18 September 2023

Simple Beneficiation Process Significantly Increases Rare Earth Grades at Meteor

Highlights

- **Screening analysis work undertaken by ANSTO produced a significant increase in Rare Earth Elements (REE) grades using low-cost sieve separation processing.**
- **Rare earth grade increased by up to 79%, whilst retaining over 75% of both TREOs and MREOs after a 55% sample mass reduction via -38µm fraction, from the shallow 'gypsum domain' samples.**
- **22 samples from the Meteor REE Prospect returned an average grade of 2011ppm TREO (increased from 1406ppm), and 509ppm MREO (increased from 357ppm) using a -38µm sieved fraction.**

Petratherm Limited (**ASX: PTR**) ("**PTR"** or "**the Company"**) is pleased to report results from beneficiation tests, as part of an ongoing metallurgical program, from its Meteor Rare Earth Prospect, located within the Company's Comet Project in the Northern Gawler Craton of South Australia.

The Meteor Prospect is the most advanced of the three Rare Earth prospects that Petratherm has identified on the Comet Project (Figure 1) with shallow drill intercepts of >500ppm TREOs spanning an area of ~1km x 2km and remaining open in several directions.

Petratherm's Chief Executive Officer, Peter Reid commented:

"The size screening program has led to a significant increase in grades at Meteor, which we anticipate will greatly improve the overall project economics. Removing a significant amount of waste in a simple initial step is expected to reduce the costs for subsequent stages as there is less material to be treated.

"It was extremely encouraging that the best results from this program were obtained from the shallowest part of the defined mineralisation, which we hope could give any future development a significant kick start.

"We will now turn to initiating the next phase of metallurgical testwork as well as continuing to investigate the other exciting prospects on the Comet Project."

Findings of an extensive beneficiation trial at Meteor indicate a simple sieving process could produce a Rare Earth Elements (**REE**) ore concentrate with a grade of approximately 2000ppm Total Rare Earth Oxide (**TREO**) (including >500ppm Magnet Rare Earth Oxide (**MREO**)), removing low grade material and providing >60% recovery of REEs while also reducing feedstock volume for further leach processing by approximately 57%. Sample results are collated in Table 1.

Using the fine fraction passing through a 38µm sieve, **an average initial head grade of 1406ppm TREO was upgraded to 2011ppm TREO. A similar result was obtained for the MREO component, the average initial head grade increasing from 357ppm to 509ppm**. Overall, the average head grade improved by 43%, but within this trend there are some outstanding upgrades of >100% (maximum 155%). In the initial testwork, only 36% of the samples submitted analysed >1500ppm, however following beneficiation, this increased to 77% of samples.

This is best illustrated in Figure 4, an east-west cross-sectional view of the REE mineralised zone at Meteor (refer Figure 2 & Figure 3 for location). Beneficiation results here have been composited to compare with previous assay data and show that all composited zones, ranging from 9-12m thick, have been upgraded to >2000ppm, when previous composites ranged from 1111ppm to 1880ppm TREOs. It is important to note that there is significant mineralisation within this section that was not part of the beneficiation trial, and given the similarity of the geology, PTR would expect a similar upgrade in these samples.

On the beneficiated samples from this drill section, 67% of TREO is captured by the -38µm fraction, producing a TREO concentrate of 2320ppm and a 65% reduction in sample volume. MREO results average 590ppm (25.4% of TREOs).

Of the 22 samples submitted for testwork (using a 500ppm TREO cut-off), eight came from a gypsum-rich domain (Table 2), which is described in more detail below. This gypsum domain is the shallowest part of the REE mineralised body at Meteor (see Figure 4) generally starting at 3-6 metres below surface and ranging in thickness from three to nine metres. Beneficiation results from this shallow domain gave spectacular results as most of the non-mineralised gypsum was removed to waste (Table 2). For this geological domain, **the -38µm fraction averaged 2018ppm TREO and 529 MREO, improving on the original head grades of 1127ppm TREO and 294ppm MREO by almost 80%.** Importantly, most of the coarse waste material is unmineralised and even though there was a **55% mass reduction, over 75% of both TREOs and MREOS are retained in the fine material**.

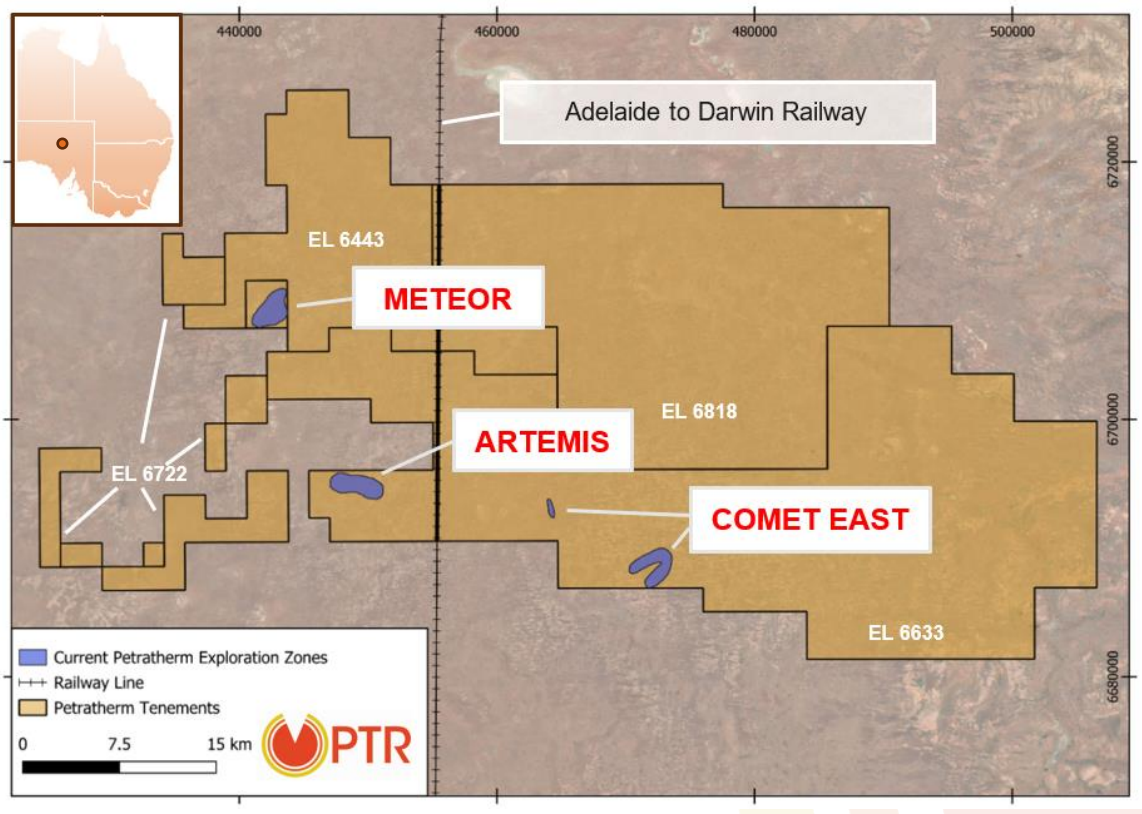


***Figure 1** – Petratherm's 100% owned Comet Project Tenement Holdings and Rare Earth Prospects.*

About the Size by Fraction Processing

Two sampling transects were undertaken, one north-south and one east-west across the central portion of the Meteor Prospect (Figure 2). Samples were selected from consecutive adjacent drill holes in order to be fully representative of typical REE ore at this prospect. A total of 22 samples (selected using a 500ppm TREO cut-off) representing 99 metres of drilling from ten drillholes completed in 2022 were studied. The study generated screenings using 5 fractions (+150 µm, 75-150 µm, 38-75 µm, 20-38 µm and -20 µm) to determine optimum mesh size. Tables of individual results using the -38 µm fraction (which returned the best overall results) are presented in Tables 1 & 2, and drill collar locations are presented in Table 3.

The mineralisation at Meteor is characterised by three distinct geological zones, an upper clay zone with abundant gypsum layers (gypsum comprises 20-50% of total volume typically), a middle clay only zone and a lower saprock zone where there is relic rock textures and significant breakdown of basement rock to clays. For the size by fraction processing, individual holes were composited based on these three mineralisation zones in each hole to determine optimum screening parameters for each zone. The screening study was performed by the Australian Nuclear Science and Technology Organisation (**ANTSO**), a leader in REE processing.

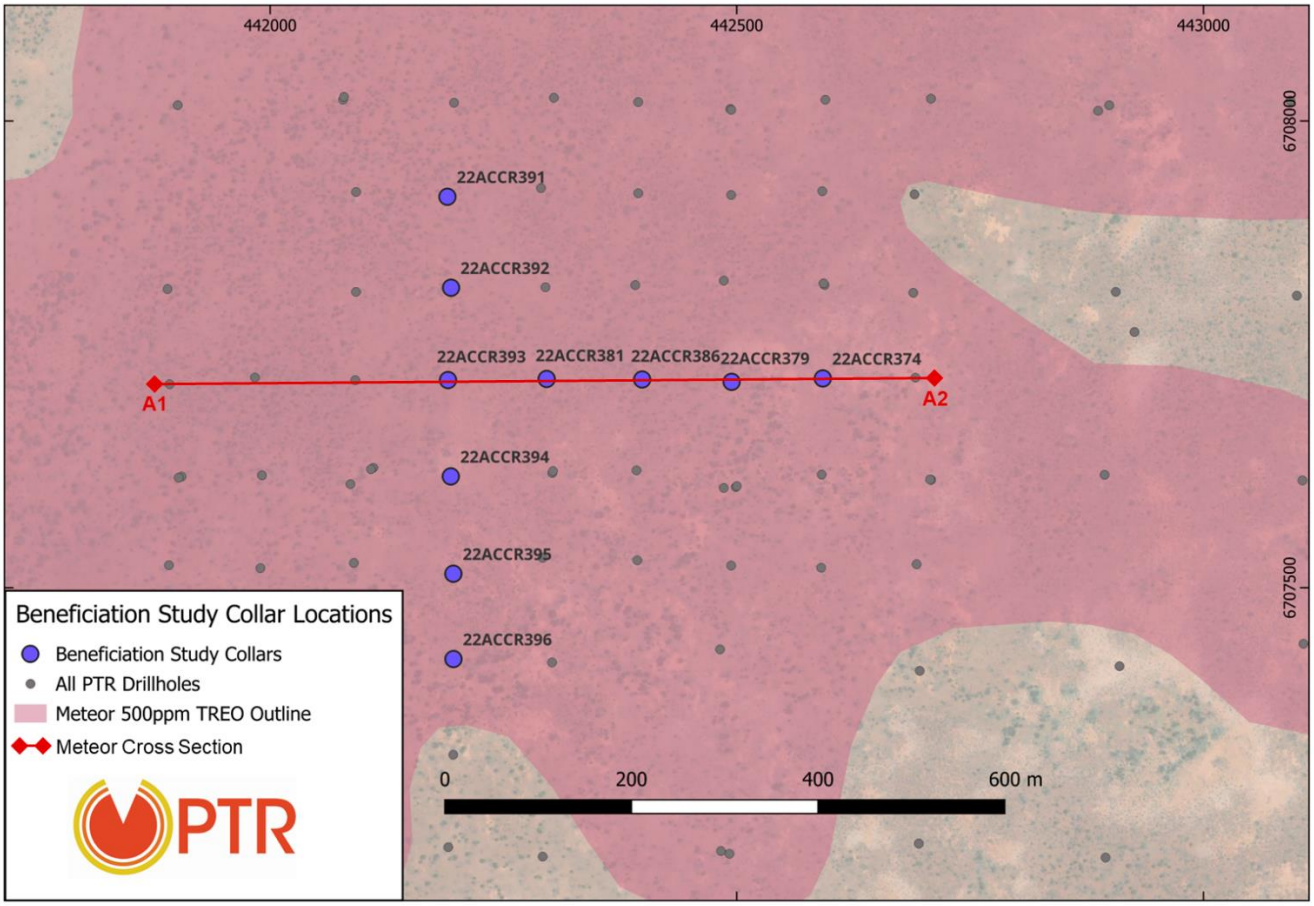


***Figure 2** – Location of beneficiation samples.*

***Figure 3** – Location of beneficiation samples on cross section A1- A2* [1]

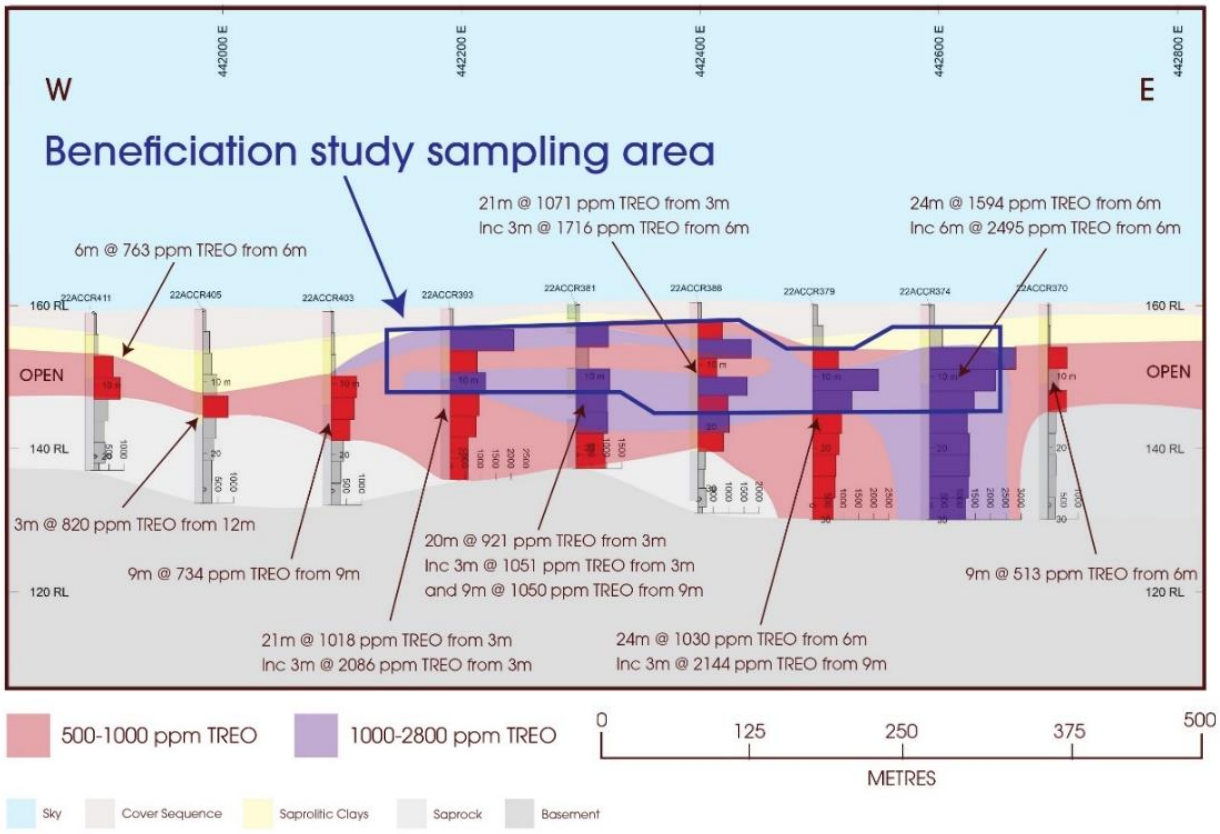
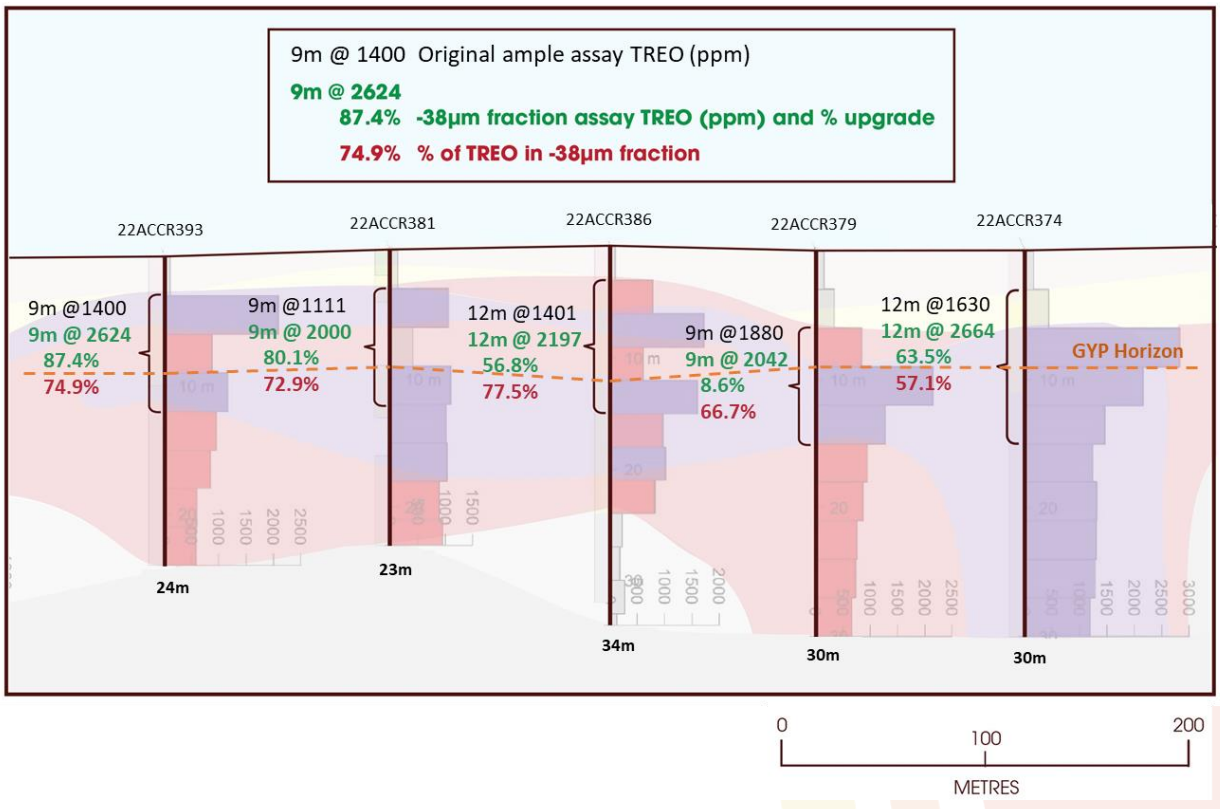


***Figure 4** – -38µm fraction results on cross section A1- A2 compared to previous drilling.*



[1] PTR ASX Release 15/02/2023 – Meteor Prospect – Exceptional Rare Earth Drill Intersections

Next Steps

A leach recovery study program will now commence using the beneficiated Meteor samples. This work will trial different leachates, in order to determine optimum parameters. In addition to this work, initial leach trials will be undertaken from representative samples collected from the Artemis and Comet East Prospect Areas.

To date, less than 10% of the prospective areas of the Project have been explored and significant potential for new rare earth occurrences and high grades remain. As such, in parallel to ore studies, the Company maintains a strong exploration focus and intends to undertake further exploratory drilling currently scheduled to begin in October. Details of the future drilling program will be provided once finalised.

***Table 1** – Meteor Prospect - Size by Fraction Summary Results*

Sample ID	Drill hole	From (m)	To (m)	Thickness (m)	Domain	TREO Head Assay (ppm)	MREO Head Assay (ppm)	-38µm fraction results						
								Mass (%)	TREO Assay (ppm)	TREO % increase	% TREO in fraction	MREO Assay (ppm)	MREO % increase	% MREO in fraction
PTR-0484	22ACCR374	3	9	6	GYP	1218	320	46.3	2010	65	75%	520	63	75%
PTR-0485		9	12	3	CLYS	2411	637	34.4	3381	40	51%	859	35	50%
PTR-0486		12	15	3	SAPROCK	1672	402	15.0	3256	95	28%	756	88	28%
PTR-0487	22ACCR379	6	9	3	GYP	1035	267	42.9	1927	86	79%	493	85	79%
PTR-0488		9	12	3	CLYS	3002	776	64.3	2590	-14	61%	664	-14	61%
PTR-0489		12	15	3	SAPROCK	1604	370	39.5	1610	0	42%	340	-8	39%
PTR-0490	22ACCR381	3	9	6	GYP	985	262	44.5	2019	105	85%	530	103	85%
PTR-0491		9	12	3	SAPROCK	1362	352	31.2	1962	44	48%	508	44	49%
PTR-0492	22ACCR386	3	12	9	GYP	1315	361	52.1	2245	71	88%	611	69	89%
PTR-0493		12	15	3	SAPROCK	1658	383	37.9	2054	24	46%	434	13	43%
PTR-0495/6	22ACCR391	9	21	12	CLYS	869	223	85.1	870	0	92%	223	0	92%
PTR-0500	22ACCR392	9	12	3	GYP	510	123	19.3	929	82	36%	220	79	36%
PTR-0499		12	15	3	CLYS	1641	393	79.6	1644	0	82%	393	0	84%
PTR-1084	22ACCR393	3	9	6	GYP	1483	387	41.4	2968	100	80%	779	101	81%
PTR-1085		9	12	3	SAPROCK	1236	308	41.5	1936	57	64%	485	58	64%
PTR-1086	22ACCR394	12	15	3	CLYS	938	251	40.0	1383	47	60%	374	49	61%
PTR-1088	22ACCR395	6	9	3	GYP	1144	288	65.8	1690	48	92%	432	50	94%
PTR-1089		9	15	6	CLYS	2124	539	51.5	2771	30	70%	716	33	71%
PTR-1090		15	18	3	SAPROCK	517	132	12.5	1318	155	31%	342	158	32%
PTR-1091	22ACCR396	3	9	6	GYP	1327	343	44.3	2354	77	73%	644	88	77%
PTR-1092		9	15	6	CLYS	1747	457	36.6	1450	-17	31%	380	-17	31%
PTR-1093		15	18	3	SAPROCK	1140	287	18.4	1888	66	29%	483	68	30%
Average						1406	357	42.9	2011	53	61%	509	52	61%

***Table 2** – Meteor Prospect – Gypsum Horizon (Upper Zone) - Size by Fraction Summary Results*

Drill hole	Sample ID	From (m)	To (m)	Thickness (m)	TREO Head Assay (ppm)	MREO Head Assay (ppm)	-38µm fraction results						
							Mass (%)	TREO Assay (ppm)	TREO % increase	% TREO in fraction	MREO Assay (ppm)	MREO % increase	% MREO in fraction
22ACCR374	**PTR-0484**	3.0	9.0	6.0	**1218**	320	46.3	**2010**	**65.0**	75%	**520**	**62.8**	75%
22ACCR379	**PTR-0487**	6.0	9.0	3.0	**1035**	267	42.9	**1927**	**86.2**	79%	**493**	**85.1**	79%
22ACCR381	**PTR-0490**	3.0	9.0	6.0	**985**	262	44.5	**2019**	**105.0**	85%	**530**	**102.8**	85%
22ACCR386	**PTR-0492**	3.0	12.0	9.0	**1315**	361	52.1	**2245**	**70.7**	88%	**611**	**69.5**	89%
22ACCR392	**PTR-0500**	9.0	12.0	3.0	**510**	123	19.3	**929**	**82.0**	36%	**220**	**79.1**	36%
22ACCR393	**PTR-1084**	3.0	9.0	6.0	**1483**	387	41.4	**2968**	**100.2**	80%	**779**	**101.2**	81%
22ACCR395	**PTR-1088**	6.0	9.0	3.0	**1144**	288	65.8	**1690**	**47.8**	**92%**	**432**	**50.0**	94%
22ACCR396	**PTR-1091**	3.0	9.0	6.0	**1327**	343	44.3	**2354**	**77.3**	73%	**644**	**87.9**	77%
			Average	**5.3**	**1127**	**294**	**44.6**	**2018**	**79.3**	**76%**	**529**	**79.8**	**77%**

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 3** – Meteor Prospect – Size by Fraction Drill Hole Collars*

Hole ID	Easting MGA94 Z53	Northing MGA94 Z53	RL metres	Dip Deg.	Azimuth Deg.	EOH Depth metres
22ACCR374	442592	6707724	160	-90	0	30
22ACCR379	442494	6707721	160	-90	0	30
22ACCR381	442296	6707724	160	-90	0	23
22ACCR386	442399	6707723	160	-90	0	34
22ACCR391	442190	6707919	160	-90	0	29
22ACCR392	442194	6707821	160	-90	0	20
22ACCR393	442191	6707723	160	-90	0	24
22ACCR394	442194	6707619	160	-90	0	24
22ACCR395	442196	6707515	159	-90	0	30
22ACCR396	442196	6707424	159	-90	0	27

About Petratherm Limited

Petratherm Limited (ASX: PTR) is a critical minerals explorer focused on the discovery of world-class copper-gold and rare earth deposits. The Company has several advanced drill ready projects in the Olympic Copper-Gold Domain of South Australia. PTR recently announced the discovery of significant concentrations of rare earths hosted in clays in the Northern Gawler Craton of South Australia which are undergoing further drill testing.

Exploration drilling at the Comet Project Area has delineated two major REE occurrences. The Meteor and Artemis REE prospects both occur at very shallow depths, include high-grade blankets of mineralisation showing good lateral extent and ore thickness. Less than 10% of the project area has been explored for REE's and a systematic program of advancement of current prospects, testing of new areas and metallurgical recovery test work is ongoing.

PTR has several exciting copper-gold targets at its Mabel Creek and Woomera Projects located within the Olympic Copper-Gold Tend. Targeting work has defined several compelling Tier 1 Copper-Gold targets and PTR anticipates drill testing of targets will begin from late in 2023 calendar period.

PTR's Project Locations in South Australia

EL 6443 & EL 6633 (Comet 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 (eg 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 (eg '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 (eg submarine nodules) may warrant disclosure of detailed information.*	• A total of 161 air core drill holes have been drilled at the Meteor Prospect Area. Drill spacings are arranged in a grid on either 100 metre or 200 metre spacing. • Samples collected for size by fraction analysis comprised composite intervals ranging from 3 metres to 12 metres from one metre drill samples stored individually in green bags. • To ensure sample representivity across the mineralisation, composite samples were collected from one west-east drill traverse and one north south traverse over main mineralised zone (see Figure 2). Composite samples from each hole were further broken down into an upper gypsum/clay rich zone, a middle clay zone and a lower sap rock zone (see Table 1 in report for sample details). • Composite samples were collected using a "spear" tool to collect representative samples from green bags. Composite samples were an average weight of 1.6 kg. • A GPS was used to record the location of each drill hole. The accuracy of this GPS is +/- 3 metres.
Drilling techniques	• *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (eg 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.).*	• Drill method consisted of Air core. Hole diameters are 78 mm.

Criteria	JORC Code explanation	Commentary
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 material.*	• 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.
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. • All drillholes were geologically logged.
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. • It is considered representative samples were collected. • Laboratory sample preparation includes drying and pulverizing of submitted sample to target of p80 at 75 um. • Duplicate samples have been introduced into the sample stream by the Company. • Standard samples were introduced into the sample stream by the Company, and 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 (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie*	• Assayed for REE elements by ALS Geochemistry Laboratory, Brisbane. • Samples were analysed by the following. Lithium tetraborate fusion assayed by Inductively Coupled Plasma Mass Spectrometry (ICP-MS) for rare earths. • Detection limits in ppm: La (0.1) Ce (0.1) Pr (0.02) Nd (0.1) Sm (0.03) Eu (0.02) Gd (0.05) Tb (0.01) Dy (0.05) Ho (0.01) Er

Criteria	JORC Code explanation	Commentary
	lack of bias) and precision have been established.	(0.03) Tm (0.01) Yb (0.03) Lu (0.01) Y (0.1) • Results presented are considered to represent a total digestion. • For laboratory samples, the Company has introduced QA/QC samples at a ratio of one QA/QC sample for every 20 drill samples. The laboratory introduces additional QA/QC samples (blanks, standards, checks). • The procedure used by ANTSO for size by grade analysis involved a series of wet and dry screening to generate an appropriately sized fraction for assays. A total of 5 fractions for analysis were undertaken - +150 µm, 75-150 µm, 38-75 µm, 20-38 µm and -20 µm.
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.*	• The Company has queried initial drill assays prior to the size fraction analysis to verify the accuracy of the results. • No twinned holes were drilled in the program. • Rare earth element analyses were originally reported in elemental form but have been converted to relevant oxide concentrations as in the industry standard. • TREO = La_2O_3 + CeO_2 + Pr_6O_{11} + Nd_2O_3 +Sm_2O_3 + Eu_2O_3 + Gd_2O_3 + Tb_4O_7 + Dy_2O_3 + Ho_2O_3 + Er_2O_3 + Tm_2O_3 + Yb_2O_3 + Lu_2O_3 + Y_2O_3 • MREO = Pr_6O_{11} + Nd_2O_3 + Dy_2O_3 + Tb_4O_7

Criteria	JORC Code explanation	Commentary
		<table><tr><th>Element Name</th><th>Element Oxide</th><th>Oxide Factor</th></tr><tr><td>Ce</td><td>CeO2</td><td>1.2284</td></tr><tr><td>Dy</td><td>Dy2O3</td><td>1.1477</td></tr><tr><td>Er</td><td>Er2O3</td><td>1.1435</td></tr><tr><td>Eu</td><td>Eu2O3</td><td>1.1579</td></tr><tr><td>Gd</td><td>Gd2O3</td><td>1.1526</td></tr><tr><td>Ho</td><td>Ho2O3</td><td>1.1455</td></tr><tr><td>La</td><td>La2O3</td><td>1.1728</td></tr><tr><td>Lu</td><td>Lu2O3</td><td>1.1371</td></tr><tr><td>Nd</td><td>Nd2O3</td><td>1.1664</td></tr><tr><td>Pr</td><td>Pr6O11</td><td>1.2082</td></tr><tr><td>Sm</td><td>Sm2O3</td><td>1.1596</td></tr><tr><td>Tb</td><td>Tb4O7</td><td>1.1762</td></tr><tr><td>Tm</td><td>Tm2O3</td><td>1.1421</td></tr><tr><td>Y</td><td>Y2O3</td><td>1.2699</td></tr></table>
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 ± 3 metres and a vertical accuracy ±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.*	• Drill holes used in the size fraction analysis were completed every 100 m along 2 orthogonal drill traverses over the central mineralised area. • The data spacing and distribution is insufficient to establish the degree of geological and grade continuity appropriate for a for a JORC mineral resource.
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.*	• The mineralisation is horizontal in basic form. As such, no sampling bias is introduced by the drill hole orientation.
Sample security	• *The measures taken to ensure sample security.*	• Company staff and contractors collected laboratory samples. • Samples submitted were delivered to ANTSO by courier. ANSTO in turn managed assay work with ALS once size fractions were collected.

Criteria	JORC Code explanation	Commentary
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• Head assay grades for size fraction analysis closely match original drill assays indicating sampling techniques and data are accurate.

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.*	• EL 6443 Comet and EL 6633 Gina are located 80km south south-west of Coober Pedy overlapping Ingomar and Commonwealth Hill Pastoral Stations. • The tenements are located within the Woomera Prohibited Area (Amber Zone) and the Far North Prescribed Wells Area. • Native Title Holder: SCD2011/001 Antakirinja Matu-Yankunytjatjara. • The tenement is 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:** Magnetics and Gravity. **Exploration Drilling:** 202 Mechanised Auger, 103 Air core, 9 Rotary Air, 27 Reverse Circulation & 3 Diamond.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The tenements are within the Northern Gawler Craton, South Australia • Petratherm are exploring for REEs and gold. • This release refers to REE mineralisation hosted in clays within the weathered saprolite profile.

Criteria	JORC Code explanation	Commentary

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.*
		• The type of drilling performed comprised vertical shallow holes to an approximate hole depth of 27 metres over the study area.
		• All drillhole information pertaining to results within this release are tabulated in Table's 1, 2 and 3 in the main body of the release.

Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg 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 ANTSO and ALS Laboratories. • All results above 500 ppm TREO are reported in Table 1. • A cut off value of 500 ppm TREO was used and values below 500pm are only included when said interval of no more than 3 metres is situated between a continuous run of samples with greater than 500 ppm + TREO. • No assumptions of metal equivalent values were made or used.
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 (eg 'down hole length, true width not known').*	• Drill holes were drilled vertically at -90 degrees. Any relationship between mineralisation widths and intercepts lengths is not known. • TREO values reported are down hole length.
Diagrams	• *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*	• See Figs 2,3 & 4 in the main body of release attached. • Representative cross-sections have been produced.

Criteria	JORC Code explanation	Commentary
	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.*	• All results from the drill holes used in the size by fraction study above a cut off 500 ppm TREO are reported in the Table 1 of Significant Intercepts. • All sample locations where REE grades are below 500 ppm TREO are also shown in Figure 2 in the release. • All collar locations used in the study are reported in Table 3 of the release
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.*	• See attached ASX Release. Geological observations are included in that report.
Further work	• *The nature and scale of planned further work (eg 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.*	• See attached release.