

18 April 2024

## Farm-in Agreement Expands Muckanippie Project

### Highlights

- Petratherm Limited (PTR) and Narryer Metals Ltd (ASX: NYM) have executed a Letter of Agreement allowing PTR the right to earn-in to EL 6715 ('Sturt EL'), a large **324 km<sup>2</sup> ground position adjoining PTR's northern Muckanippie Project area.**
- The agreement secures a majority ground position over the Muckanippie Suite, a layered igneous intrusion, which is highly prospective for a range of critical minerals.
- Exploration will target two key metal groupings, **nickel-platinum-palladium-gold** and **vanadium-titanium-iron-phosphate.**
- Historical shallow drill testing of two bullseye magnetic anomalies (one hole in each) returned exceptional titanium-vanadium-iron assays recording up to **21% TiO<sub>2</sub>, 0.44% V<sub>2</sub>O<sub>5</sub> and 47.5% Fe.**
- Limited historical shallow drill testing of electromagnetic features and associated magnetic horizons (Nardoo and Duke Prospects) returned elevated **nickel (0.12%), gold (0.54 g/t Au), palladium (77 ppb), and vanadium oxide (0.23%).**
- Prospective mineral horizons within the Muckanippie layered intrusion occur over many kilometres of trend and have never been drill tested.
- The Muckanippie Suite displays similar rock types and anomalous metal associations to the globally significant Bushveld Complex in South Africa, which is a layered igneous intrusion and a major source of critical minerals.
- The area has largely been unexplored and lies under a shallow cover (<10 metres). PTR intends to undertake a regional low-cost RAB drilling program of the layered horizons to test for mineralisation.

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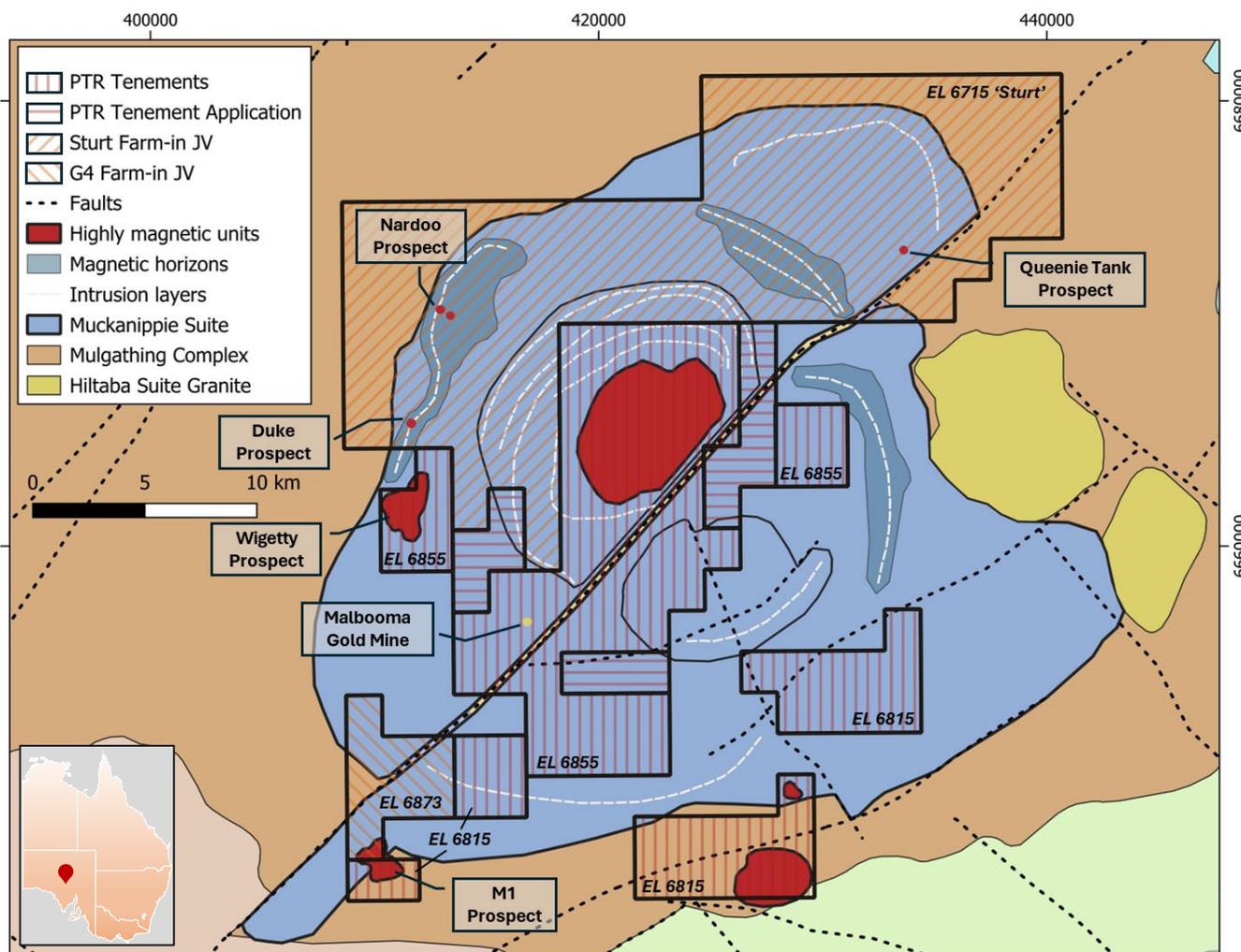
**Petratherm Limited** (ASX: PTR) ("PTR" or "the Company") is pleased to announce that it has executed a Letter of Agreement under which **Narryer Metals Ltd** (ASX: NYM) agrees to grant PTR the right to earn-in to EL 6715 ('Sturt'). PTR can earn up to a 70% interest via a 2 Stage Farm-in with further provisions, dependent on NYM's elections, to earn up to an 80% equity in the project. Key farm-in terms are presented at the end of this announcement.

The 'Sturt' exploration lease covers a 324 km<sup>2</sup> area and adjoins PTR's northern Muckanippie Project area (Figure 1). PTR has now acquired a majority ground position over the Muckanippie Suite, a layered igneous intrusion which is highly prospective for a range of high value critical minerals. The Company's Muckanippie Project holdings total 645 km<sup>2</sup>, either in its own 100% right or through farm-in joint ventures (Figure 1).

**PTR Chief Executive Officer, Peter Reid Commented:**

“Our review of historical exploration over the Sturt Project Area has highlighted the areas prospectivity for gold-platinum group metal and vanadium-titanium-iron deposits of the Bushveld Type. The Company is extremely excited with the execution of the Farm-in Agreement with Narryer Metals, which greatly expands the Company’s land position over the Muckanippie Layered Intrusion. Whilst it is early days, we believe the area has tremendous up-side potential.

“Excellent pre-competitive aeromagnetic data coverage over the Muckanippie area by the South Australian Geological Survey provides a window into the detail of this large, layered intrusion. Prospective horizons have been identified by PTR’s geological team which can be tested effectively with low-cost shallow RAB Style drilling. The Company looks forward to having a drill rig on the ground mid-year to start this exciting exploration Program.”



**Figure 1 –Interpreted Geology Map of PTR Muckanippie Tenements, New Sturt Project Area and Prospects.**

## Muckanippie Complex – Regional Prospectivity

The Muckanippie Suite is series of large layered igneous intrusions, ranging in composition from ultramafic to felsic (anorthosite), located in the northern Gawler Craton of South Australia (Figure 1). This style of layered intrusion forms in specific geological environments and are uncommon. Globally, layered mafic and anorthosite igneous intrusions are a major source of critical minerals. The most notable example being the Bushveld Complex of South Africa which is host to world's foremost Platinum Group Metals mining operations and includes major quantities of base metal, chromium and vanadium<sup>1</sup>.

Other layered mafic to anorthosite intrusions host major titanium, iron, vanadium and phosphate mines, for example Lac Tio in Canada (Ti-Fe), Tellnes in Norway (Ti), and Damiao in China (Fe-Ti-V-P)<sup>2</sup>. The mineralisation in the Fe-Ti-P-V ores is mostly in the form of magnetite and thus magnetic data is a powerful tool in finding and delineating these orebodies.

The Muckanippie Suite has been largely unexplored as it is partially masked by a thin layer of cover material above the layered geological sequence. Where sparse outcrop occurs or shallow drilling has been undertaken, highly anomalous Gold, Platinum Group Metals, Titanium, Vanadium, Iron and Phosphate are reported. PTR has previously announced high Ti-Fe-P and elevated V drill intersections at its M1 and Wigetty Prospect (Figure1)<sup>3</sup>.

## 'Sturt' Licence Area – Gold – Platinum Group Metal Prospectivity

The 'Sturt' Licence area covers interpreted portions of the northern and western lower stratigraphic horizons of the main layered intrusion (Figure 1). Limited historical shallow air-core drilling at Nardoo South, Nardoo East and Duke Prospects tested geochemical anomalies associated with magnetic horizons and electromagnetic features (Figure 2).

At Nardoo South, anomalous **nickel up to 0.12% Ni** and **vanadium up to 0.14% V<sub>2</sub>O<sub>5</sub>** is reported associated with mafic and ultramafic intrusive rocks. At Nardoo East significantly anomalous palladium is reported up to 76 ppb.

At Duke Prospect a single 50 metre spaced air-core drill traverse over the centre of a magnetic layer (Figure 2) returned significant gold and highly anomalous palladium and vanadium assay results. Drill hole DAC5 returned **2 metres @ 0.54 g/t Au** from 34 metres. Other 2 metre composite assay results from the Duke Prospect report anomalous **palladium up to 77 ppb and vanadium up to 0.23% V<sub>2</sub>O<sub>5</sub>**<sup>4</sup>.

PTR postulate that the gold-palladium-vanadium mineralisation is associated along discrete horizons within the layered intrusion like that recorded in the Bushveld Complex. PTR intend to undertake exploratory drilling to test for higher concentrations that are likely to form as narrow reef like horizons.

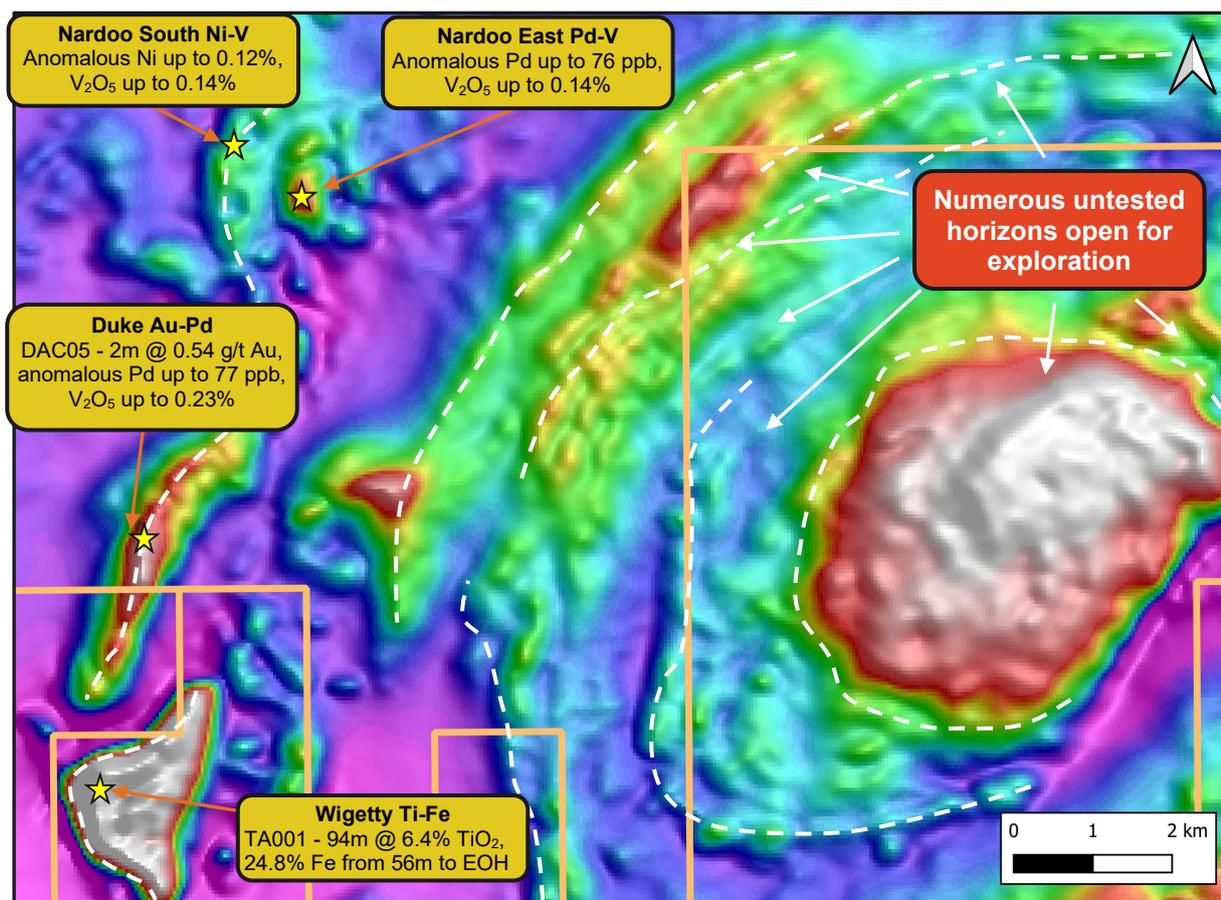
<sup>1</sup> Implats Mineral Resource and Mineral Reserve Statement 2023

<sup>2</sup> Characteristics of Deposits sources: **Lac Tio & Tellnes** - Charlier, B, Namur, O, Bolle, O, Latypov, R & Duchesne, J-C 2015, 'Fe-Ti-V-P ore deposits associated with Proterozoic massif-type anorthosites and related rocks', *Earth-Science Reviews*, vol. 141, pp. 56–81.

**Damiao** - Chen, WT, Zhou, M-F & Zhao, T-P 2013, 'Differentiation of nelsonitic magmas in the formation of the ~1.74 Ga Damiao Fe-Ti-P ore deposit, North China', *Contributions to Mineralogy and Petrology*, vol. 165, no. 6, pp. 1341–1362.

<sup>3</sup> PTR ASX Release 29/02/2024 Farm-in Agreement Executed – Muckanippie Project Expansion.

<sup>4</sup> South Australia. Department of Primary Industries and Resources. Open file Envelope, 12542



**Figure 2 – Magnetic Image over Western Prospect Areas – The layered nature of the Muckanippie intrusion is apparent (trend lines dashed to aid visualisation). PTR postulate specific horizons are prospective for Au-PGM and VTM style mineralisation. Note, most of layered suite is untested by drilling.**

### ‘Sturt’ Licence Area – Vanadium-Titanium-Magnetite-Phosphate Potential

In the northeastern section of the licence area (Figure 3) two discrete magnetic anomalies (Queenie Tank Prospect) were drill tested using a sonic drill method by Flinders Mines in 2008, as part of a regional exploration program for diamonds. Drill holes GM 25.1 and GM 25.2 were selectively assayed for a wide range of elements over short down hole intervals. Both drill holes record exceptional concentrations of vanadium (**up to 0.44%**), titanium (**up to 21% TiO<sub>2</sub>**) and iron (**up to 47.5% Fe**) along with highly anomalous phosphate and chrome (Table 1). Please note historical assaying of the drill holes was not complete (only selected sampling of short intervals down hole) so no assumptions can be made of average down hole mineral concentrations.

The style of mineralisation intersected in the historical drilling is indicative of Vanadiferous Titanomagnetite (VTM) deposits, which supply approximately 88% of the world’s vanadium<sup>5</sup>. These deposits are associated with layered intrusions like that identified at Muckanippie and the ores typically form stratiform horizons due to their association with the layered intrusions.

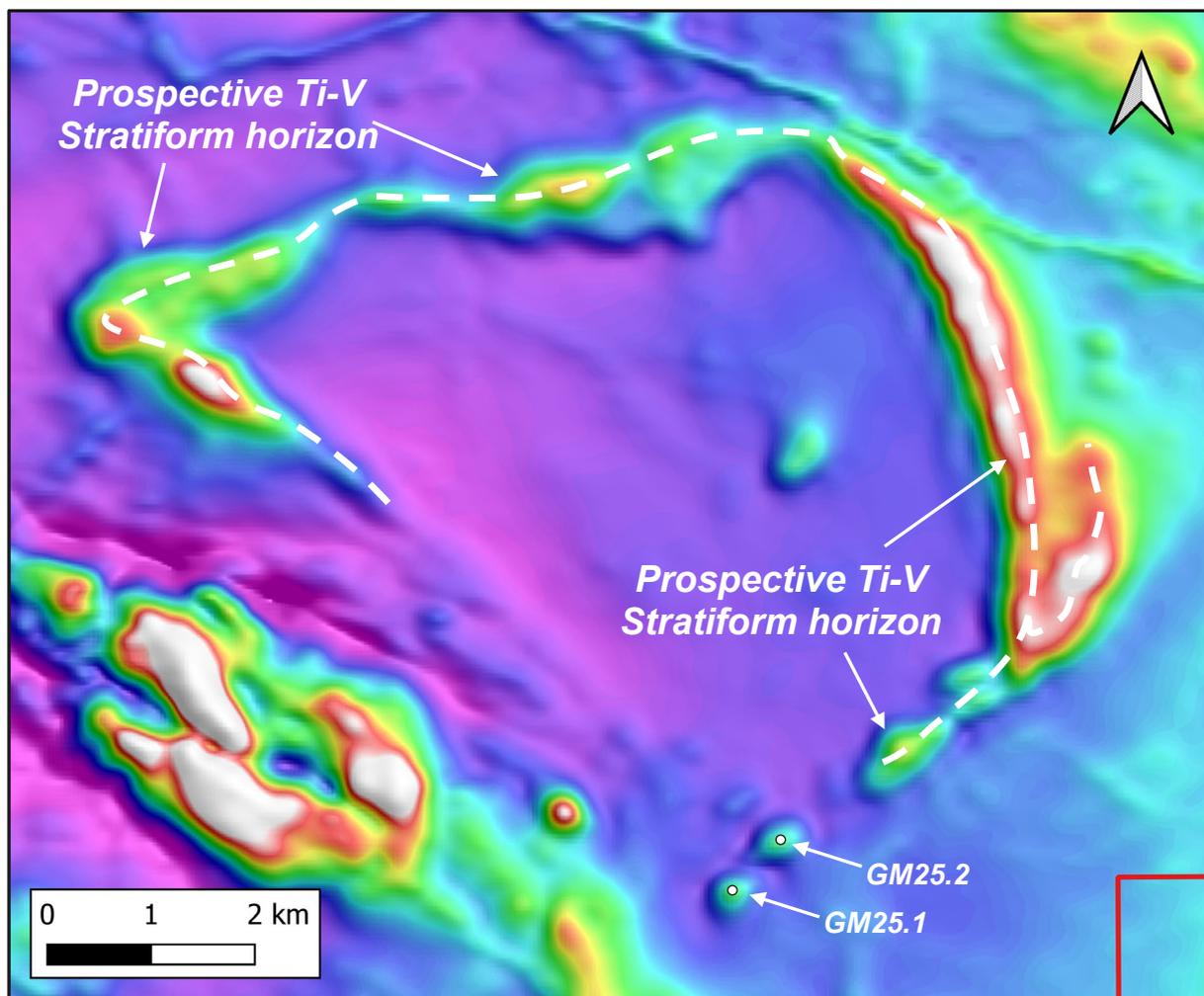
Petratherm postulate that the discrete bull eye magnetic anomalies are pulled apart segments from later faulting/shearing of the main stratiform magnetic horizon evident in the regional magnetic data

<sup>5</sup> Simandl GJ & Paradis S 2022. Vanadium as a critical material: economic geology with emphasis on market and the main deposit types. *Applied Earth Science* 131 (4): 218-236.

immediately along trend (Figure 3). This prospective magnetic horizon which extends for approximately 18 kilometres occurs under shallow cover and will be a priority for drilling follow up.

**Table 1:** Historical assay drill results from Queenie Prospect. Note the drill holes were not continuously sampled. The element assays reported show all the intervals that were sampled. Concentrations of these minerals over other intervals within the drill holes are unknown. All but 2 samples reported significant assay concentrations.

Table 1 - Queenie Tank Prospect - Vanadium -Titanium - Iron - Phosphate - Chromite assay data								
Drill Hole	From (m)	To (m)	Interval (m)	V <sub>2</sub> O <sub>5</sub> %	TiO <sub>2</sub> %	Fe %	P <sub>2</sub> O <sub>5</sub> %	Cr <sub>2</sub> O <sub>3</sub> %
GM25.1	20	21	1	0.07	0.89	<b>47.49</b>	0.29	0.06
GM25.1	24.5	25	0.5	<b>0.44</b>	<b>21.00</b>	<b>43.51</b>	0.19	<b>1.46</b>
GM25.1	45	46	1	0.06	<b>5.32</b>	15.39	1.48	0.11
GM25.1	50	51	1	0.06	<b>8.57</b>	14.27	<b>4.42</b>	0.03
GM25.1	54	55	1	0.01	0.58	2.36	0.35	0.00
GM25.1	55	56	1	0.04	<b>8.26</b>	14.34	<b>4.24</b>	0.01
GM25.2	10.5	11	0.5	0.05	<b>10.05</b>	<b>27.56</b>	0.82	0.03
GM25.2	24	24.5	0.5	0.05	<b>12.1</b>	16.65	<b>3.06</b>	0.04
GM25.2	34.8	35	0.2	<b>0.40</b>	<b>16.65</b>	<b>43.51</b>	0.09	<b>1.27</b>
GM25.2	41	41.5	0.5	<b>0.39</b>	<b>16.70</b>	<b>44.48</b>	0.07	<b>1.23</b>
GM25.2	48.5	49	0.5	<b>0.13</b>	<b>14.25</b>	17.28	0.04	0.15
GM25.2	52	52.5	0.5	<b>0.44</b>	<b>18.15</b>	<b>45.39</b>	0.04	<b>1.44</b>
GM25.2	53	53.2	0.2	0.07	3.52	17.91	0.21	0.19
GM25.2	53.7	54	0.3	0.04	1.88	<b>21.75</b>	0.14	0.11



**Figure 3 - Magnetic Image over Queenie Tank Prospect Area.** Historic drill holes (GM25.1 & GM25.2) tested bullseye magnetic bodies returning high V-Ti-Fe concentrations (see Table 1). PTR postulate magnetic bodies may represent tectonically separated segments of the sub-circular magnetic horizon shown. The magnetic horizon is interpreted as a stratiform layer within the layered intrusion and is a high priority for drill testing.

### Next Steps

The Company will complete detailed geophysical interpretations which will aid in drill target detection and ranking. Ground reconnaissance mapping and surface sampling of limited outcrop will get underway in approximately 2 weeks' time. This will be followed by native title heritage surveys over prospective areas. Following heritage survey work a targeted reconnaissance-style drill campaign is planned over favourable layered horizons and magnetic targets.

## Key Terms of the Narryer Metals Ltd and Petratherm Ltd Farm-in Agreement EL 6715

- Stage 1 - PTR to spend \$200,000 within the period of 2 years, to earn a 51% interest in the Tenement.
  - At least 50% of the total expenditure must be direct drilling costs
- Stage 2 - PTR may elect to earn a further 19% interest in the Tenement by spending \$300,000 in an additional 2 years, i.e. PTR may earn up to a 70% interest.
- On completion of Stage 2 – the Parties may either contribute to expenditure on a pro-rata basis or dilute their interest following application of standard industry formula.
- NYM may elect to offer PTR an additional 10% interest in the Tenement by PTR sole funding to the delineation of a JORC 2012 Resource at which time:
  - the parties' respective interests in the Tenement will be PTR 80% and NYM 20%; and
  - the parties may elect to either contribute to expenditure on a pro-rata basis or dilute their interest following application of a standard industry formula.

**ENDS**

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

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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.

**Table 2 – Nardoo Prospect significant historical drill intercepts<sup>6</sup>**

<b>Table 2 - Nardoo Prospect Historical Drill Intercepts</b>								
<b>Drill Hole</b>	<b>Prospect</b>	<b>From (m)</b>	<b>To (m)</b>	<b>Interval</b>	<b>Au</b>	<b>Pd</b>	<b>Ni</b>	<b>V<sub>2</sub>O<sub>5</sub></b>
		<b>(m)</b>	<b>(m)</b>	<b>(m)</b>	<b>ppb</b>	<b>ppb</b>	<b>%</b>	<b>%</b>
NEAC01	Nardoo East	10	12	2		26		0.02
NEAC03	Nardoo East	8	10	2				0.14
NEAC03	Nardoo East	18	20	2		76		0.07
NEAC06	Nardoo East	32	34	2		5		0.10
NEAC08	Nardoo East	2	14	12		4		0.11
NEAC08	Nardoo East	14	16	2		46		0.10
NEAC08	Nardoo East	28	30	2		11		0.12
NSAC04	Nardoo South	2	4	2	1	3	0.04	0.13
NSAC04	Nardoo South	50	52	2	1	7	0.12	
NSAC07	Nardoo South	2	4	2	0		0.04	0.14
NSAC13	Nardoo South	48	50	2	25	3	0.04	0.03
NSAC15	Nardoo South	2	4	2				0.11
NSAC21	Nardoo South	0	6	6	0	3	0.06	0.13
NSAC26	Nardoo South	38	40	2	9	5	0.12	

**Table 3 – Duke Prospect significant historical drill intercepts<sup>7</sup>**

<b>Table 3 - Duke Prospect Historical Drill Intercepts</b>							
<b>Drill Hole</b>	<b>Prospect</b>	<b>From (m)</b>	<b>To (m)</b>	<b>Interval</b>	<b>Au</b>	<b>Pd</b>	<b>V<sub>2</sub>O<sub>5</sub></b>
		<b>(m)</b>	<b>(m)</b>	<b>(m)</b>	<b>ppb</b>	<b>ppb</b>	<b>%</b>
DAC03	Duke	2	4	2	0.8	6	0.14
DAC05	Duke	30	32	2	14.4	3	
DAC05	Duke	32	34	2	543	5	
DAC05	Duke	34	36	2	20.8	2	
DAC05	Duke	36	38	2	17.9	2	
DAC06	Duke	0	2	2	4.2	7	0.19
DAC06	Duke	2	4	2	1.1	2	0.23
DAC07	Duke	0	2	2		29	
DAC07	Duke	4	6	2		26	
DAC08	Duke	14	16	2			0.10
DAC08	Duke	24	26	2			0.12
DAC08	Duke	42	43	1	82.7		
DAC10	Duke	16	18	2		39	0.11
DAC10	Duke	18	20	2		77	
DAC10	Duke	20	22	2		37	

<sup>6</sup> Significant cut off values used - > 25ppb Au or >25 ppb Pd or >0.1% Ni or >0.1% V<sub>2</sub>O<sub>5</sub>

<sup>7</sup> Cut off values used - Au > 14 ppb or > 25 ppb Pd or > 0.1% V<sub>2</sub>O<sub>5</sub>.

**Table 4 – Sturt Project Drill Hole Details**

Hole ID	Easting GDA94 Z53	Northing GDA94 Z53	RL (m)	Dip Deg	Azimuth Deg	Hole Depth (m)
NEAC01	413250	6669447	178	-90	0	41
NEAC03	413352	6669451	180	-90	0	27
NEAC06	413504	6669451	181	-90	0	49
NEAC08	413594	6669448	181	-90	0	37
NSAC04	412347	6670002	180	-90	0	61
NSAC07	412502	6670000	179	-90	0	39
NSAC13	412499	6670199	178	-90	0	50
NSAC15	412600	6670198	177	-90	0	60
NSAC21	412454	6669799	181	-90	0	43
NSAC26	412507	6667620	180	-90	0	71
DAC03	411301	6664997	187	-90	0	45
DAC05	411403	6665000	187	-90	0	49
DAC06	411453	6665000	187	-90	0	30
DAC07	411503	6665003	187	-90	0	27
DAC08	411552	6665001	186	-90	0	43
DAC10	411740	6665000	185	-90	0	39
GM25.1	432171	6671818	NA	-90	0	56
GM25.2	432622	6672311	NA	-90	0	54

## 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 2024 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 rare earths over large areas at several prospect sites. The rare earths are associated with a major intrusive complex, which has been found to be highly prospective for other critical minerals including Gold, Platinum Group Elements, Vanadium, Chrome and Titanium. This is an early-stage Greenfields project with exceptional upside potential.



*PTR's Project Locations in South Australia*

EL6815, EL6855, EL6873 & EL6715 (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>	<ul style="list-style-type: none"> <li>No sampling undertaken.</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> <li>No drilling has been undertaken by Petratherm, although limited historical drilling and sampling exists.</li> <li>Mineralised intersections were encountered but have not been reported as true widths due to insufficient data spacing and orientation relationship knowledge.</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 diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).</li> </ul>	<ul style="list-style-type: none"> <li>Historic exploration drilling reported includes RC.</li> <li>Additional details from historic drilling are unknown.</li> </ul>
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	<ul style="list-style-type: none"> <li>No drilling has been undertaken by Petratherm although limited historical drilling exists.</li> <li>Additional details from historic drilling are unknown.</li> </ul>
<b>Logging</b>	<ul style="list-style-type: none"> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul style="list-style-type: none"> <li>No drilling has been undertaken by Petratherm although limited historical drilling exists.</li> <li>Additional details from historic drilling are unknown.</li> </ul>
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> <li>Details of sampling techniques from historic public data is unknown.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</li> </ul>	<ul style="list-style-type: none"> <li>No drilling has been undertaken by Petratherm although limited historical drilling exists.</li> <li>Additional details from historic drilling are unknown.</li> </ul>
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul style="list-style-type: none"> <li>No drilling has been undertaken by Petratherm although limited historical drilling exists. Additional details from historic drilling are unknown.</li> </ul>
<b>Location of data points</b>	<ul style="list-style-type: none"> <li>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul style="list-style-type: none"> <li>All maps and locations are in UTM grid (GDA94 Z53). Drill hole positions have been reproduced from SA Government open file databases and the accuracy of this data is unknown.</li> </ul>
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <li>Data spacing for reporting of Exploration Results.</li> <li>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.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul style="list-style-type: none"> <li>No drilling or sampling has been undertaken by Petratherm although historical drilling exists.</li> <li>Data spacing is insufficient to establish the degree of geological and grade continuity required for a Mineral Resource estimation.</li> </ul>
<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>No drilling has been undertaken by Petratherm although limited historical drilling exists.</li> <li>The relationship between the drilling orientation and the orientation of key mineralised structures has not been confirmed.</li> </ul>

Criteria	JORC Code explanation	Commentary
<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>No sampling has been undertaken by Petratherm although limited historic sampling exists.</li> <li>Additional details from historic drilling are unknown.</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>No sampling has been undertaken by Petratherm although limited historic sampling exists.</li> <li>Additional details from historic drilling are unknown.</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 on 12/08/2022 for a period of 6 years.</li> <li>EL 6855 was granted on 18/10/22 for a period of 6 years.</li> <li>EL6873 was granted on 18/11/2022 for a period of 6 years.</li> <li>EL6715 was granted on 06/04/2022 for a period of 6 years.</li> <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>
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>Previous exploration work includes;</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></li> </ul>

Criteria	JORC Code explanation	Commentary
		Open file records indicate 338 RAB / Air core, 2 sonic & 9 RC reconnaissance and prospect scale holes drilled over Project Group.
<b>Geology</b>	<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 in paleochannels and in the weathering zone.</li> </ul>
<b>Drill hole Information</b>	<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>• No drilling has been undertaken by Petratherm although regional historical prospect drilling exists.</li> <li>• Details from historic drilling pertaining to the announcement are presented in Tables 1,2,3 &amp; 4.</li> <li>• Data sourced from SA Government open file databases and the accuracy of this data is unknown.</li> </ul>
<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>• No drilling has been undertaken by Petratherm.</li> <li>• No assumptions of metal equivalent values were made or used.</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>• No drilling has been undertaken by Petratherm.</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</i></li> </ul>	<ul style="list-style-type: none"> <li>• No drilling has been undertaken by Petratherm.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>practiced to avoid misleading reporting of Exploration Results.</i>	
<b><i>Other substantive exploration data</i></b>	<ul style="list-style-type: none"> <li><i>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</i></li> </ul>	<ul style="list-style-type: none"> <li>No other substantive exploration data has been collected by Petratherm.</li> </ul>
<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 including rock chip and soil sampling, geophysical surveying, and drilling.</li> </ul>