6 February 2025

Drilling Confirms Potential for World-Class Titanium Project at Rosewood

Highlights

- 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 open.
- New intersections over the project include:
  - 24RW005 - **25m @ 7.1% HM** from 8m, incl. **5m @ 16.6% HM** from 28m.
  - 24RW013 - **19m @ 9.3% HM** from 5m, incl. **6m @ 13.9% HM** from 6m.
  - 24RW019 - **28m @ 13.6% HM** from 10m, incl. **8m @ 26.3% HM** from 29m.
  - 24RW025 - **17m @ 8.8% HM** from 2m.
  - 24RW031 - **19m @ 9.0% HM** from 5m, incl. **3m @ 19.5% HM** from 6m
  - 24RW036 - 1**6m @ 12.1% HM** from 14m, incl. **8m @ 19.6% HM** from 15m
- **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 end of current drill traverses requiring follow-up extension drilling.
- Examples of end of drill traverse open mineralisation include:
  - 24RW038 (West) - **14m @ 8.5% HM** from 0m
  - 24RW036 (North) - **16m @ 12.1% HM** from 14m (Historical Car series holes indicate mineralisation extends at least 3 kilometres further north of current drill area)
  - 24RW043 (East) - **4m @ 9.3% HM** from 10m
- 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 pseudorutile.
- Results from other Muckanippie Project HM targets expected within 2 weeks.

Petratherm CEO, Peter Reid, commented:
"These results confirm exceptional heavy mineral grade continuity and thickness over a very large area. Encouraging thick, high-grade mineralisation occurs right up to the extents of current drilling and we look forward to step out exploration drilling in the coming weeks, especially to the north, which has significant potential for additional mineralisation."

"We have now strengthened our confidence of Rosewood's large scale potential and as a result this next round of exploration drilling will include in parallel the collection of bulk heavy mineral sample to expedite initial trial mineral separation testing using standard ore processing techniques. This work will investigate ore recoveries and ore products for potential sale."

Rosewood Prospect Drilling

Petratherm Limited (ASX: PTR) ("**PTR**" or "**the Company**") is pleased to announce results from the maiden exploration drilling at the Rosewood Heavy Mineral Sand (HMS) Prospect. During October 2024 the Company undertook a 100 hole vertical air-core drill program totalling 3,392 metres to test for titanium-bearing HM mineralisation at the Muckanippie Project in the northern Gawler Craton, South Australia. As part of this program, 50 holes totalling 1,697 metres were drilled at the Rosewood Prospect, with initial HM assays returning exceptional results including **22m @ 19.1% HM from 8 metres in drill hole 24RW020**[1]. Results from the remaining 45 drill holes have now been received and confirm that the mineralised zone continues over an area of at least 15 square kilometres (15 km^2) and is open in three directions (Figure 1).

Previously PTR reported exceptionally pure high value titanium ores, from Rosewood averaging >95% Valuable Heavy Mineral (VHM) Content. HM samples from Main Zone average 25.3% rutile product (high-titanium leucoxene and rutile), with average TiO2 grade of 93.0%. The other VHM in the Main Zone is composed of pseudorutile, which averages 69.5% of the HM content. The pseudorutile is high in TiO_2, averaging 75.4% TiO_2[2].

Table 1: Drilling Highlights

Drill hole	Thickness (Metres)	HM%	From (metres)	Including
24RW004	6	7.9%	9	2m @ 12.0% from 10m
and	13	11.7%	20	8m @ 14.8% from 24m
24RW005	25	7.1%	8	5m @ 16.6% from 28m
24RW006	24	5.9%	6	
24RW014	11	11.1%	5	5m @ 15.7% from 8m
24RW016	9	12.2%	7	4m @ 16.8% from 9m
24RW019	28	13.6%	10	8m @ 26.3% from 29m
24RW025	17	8.8%	2	7m @ 11.9% from 12m
24RW026	4	17.0%	11	
24RW031	19	9.0%	5	5m @ 17.4% from 19m
24RW035	5	17.8%	7	3m @ 25.7% from 9m
24RW036	16	12.1%	14	8m @ 19.6% from 15m
24RW037	13	7.7%	1	5m @ 13.3% from 7m
24RW038	14	8.5%	0	6m @ 13.0% from 5m
24RW039	11	7.2%	0	5m @ 11.8% from 5m
24RW049	8	10.4%	5	

Rosewood Exploration Results

At Rosewood drilling focused on extending mineralisation from the southern edge, where it outcrops in places, northwards where it extends under very thin cover (Figure 1). All fifty holes drilled at Rosewood intersected the target host sediments, a silt, sand and clay rich sequence interpreted to be fluvio-deltaic in origin. The iron-oxide content of the sediments is extremely low and they appear as bleached white sediment with dark titaniferous mineral banding. 90% of the holes drilled intersected at least 5 metres of >5% HM and 76% intersected at least 10m @ 5% HM, with multiple spectacular intercepts (Tables 1 & 2).

[1] PTR ASX release 04 December 2024 – Drill Results Confirm Major HMS Discovery at Rosewood
[2] PTR ASX release 20 January 2025 – Pure High-Value Titanium Mineral Assemblage at Rosewood

The current drilled mineralised area extends across an 8 kilometre east-west extent, and widths range between 500 metres to 2,200 metres in a north-south direction. Based on using a simple 5 metres of >5% HM outline from the drilling to date the mineralisation occurs over a continuous **15 square kilometre area.** Significantly, mineralisation is open to the north on all drill traverses, with many of the northern holes returning thick intercepts. Previously PTR reported re-logging and assaying of historical CAR series drillholes which confirm that HM bearing sediments continue up to three kilometres north of current drilling (Figure 1)[3].

It is noteworthy that the northern most hole drilled, 24RW036, returned an exceptional intercept of **16 metres grading 12.1% HM** starting from 14 metres and including **8 metres at 19.6% HM**. Similarly, mineralisation is open to the west and to the east with holes on the most western and eastern traverses containing consistent mineralisation, including **14m @ 8.5% HM** from surface in 24RW038 and **9m @ 5.3% HM** from 13 metres in 24RW044 respectively.

Mineralisation starts at shallow depths across the Rosewood Prospect typically ranging from 0 to 14 metres and has an average starting depth of 5.7 metres across all holes containing significant intercepts. Average drill intercept thickness's and HM content across the whole prospect, using a 2% HM cut-off, produces an average interval thickness of 12.2 metres and an average intercept grade of 8.0 % HM. As a cautionary note the potential average thickness and grade should only be considered an approximate guide due to the current wide and variable drill hole spacing.

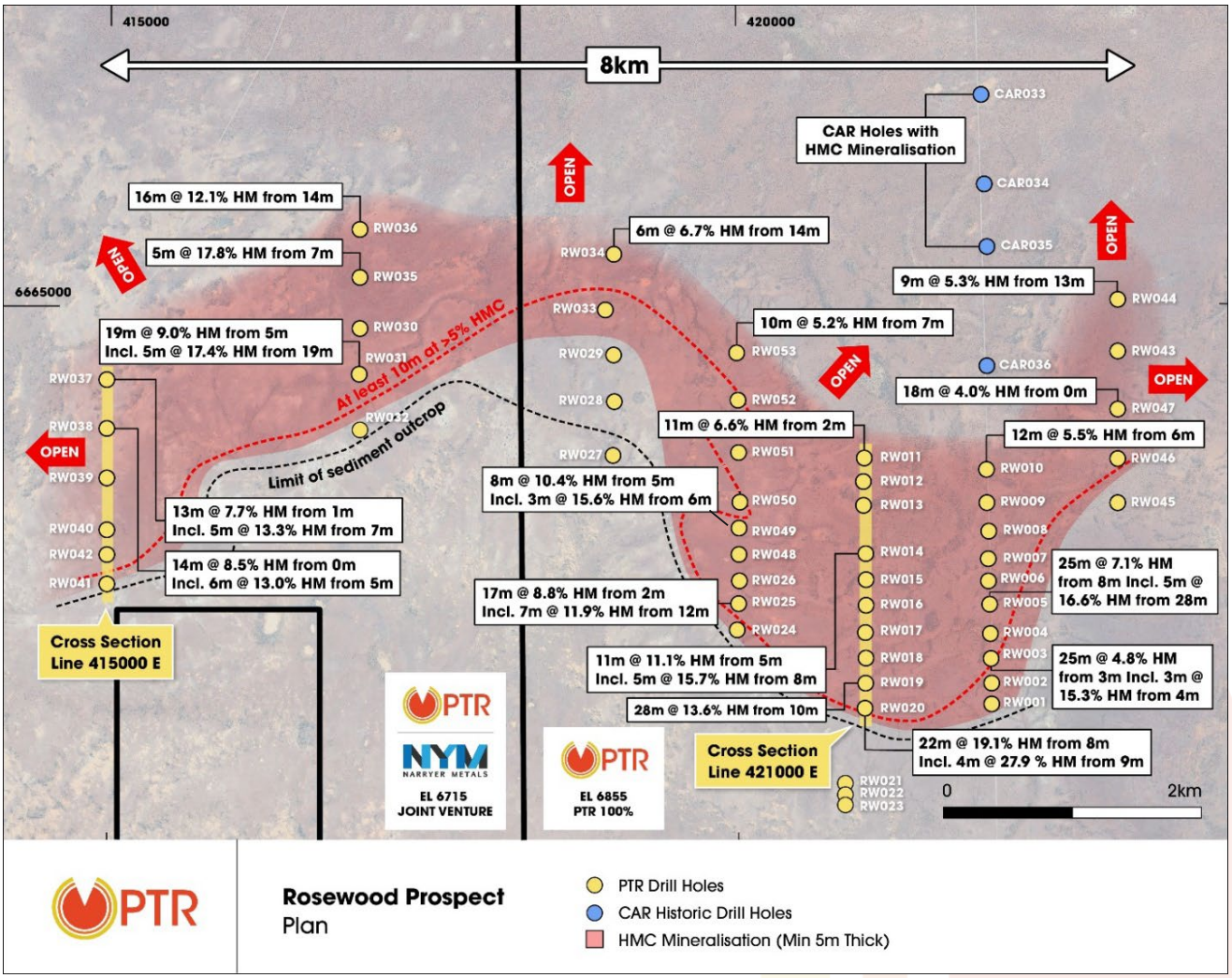

Figure 1 – *Rosewood Prospect drilling results and cross section locations.*

[3] PTR ASX release 11 September 2024 – High-Grade Titanium Rich Heavy Mineral Sands at Muckanippie

Rosewood Prospect – Eastern Area

In the eastern part of the Rosewood Prospect, the new drill results confirmed the high grades and continuity identified from the first round of results[1] (Figure 2). A thick continuous HM band continues from outcrop in the south over 2.1 kilometres northwards where it remains open. New results on this traverse include (Figure 2) :

- 24RW013 - **19m @ 9.3% HM** from 5m, incl. **6m @ 13.9% HM** from 6m.
- 24RW014 - **11m @ 11.1% HM**, incl. **5m @ 15.7% HM** from 8m.
- 24RW016 - **9m @ 12.2% HM** from 7m, incl. **4m @ 16.8% HM** from 9m.
- 24RW019 - **28m @ 13.6% HM** from 10m, incl. **8m @ 26.3% HM** from 29m.

Holes from this section have been submitted for mineralogy assessment and have on average recorded >95% Valuable Heavy Mineral (VHM) content composed primarily of high titanium rutile-product (high-titanium leucoxene and rutile) and pseudorutile[2]. On the far eastern drill line mineralisation remains open with drill hole 24RW043 returning **4 metres at 9.3% HM** from 10m and the next drill hole 400 metres further north 24RW044, returning **9 metres at 5.3% HM** from 13 metres (Figure 1).

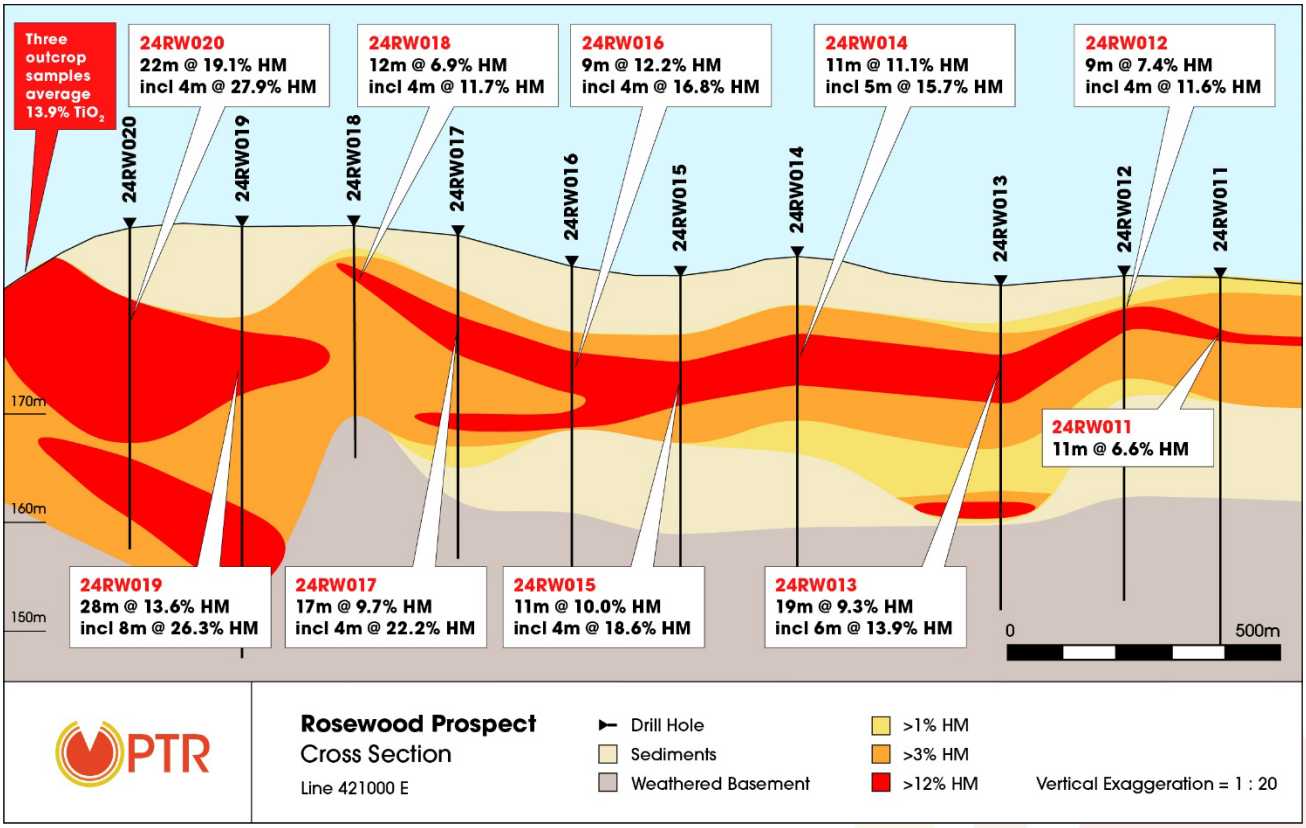

Figure 2 – *Rosewood Geological Cross Section 421000E – Eastern Area showing new and previously published HM intercepts[1]*

Rosewood Prospect – Western Area

To the west, drilling results remain strong and continuous and are open both to the north and the west. On the western most traverse (Figure 3), better drill intersections include:

- 24RW038 – **14m @ 8.5% HM** from surface, incl. **6m @ 13.0% HM** from 5m.
- 24RW039 – **11m @ 7.2% HM** from surface, incl. **5m @ 11.8% HM** from 5m.

These demonstrate very thick, shallow, high-grade mineralisation, with significant potential for additional mineralisation to be found with step out exploration drilling. Also of note on this traverse, a deeper HM zone in the northern most hole 24RW037 (6m @ 12.0% HM from 16 metres) which returned a high zirconium dioxide (ZrO_2) interval assay interval averaging 0.15% ZrO_2, indicating the potential for the existence of a high-zircon HM system to the north (Figure 3). The HM will now undergo mineralogical analysis to determine what fraction contains zircon. This zonation was also evident in drilling in the eastern portion of the Rosewood Prospect where elevated zirconium dioxide was identified in the northern lower mineralised section and will be investigated further[2].

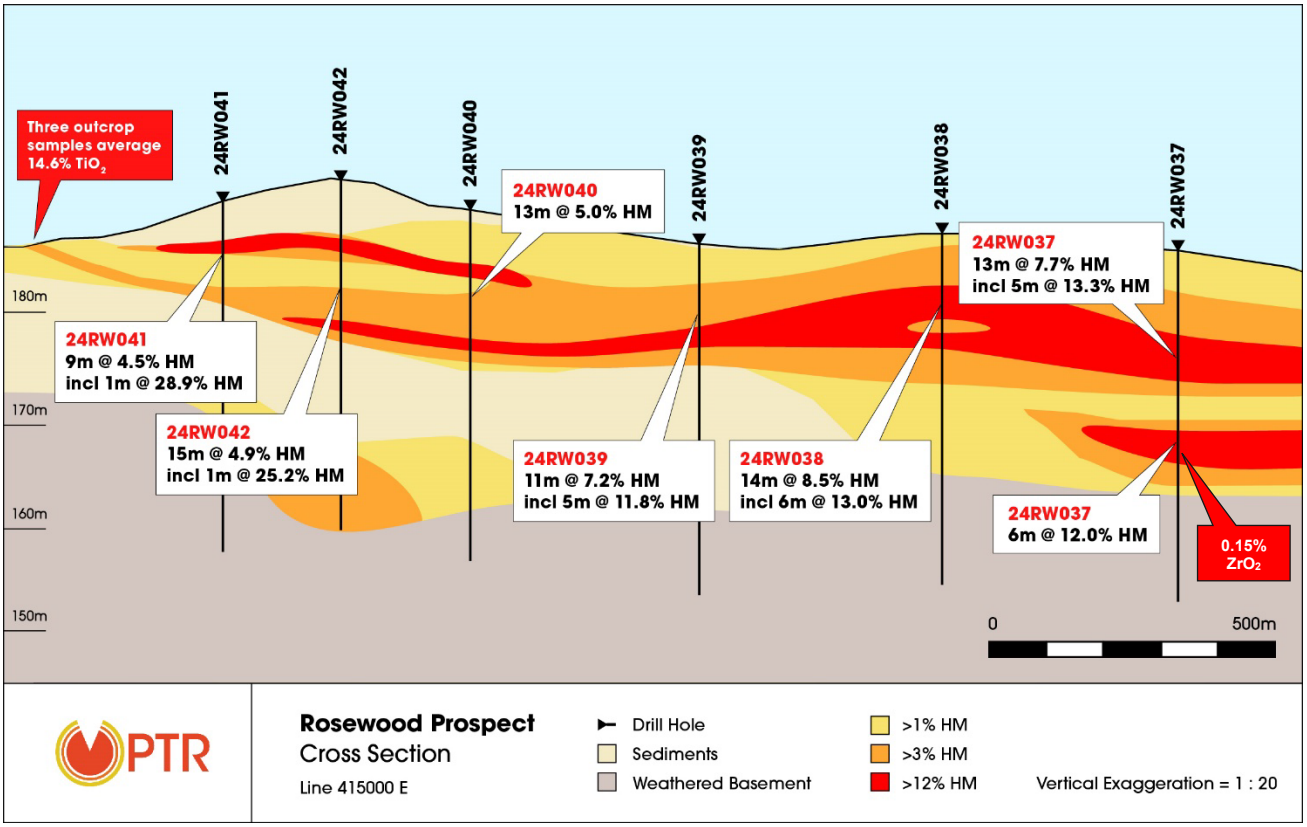

Figure 3 – *Rosewood Geological Cross Section 415000E – Western Area showing HM intercepts.*

Next steps

At Rosewood, work will continue on mineralogical and metallurgical assessment which will include using existing HM concentrates 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 which titanium oxides products can be produced for further marketing and evaluation.

Further drilling will be undertaken at Rosewood with two purposes; 1) to test for further extensions of the known HM mineralisation; and 2) to obtain bulk (>500 kilogram) samples for large-scale metallurgical test work. It is envisaged the drilling operations will commence in approximately 4 weeks' time.

Further afield on the Muckanippie Project, HM drilling results from exploration of saprolite zones (weathered basement reduced to clays) over areas of primary titanium-bearing rocks are expected within two weeks.

ENDS

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

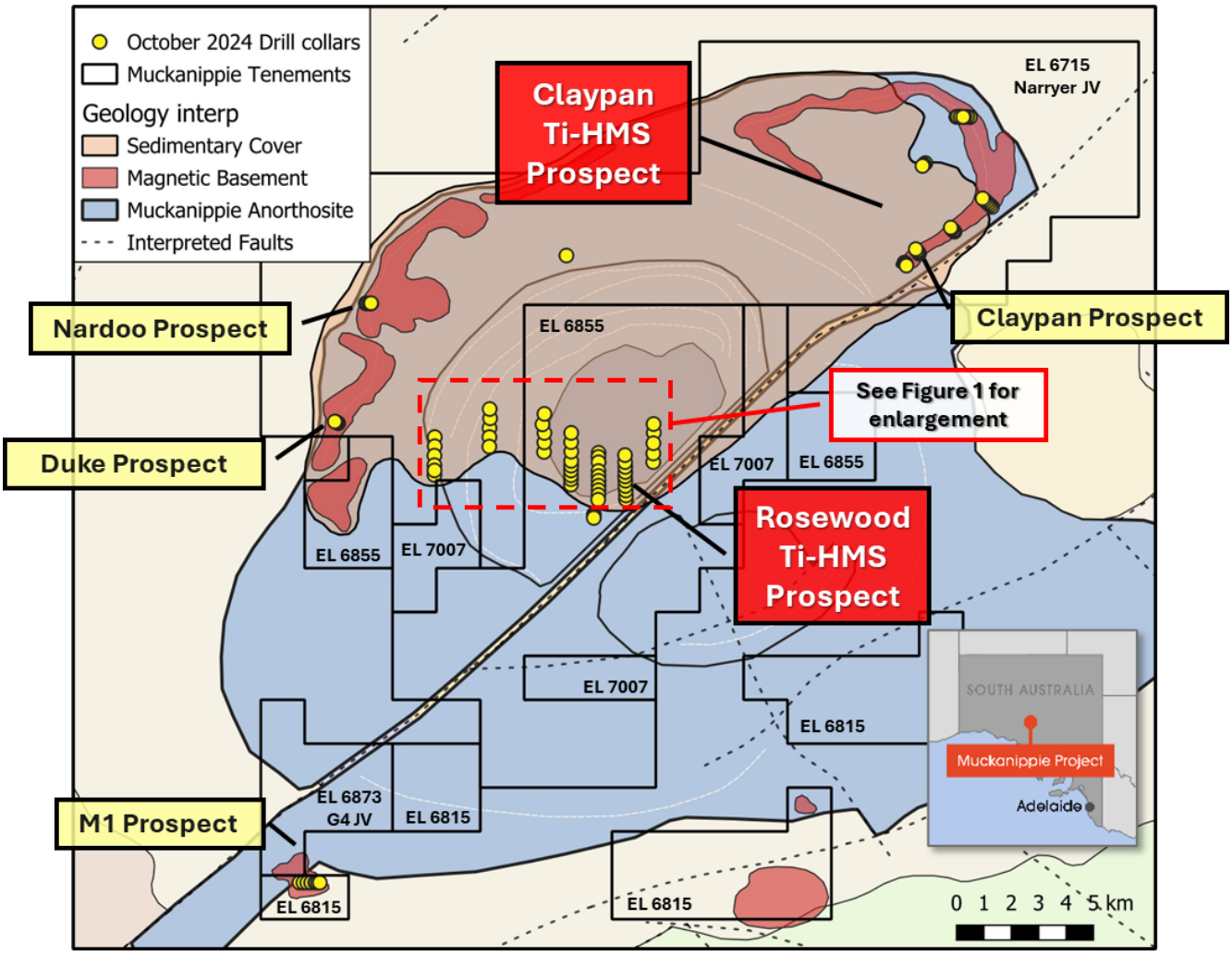

Figure 4 – *Geology Map of Muckanippie Project Area, Tenements, Prospect Names and 2024 drill collars. The Project contains both 100% owned Petratherm tenure and the JV tenements, EL 6715 (Narryer Metals Limited, ASX:NYM)* [4] *and EL6873 (G4 Metals)* [5]

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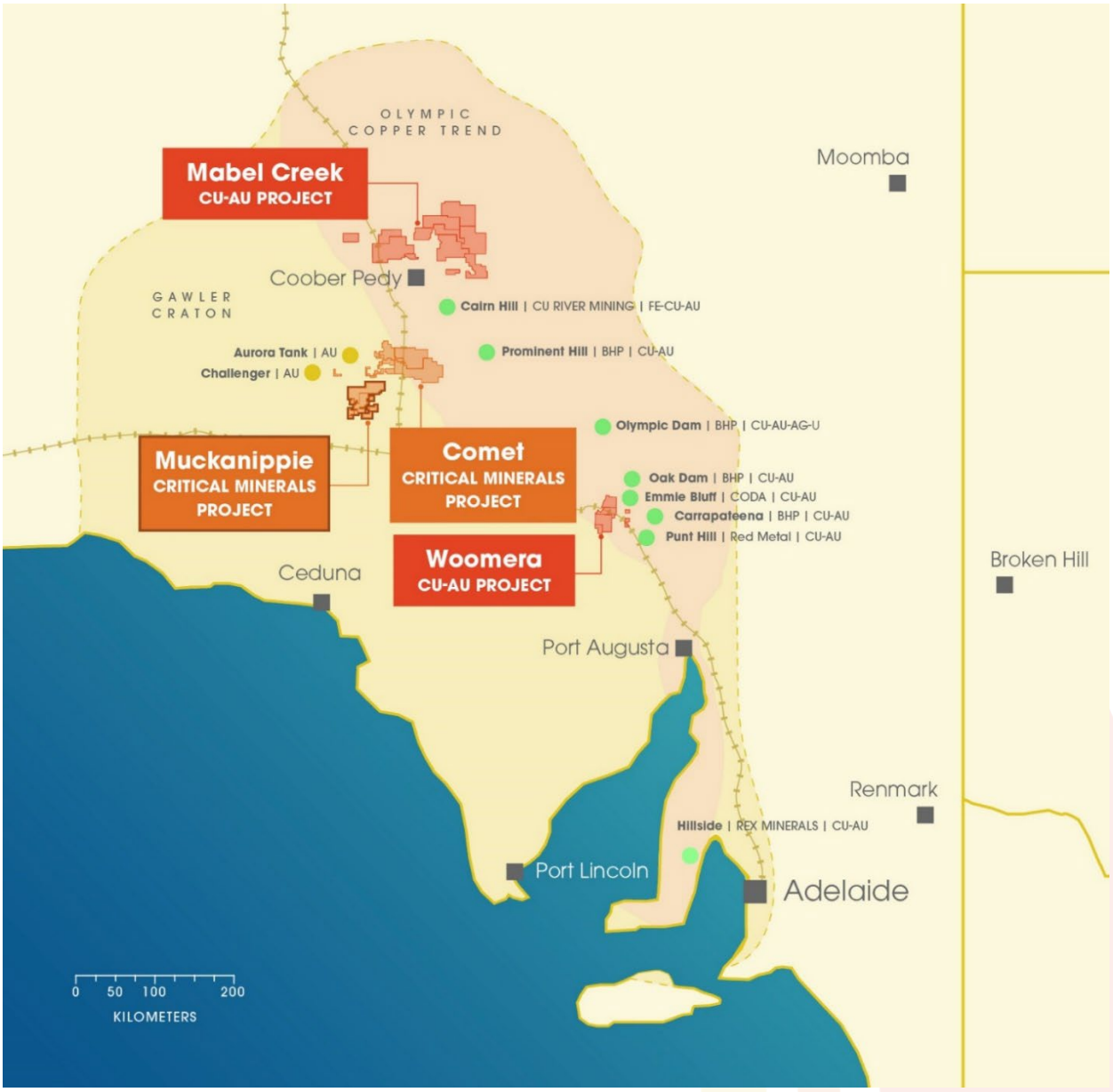
Competent Persons Statement:
The information in this report that relates to Exploration Targets and Exploration Results is based on information compiled by Mr Peter Reid, who is a Competent Person, and a Member of the Australian Institute of Geoscientists. Mr Reid is not aware of any new information or data that materially affects the historical exploration results included in this report. Mr Reid is an employee of Petratherm 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.

[4] ASX Announcement 18 April 2024 – Farm-in Agreement Expands Muckanippie Project
[5] 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

TABLE 2: Rosewood Heavy Mineral Significant Intercepts

Table 2 - Rosewood Heavy Mineral (HM) %, Significant Intercepts				
Drill Hole	**From** (metres)	**To** (metres)	**Interval** (metres)	**HM %** Original Sample
24RW001	0	16	16	**3.4%**
and	23	32	9	**4.2%**
24RW002	0	17	17	**4.3%**
and	22	28	6	**3.9%**
24RW003	3	28	25	**4.8%**
incl.	4	7	3	**15.3%**
24RW004	9	15	6	**7.9%**
and	20	33	13	**11.7%**
incl.	24	32	8	**14.8%**
24RW005	8	33	25	**7.1%**
incl.	28	33	5	**16.6%**
24RW006	6	30	24	**5.9%**
24RW007	8	20	12	**5.9%**
incl.	10	15	5	**11.1%**
and	25	34	9	**5.8%**
24RW008	7	22	15	**5.3%**
24RW009	7	20	13	**6.1%**
and	25	33	8	**3.8%**
24RW010	6	18	12	**5.5%**
24RW011	2	13	11	**6.6%**
24RW012	3	12	9	**7.4%**
incl.	3	7	4	**11.6%**
24RW013	5	24	19	**9.3%**
incl.	6	12	6	**13.9%**
incl.	21	24	3	**21.3%**
24RW014	5	16	11	**11.1%**
incl.	8	13	5	**15.7%**
24RW015	6	17	11	**10.0%**
incl.	9	13	4	**18.6%**
24RW016	7	16	9	**12.2%**
incl.	9	13	4	**16.8%**
24RW017	6	23	17	**9.7%**
incl.	8	12	4	**22.2%**
24RW018	2	14	12	**6.9%**
incl.	4	8	4	**11.7%**
24RW019	10	38	28	**13.6%**
incl.	29	37	8	**26.3%**
24RW020	8	30	22	**19.1%**
incl.	9	13	4	**27.9%**
24RW024	5	9	4	**13.1%**
24RW025	2	19	17	**8.8%**
incl.	3	8	5	**10.0%**
incl.	12	19	7	**11.9%**

TABLE 2 (Continued): Rosewood Heavy Mineral Significant Intercepts

Table 2 - Rosewood Heavy Mineral (HM) %, Significant Intercepts				
24RW026	11	15	4	**17.0%**
and	20	24	4	**5.9%**
24RW030	0	12	12	**7.1%**
incl.	8	10	2	**17.2%**
24RW031	5	24	19	**9.0%**
incl.	6	9	3	**19.5%**
incl.	19	24	5	**17.4%**
24RW032	6	8	2	**6.5%**
and	13	14	1	**17.3%**
24RW033	4	7	3	**10.0%**
24RW034	14	20	6	**6.7%**
24RW035	7	12	5	**17.8%**
incl.	9	12	3	**25.7%**
24RW036	14	30	16	**12.1%**
incl.	15	23	8	**19.6%**
24RW037	1	14	13	**7.7%**
incl.	7	12	5	**13.3%**
and	16	22	6	**12.0%**
24RW038	0	14	14	**8.5%**
incl.	5	11	6	**13.0%**
24RW039	0	11	11	**7.2%**
incl.	5	10	5	**11.8%**
24RW040	1	14	13	**5.0%**
24RW041	0	9	9	**4.5%**
incl.	4	5	1	**28.9%**
24RW042	0	15	15	**4.9%**
incl.	6	7	1	**25.2%**
24RW043	9	18	9	**6.5%**
incl.	10	14	4	**9.3%**
24RW044	13	22	9	**5.3%**
24RW045	12	30	18	**3.3%**
24RW046	1	4	2	**2.6%**
and	13	24	11	**5.4%**
24RW047	0	18	18	**4.0%**
24RW048	9	13	4	**13.8%**
24RW049	5	13	8	**10.4%**
incl.	6	9	3	**15.6%**
and	18	24	6	**3.9%**
24RW050	8	11	3	**9.5%**
24RW051	9	12	3	**19.4%**
24RW052	3	6	3	**6.7%**
24RW053	7	17	10	**5.2%**

TABLE 3: Rosewood Prospect Significant Zircon Intercepts

Table 2 - Rosewood ZrO_2 %, Coincident with Significant HM Intercept				
Drill Hole	**From** (metres)	**To** (metres)	**Interval** (metres)	**ZrO_2 %**
24RW009	30	33	3	**0.14**
24RW013	21	24	3	**0.16**
24RW031	21	24	3	**0.15**
24RW034	15	18	3	**0.10**
24RW037	16	22	6	**0.15**
24RW040	9	12	3	**0.13**
24RW045	27	30	3	**0.18**
24RW046	21	24	3	**0.10**

TABLE 4: Drill Hole Collars

Hole ID	Easting MGA94 Z53	Northing MGA94 Z53	RL metres	Dip Deg.	Azimuth Deg.	EOH Depth metres
CAR 030	421837	6669463	180	-90	0	62
CAR 031	421860	6668673	179	-90	0	54
CAR 032	421892	6667487	178	-90	0	35
CAR 033	421909	6666673	172	-90	0	67
CAR 034	421934	6665936	181	-90	0	55
CAR 035	421964	6665453	182	-90	0	53
CAR 036	421965	6664475	185	-90	0	55
CAR 037	421997	6663404	184	-90	0	80
CAR 038	422020	6662460	186	-90	0	52
CAR 039	422043	6661923	187	-90	0	79
24RW001	422010	6661830	163	-90	0	72
24RW002	422011	6661995	182	-90	0	36
24RW003	422002	6662200	194	-90	0	30
24RW004	421989	6662393	192	-90	0	33
24RW005	421986	6662613	182	-90	0	33
24RW006	421976	6662796	182	-90	0	30
24RW007	421980	6662982	186	-90	0	39
24RW008	421979	6663192	186	-90	0	33
24RW009	421971	6663397	183	-90	0	33
24RW010	421964	6663692	182	-90	0	60
24RW011	420997	6663780	184	-90	0	53
24RW012	420992	6663607	189	-90	0	33
24RW013	421000	6663385	187	-90	0	33
24RW014	420998	6663015	180	-90	0	33
24RW015	421000	6662806	186	-90	0	33
24RW016	421006	6662606	188	-90	0	33
24RW017	421005	6662400	190	-90	0	33
24RW018	421005	6662211	192	-90	0	24
24RW019	421003	6662009	186	-90	0	45
24RW020	420997	6661808	192	-90	0	33
24RW024	419995	6662436	185	-90	0	33
24RW025	419995	6662664	190	-90	0	33
24RW026	419994	6662829	192	-90	0	33
24RW027	419001	6663804	189	-90	0	23
24RW028	419009	6664203	195	-90	0	33
24RW029	419010	6664604	192	-90	0	33
24RW030	417001	6664797	198	-90	0	33
24RW031	417001	6664414	195	-90	0	33
24RW032	417000	6664013	191	-90	0	33
24RW033	418980	6664966	187	-90	0	33
24RW034	419004	6665407	183	-90	0	33
24RW035	417020	6665203	189	-90	0	33
24RW036	417001	6665594	188	-90	0	33
24RW037	415001	6664399	192	-90	0	33
24RW038	415003	6664013	188	-90	0	33
24RW039	414995	6663618	191	-90	0	33
24RW040	414997	6663216	192	-90	0	33
24RW041	415002	6662807	194	-90	0	33
24RW042	415003	6662996	191	-90	0	33
24RW043	423009	6664646	195	-90	0	33
24RW044	423000	6665008	193	-90	0	24
24RW045	422998	6663408	191	-90	0	37
24RW046	422999	6663769	188	-90	0	33
24RW047	422998	6664198	189	-90	0	33
24RW048	419994	6663031	194	-90	0	33
24RW049	419997	6663233	194	-90	0	33
24RW050	419997	6663435	196	-90	0	30
24RW051	419997	6663825	198	-90	0	30
24RW052	419990	6664223	194	-90	0	21
24RW053	419990	6664611	194	-90	0	21

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
Sampling techniques	• *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.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report.* • *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.*	**Drilling** • 45 drillholes have been selected for Heavy Liquid Separation (HLS) testing, from recently completed Petratherm Drilling. • 1 metre samples were split from the drill rig using a cone splitter attachment to the cyclone. • A riffle splitter was subsequently used to split 1 metre samples for HLS testing. Results are contained in the main body of this report. • 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. • ZrO_2 assays were derived from 3m composite bulk sample intervals and assayed using lithium borate fusion method and analysed using ICP-AES and ICP-MS, by ALS laboratories. • Historic drill hole information has been sourced from open file public records managed by the South Australian Department of Primary Industries and Resources. • Additional details from historic drilling are unknown.
Drilling techniques	• *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 diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).*	• Historic CAR exploration drilling reported was RC. Additional details from historic drilling are unknown. • Petratherm has completed air core drilling.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse*	• Air core drilling methods were utilised throughout the duration of the program. • Hole diameters are 78mm. • A Geologist was on site for every drill hole to ensure that sample recoveries were appropriate. Excellent recoveries were recorded. • 1m sample intervals were collected in buckets and a 1 metre split

Criteria	JORC Code explanation	Commentary
	material.	sample taken using a cone splitter attached to the drill cyclone into pre-numbered calico bags. • 3m composite samples were collect using a spear method from 1m spoils.
Logging	• *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.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.* • *The total length and percentage of the relevant intersections logged.*	• All samples were geologically logged by the on-site geologist. • Geological logging is qualitative. • Representative chip trays containing 1 m geological sub-samples were collected.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *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.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• Samples averaging 1.6 kg were collected for laboratory assay, using a cone splitter. • It is considered representative samples were collected. • 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. • The nature, quality and appropriateness of sample preparation has been achieved. • Duplicate check samples have been introduced into the sample stream by the Laboratory. • Standard samples were introduced into the sample stream by the laboratory also completed standard assays. • Laboratory analytical charge sizes are standard sizes and considered adequate for the material being assayed.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *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.* • *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*	• 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. • 3m assays for ZrO_2 analysis carried out by ALS Laboratories, including blanks and standards.

Criteria	JORC Code explanation	Commentary
	established.	
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• Verification of intercepts has been undertaken by an independent consultant geologist, who has visually assessed drill samples and examined the laboratory data. • All data used is from primary sources.
Location of data points	• *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.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• All maps and locations are in UTM grid (GDA94 Z53) and have been measured by a GPS with a lateral accuracy of ± 5 metres and a topographic accuracy of ±5 metres.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *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.* • *Whether sample compositing has been applied.*	• Petratherm has completed regional exploration drilling along drill traverses 1km to 2km apart. Drill hole traverses extend from 1.6 to 2.2 km. • Data spacing is insufficient to establish the degree of geological and grade continuity required for a Mineral Resource estimation. • No compositing was used
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *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.*	• Drill holes reported were completed every 200 metres to 400 metres along a series of widely spaced drill hole traverses, 1km to 2km apart. Drill hole traverses extend from 1.6 to 2.2 km. • The mineralisation in drillholes and mapped in outcrop is interpreted to be recent flat lying fluvio- deltaic marine sediments. • 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. Figures contained in the main body of the text must be considered a guide and further infill drilling is required.
Sample security	• *The measures taken to ensure sample security.*	• Samples were taken directly from the field to Petratherm's warehouse and then couriered to Diamantina Laboratories in Perth. • Composite 3m samples taken directly to ALS Adelaide from Petratherm's warehouse.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• There is currently a review into the methods used to improve HM recoveries.

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *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.* • *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.*	• EL6815 was granted 100% to Petratherm Limited on 12/08/2022 for a period of 6 years. • EL 6855 was granted 100% to Petratherm Limited on 18/10/22 for a period of 6 years. • EL 7007 was granted 100% to Petratherm Limited on 15/08/24 for a period of 6 years. • EL6873 was granted to G4 Metals Pty. Ltd. on 18/11/2022 for a period of 6 years. Petratherm 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. • 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. Petratherm 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 18/04/2024 • The tenements are located approximately 120 km south south-west of Coober Pedy overlapping Bulgunnia, Mulgathing and Commonwealth Hill Pastoral Stations. • The tenements are located within the Woomera Prohibited Area (Green Zone). • **Native Title Claims:** SCD2011/001 Antakirinja Matu-Yankunytjatjara. • The tenements are in good standing and no known impediments exist.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Previous exploration work includes; • **Surface Geochemical Sampling:** Calcrete **Airborne Geophysics:** Magnetics & Radiometrics. **Ground Geophysics:** Prospect scale Magnetics, Gravity and EM. **Exploration Drilling:** Open file records indicate 296 RAB / Air core, 2 sonic & 51 RC

Criteria	JORC Code explanation	Commentary
		reconnaissance and prospect scale holes drilled over Project Group.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• 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.

Drill hole Information	• *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:*
	  ○ *easting and northing of the drill hole collar*
	  ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*
	  ○ *dip and azimuth of the hole*
	  ○ *down hole length and interception depth*
	  ○ *hole length.*
	• *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.*
		• Drill hole collar locations, RL, dip and azimuth of reported drill holes contained in Table 4 of this report.

Data aggregation methods	• *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.* • *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.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• All reported drill results are true results as reported by the Laboratory. • All results above 2% HM are reported in Table 2 of Significant Intercepts. • All ZrO_2 results within HM zones above 0.1% are reported in Table 3 of this report.
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *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').*	• 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.
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being*	• See Figures in main body of release attached.

Criteria	JORC Code explanation	Commentary
	reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	
Balanced reporting	• *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.*	• Petratherm has completed drilling of 100 drill holes at a number of Prospects on the Muckanippie Project (see Figures 1 and 3). • These drill hole results are from 45 holes completed at the Rosewood HMS Prospect over an approximate 8km by 2km area and provide a comprehensive overview of exploration results for this area.
Other substantive exploration data	• *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.*	• No other substantive exploration data has been collected by Petratherm.
Further work	• *The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• A range of exploration techniques are being considered to progress exploration. • 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. • Further infill and extension drilling is likely to occur in the near future.