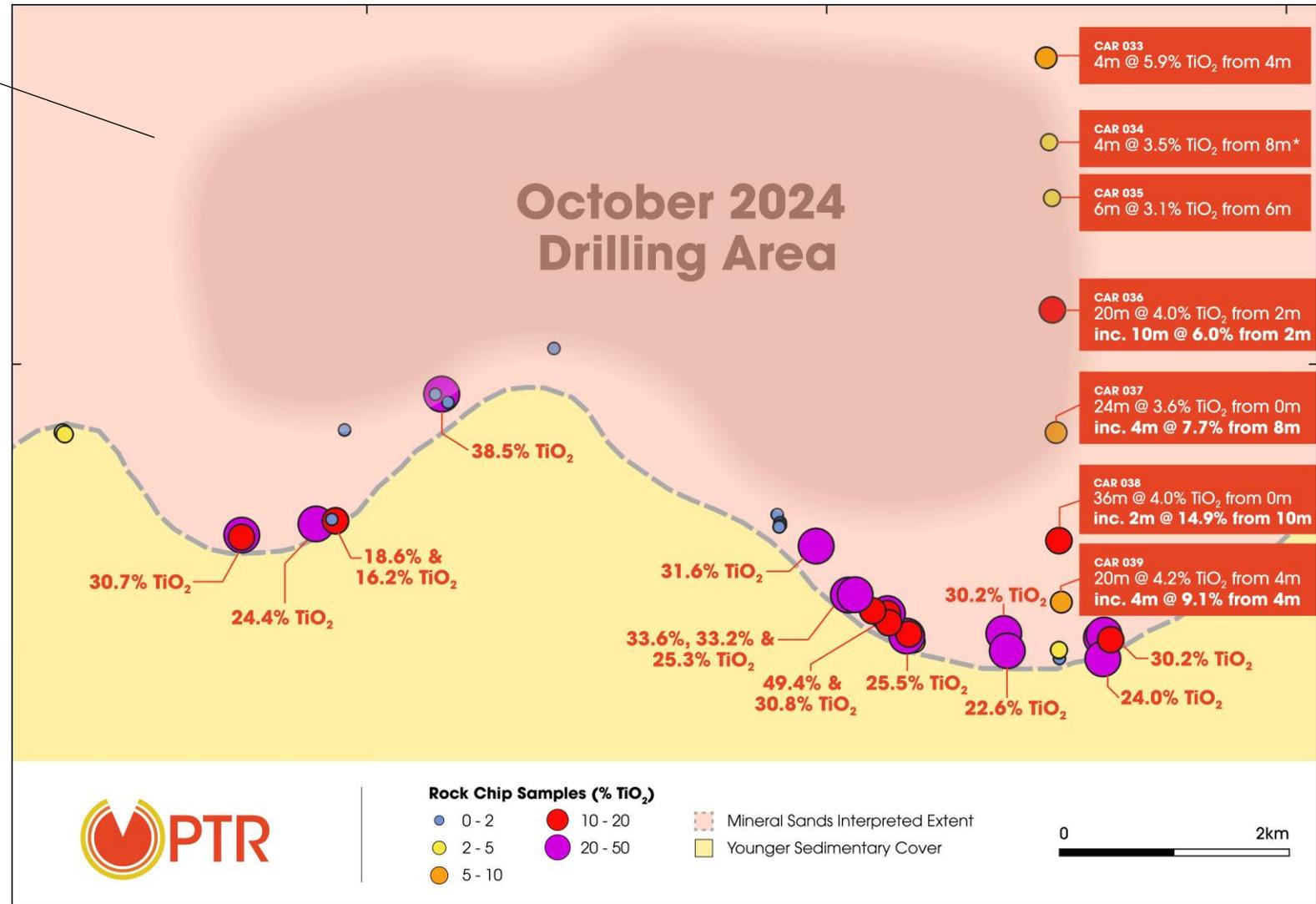
Rosewood Prospect – Exceptional TiO_2 samples hosted in sands



Sand Unit Age (Palynological dating) – Late Miocene – Early Pliocene

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

Assaying of historical SA Mines drilling confirmed heavy mineral sand (HMS) mineralisation extends at least 6 kilometres to the north.



Rosewood Prospect – October 2024 Drill Campaign



Aircore drilling operations at Muckanippie Rosewood Prospect

Footnote 6

Rosewood Prospect – October 2024 Drill Campaign



LEFT - High-grade Heavy Mineral Sand Interval - (drill hole 24RW049, 8-9m). Sands become distinctively dark grey due to high heavy mineral content. RIGHT – Panning of same interval highlights Heavy Minerals. HMC = 31.2%.



Rosewood Project

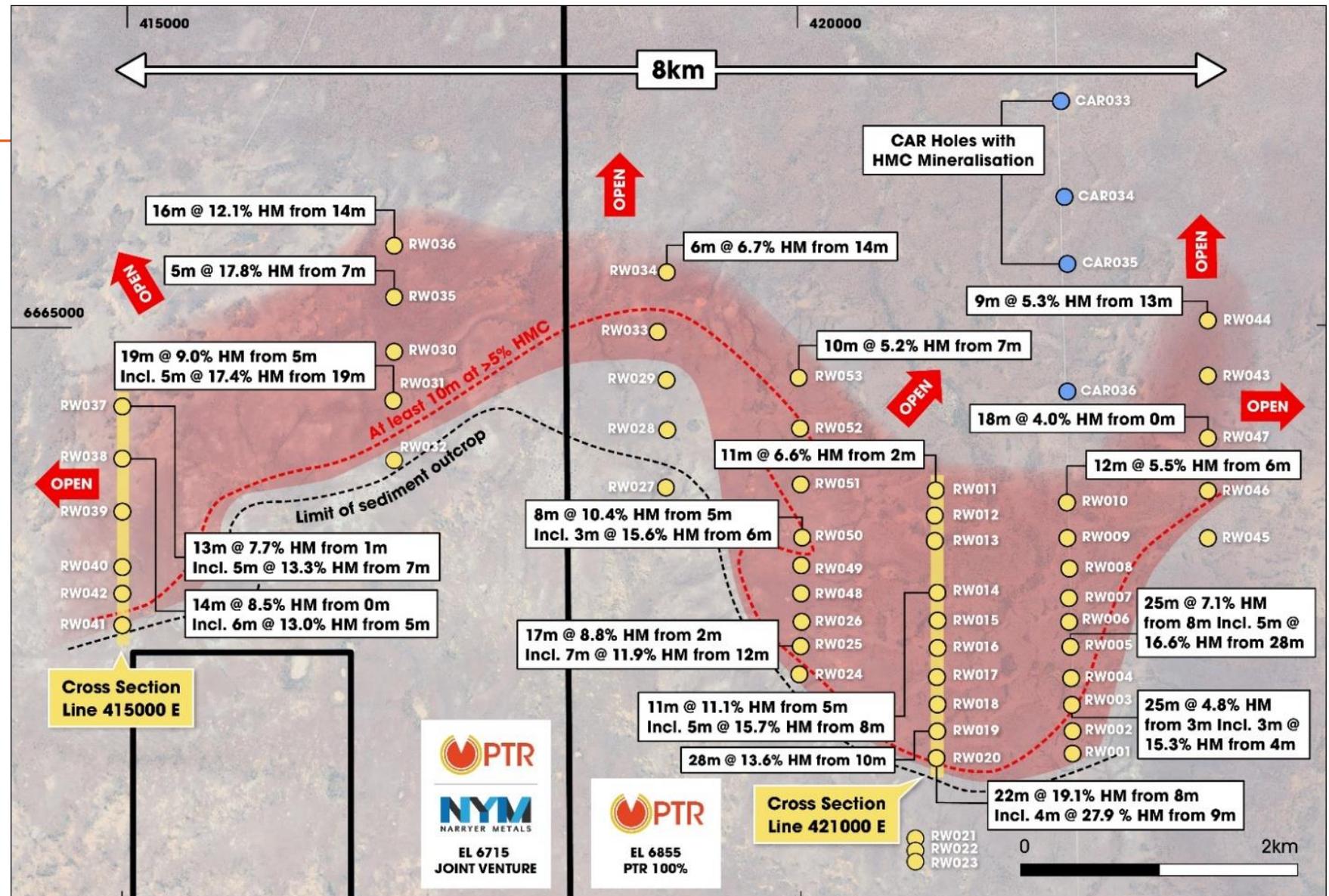
– Summary of Results

Mineralisation extends over a continuous 15km² area and remains open to the north, west and east.

Mineralisation starts from 0m to 14m depth (ave 5.7m)

Ore thickness 5 – 30m.

Ave intercept thickness and grade (using a 2% cut) = 12.2m and grading 8% HM.



Rosewood Prospect Plan

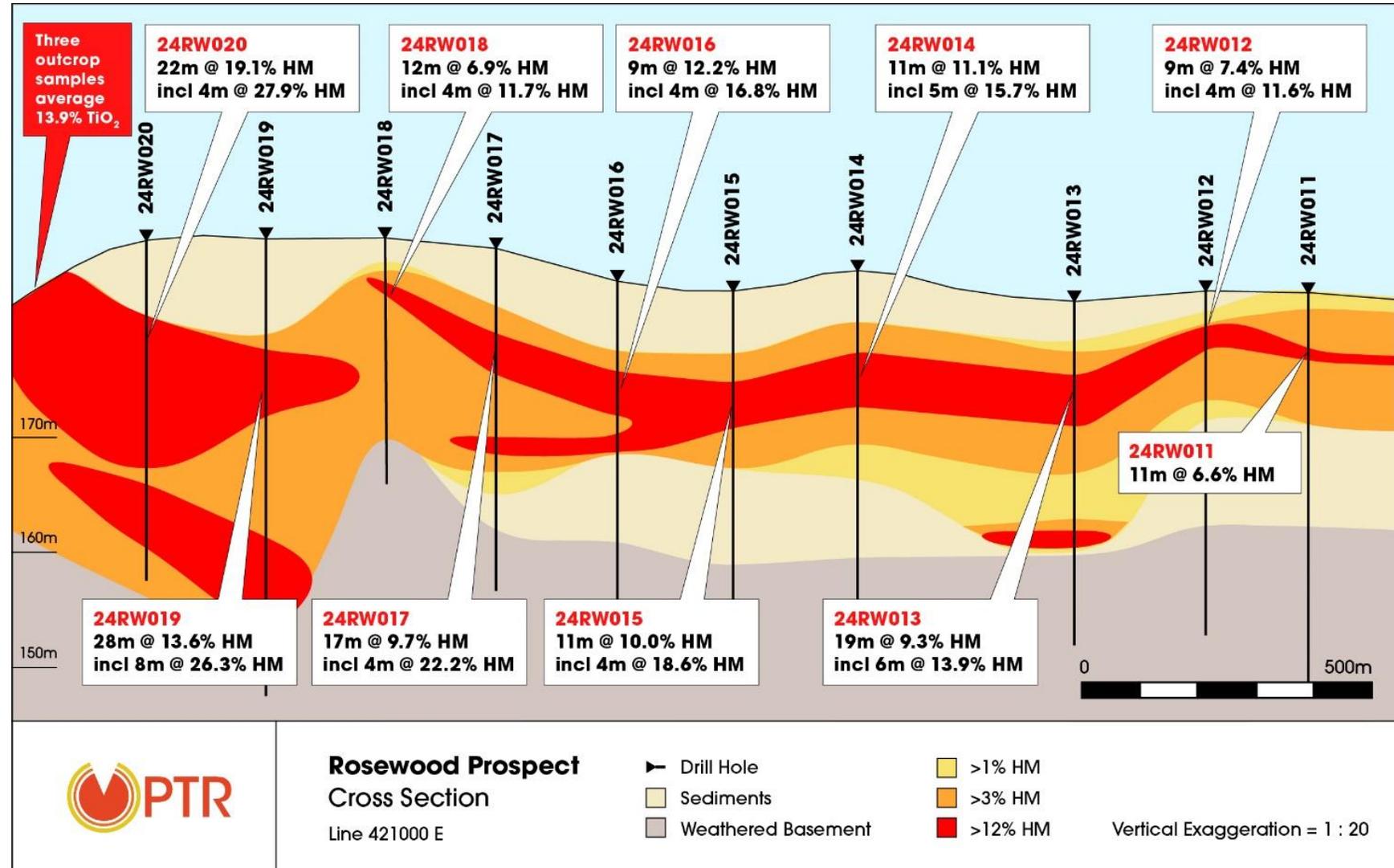
- PTR Drill Holes
- CAR Historic Drill Holes
- HMC Mineralisation (Min 5m Thick)

Footnote 8

Muckanippie Project – Bonanza Initial Drill Results !



- High grade HM mineralisation – wide intervals and extent

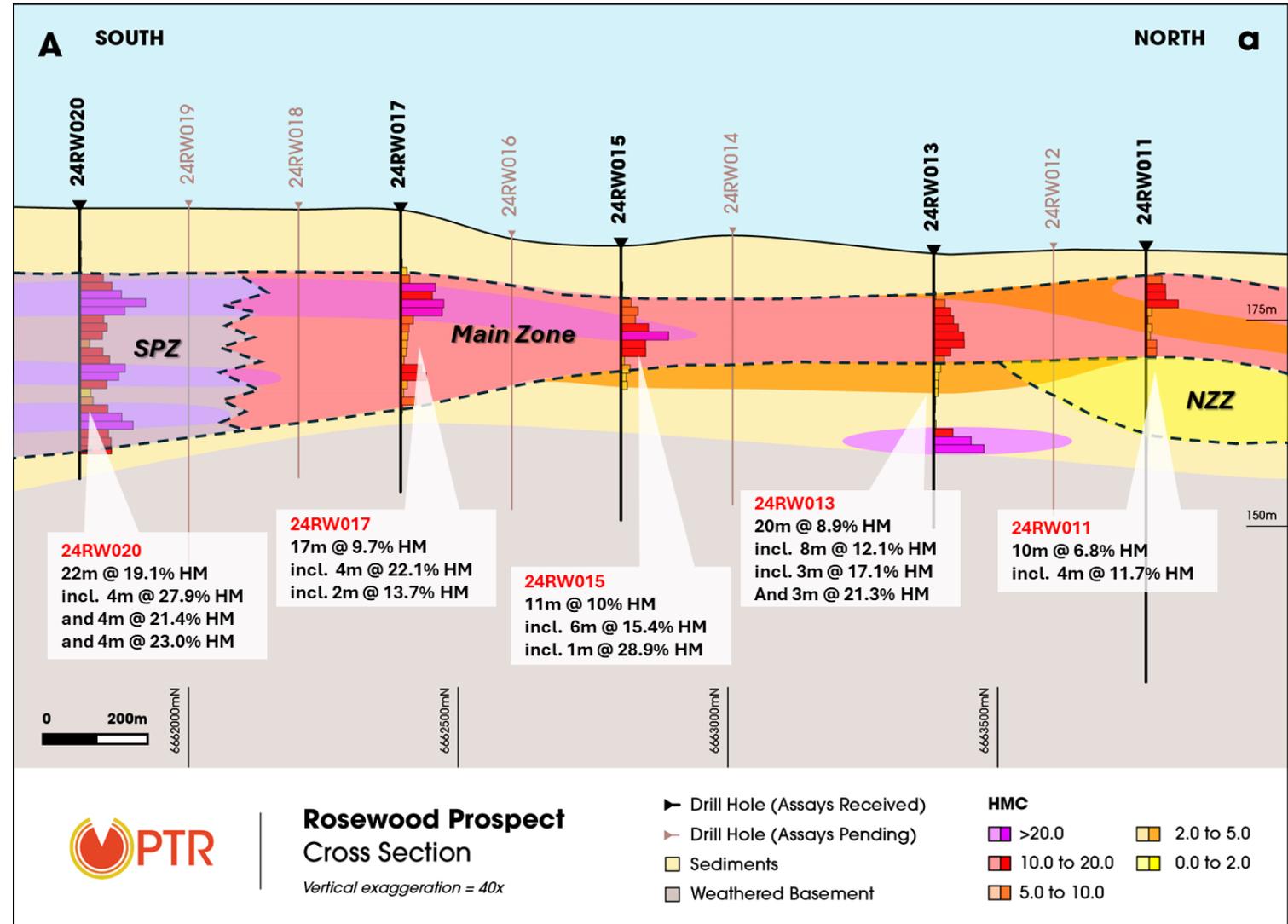


Geological Cross Section 421000E showing HMS results .

Muckanippie Project – High-Value Mineral Assemblage Identified



- Pure high value titanium ores and no deleterious minerals
- >96 % Valuable Heavy Mineral Content
- 2 Ores – Rutile Products (HiTi Leucoxene and rutile) & Pseudorutile
- Main Zone – records 25.3% Rutile Product (93% TiO₂) and 74.7%, Psuedorutile (75.4% TiO₂)
- South Psuedorutile Zone (SPZ) – Psuedorutile dominated
- North Zircon Zone – zircon bearing sediment – to be followed up



Rosewood Heavy Mineral (HM) %, Significant Intercepts



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Petratherm Limited

ASX: PTR

