



PETRATHERM LIMITED

ACN 106 806 884

ASX: PTR

www.petratherm.com.au
admin@petratherm.com.au

ASX ANNOUNCEMENT

18 April 2023

Comet Rare Earth Project – Drilling Update

HIGHLIGHTS

- Aircore drilling at the Artemis REE Prospect and over several other new high priority Rare Earth (REE) Targets scheduled to commence mid-May.
- Artemis REE Prospect contains coherent grades >1000 ppm Total Rare Earth Oxide (TREO) over substantial thicknesses (up to 32 metres). Artemis covers an area of approximately 1.5 kilometres by 800 metres and is open laterally in all directions.
- Petrological work at the advanced Meteor REE Prospect, 15km north of Artemis, has identified layered mafic rocks below the clay weathering zone highly enriched in rare earth bearing apatite.
- Several discrete mafic complexes occur east of Meteor and upcoming exploration traverse drilling across the intrusions will be undertaken to test for REEs.
- The Comet REE Project area offers excellent logistics for potential future development. It is close to the major rural/mining centre of Coober Pedy and situated on pastoral lease country, with only 1 lease holder at Meteor and Artemis. The Adelaide to Darwin railway line runs through the centre of the Project and the Company has good relations with the Traditional Owners.
- Significant up-side potential with 90% of the project area not yet explored for REE mineralisation.

INTRODUCTION

Petratherm Limited (ASX: **PTR**) is pleased to announce drilling exploration operations are scheduled to resume from mid-May at the Comet REE Project in the Northern Gawler Craton of South Australia.

Drilling to date has delineated two major REE Prospects, Meteor and Artemis, hosted in the clay weathering profile. They occur at very shallow depths, include high-grade blankets of mineralisation, and show good lateral extent and ore thickness (Figures 1 & 2).

Meteor REE Prospect – To date 170 drillholes, totalling 4,420 metres have been drilled at Meteor. Mineralisation typically starts from 3 metres depth with substantial intersections up to 38 metres of thickness, averaging 11.5 metres thickness over the Prospect Area. As currently defined, the REE mineralisation spans an approximate 2 kilometre by 1 kilometre area and remains open in several directions. High-value Magnet Rare Earth Oxide (MREO) up to 746 ppm have been recorded and average 242 ppm MREO (26% of TREO's). Due to the shallow nature of mineralisation, there is potential for low-cost favourable free dig mining methods. PTR has begun metallurgical leach optimisation trials to test the feasibility of a using simple heap leach extraction process¹.

¹ 15/2/2023 PTR ASX Release - Meteor Prospect - Exceptional Rare Earth Drill Intersections

Artemis REE Prospect – The Artemis Prospect is characterised by a high-grade blanket of mineralisation over 1,000 ppm Total Rare Earth Oxide (TREO) hosted within the clay weathering profile, extending over a 1.5 kilometre by 800 metre area. Mineralisation starts at shallow depths (typically 8 - 15 metres) and high-grade drill intersections range from 12 to 32 metres in thickness. High-value MREO intercepts up to 609 ppm are recorded, and across the prospect the average MREO drill intercept grade is 221 ppm². The mineralised area remains open laterally in all directions (Figure 2).

The Comet REE Project Area (1,915 km²) is significantly under-explored with less than 10% of the Project area having undergone systematic exploration for REE's². Consequently, the next round of drilling will be exploration-focused and centred on two key activities - testing areas around the Artemis REE Prospect mineralisation (which currently remains open laterally in all directions), and secondly testing of several mafic intrusive complexes east of the Meteor REE Prospect, considered highly prospective for new REE discoveries.

Recently completed petrological work at the advanced Meteor REE Prospect has confirmed an intrusive layered mafic rock sequence occurs below the REE clay mineralisation and horizons within this complex are enriched in rare earth bearing apatite providing a source for the rare earths. Globally, layered mafic intrusions are a known significant source of rare earths (i.e. Kola Alkaline Province, Russia³).

The Company will conduct a series of drill traverses over several discrete layered complexes it has identified to test for REE mineralised horizons. These complexes are large and the initial drilling will test a portion of the systems with follow-up drilling dependent on results.

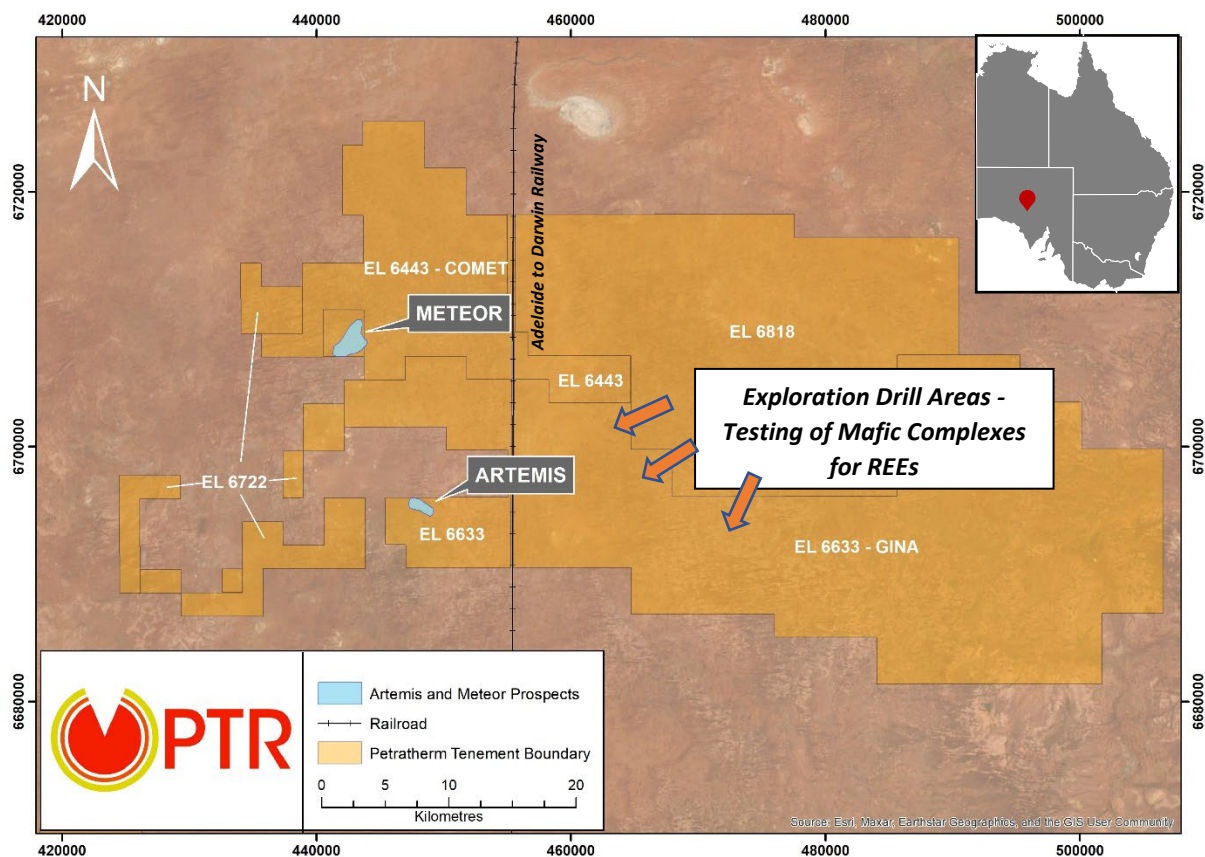


Figure 1 Artemis and Meteor Rare Earth Prospects, Located on Pastoral Country close to a Major Railway. Layered mafic Intrusions under shallow cover will be drill tested for REE.

² 24/02/2023 PTR ASX Release - Drilling Identifies Major New Rare Earth Prospect

³ Zaitsev et al, (2014), Rare earth elements in phoscorites and carbonatites of the Devonian Kola Alkaline Province, Russia. *Ore Geology Reviews*, Volume 61, Pages 204-225.

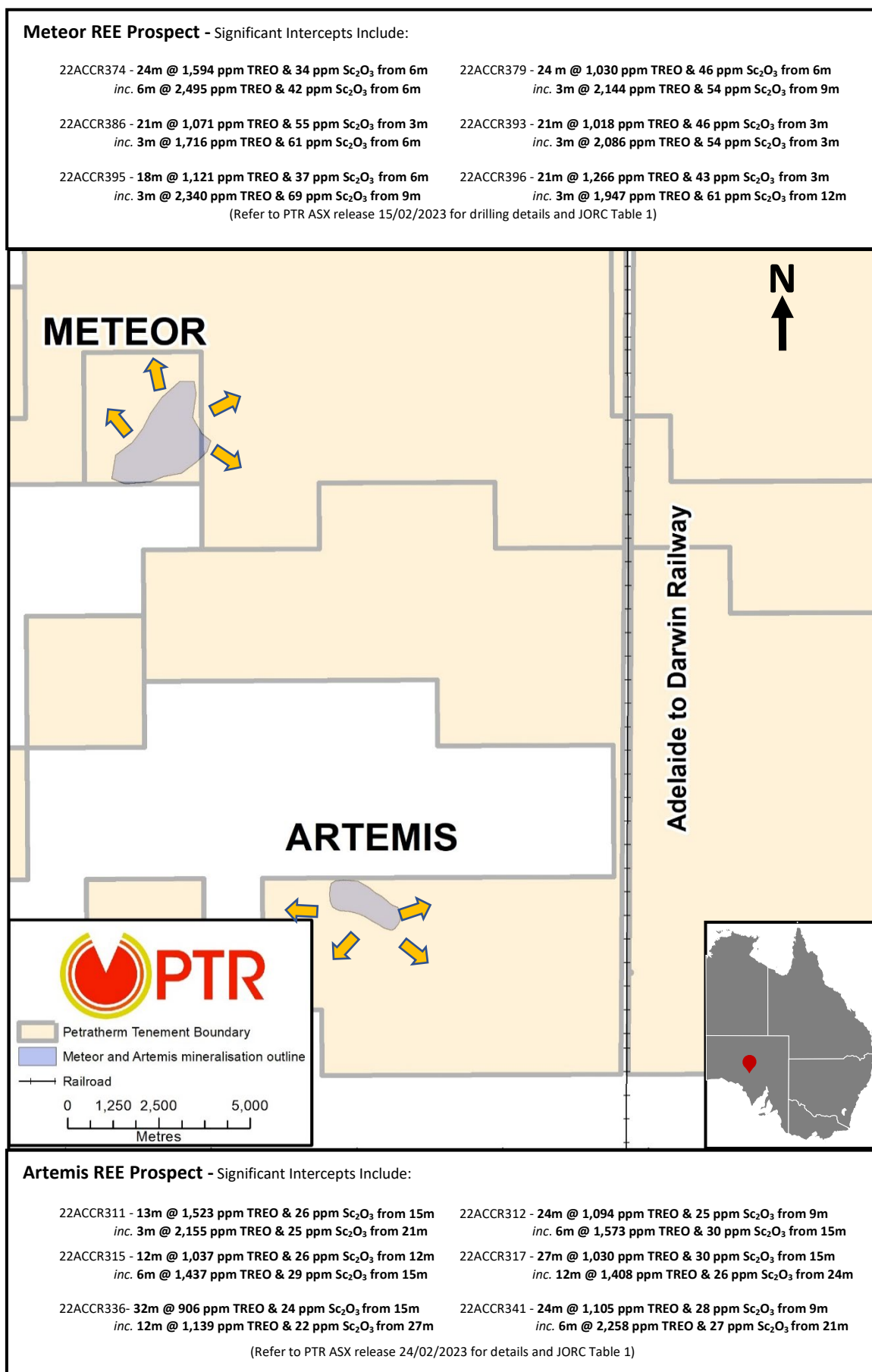


Figure 2 Artemis and Meteor Rare Earth Prospects and sample of significant intercepts.

PTR's Comet REE Project has favourable logistics for any potential future mining development. The Project is located 80 kilometres south of the major rural and mining centre of Coober Pedy on Pastoral Lease land. The Adelaide to Darwin railway line runs through the centre of the Project offering low-cost access to infrastructure and markets (Artemis and Meteor REE Prospects are located approximately 10 kilometres from the railway siding). PTR has developed a good foundation with the Traditional Owners and looks forward to fostering this relationship as the project advances.

Commenting on the upcoming drilling PTR's CEO Peter Reid said:

"The Meteor and Artemis REE Prospects highlight the fertility of the Project area and over 90% of the Comet Project has yet to be explored offering excellent exploration upside potential.

"Importantly the mineralisation found thus far is associated with specific rare earth enriched mafic rock intrusions and further potential exists for new finds not only within the near surface clay weathering profile but also in the fresh basement rock below.

"The potential for additional discoveries by the team at Petratherm puts The Company in an exciting and enviable position."

This ASX announcement has been authorised for release by the Board of Petratherm Ltd.

For further information contact :

Peter Reid (Chief Executive Officer) Tel: 0435 181 705 E: preid@petratherm.com.au

Competent Persons Statement: The information in this report that relates to Exploration Targets and Exploration Results is based on information compiled by Mr Peter Reid, who is a Competent Person, and a Member of the Australian Institute of Geoscientists. Mr Reid is not aware of any new information or data that materially affects the historical exploration results included in this report. Mr Reid is an employee of Petratherm Ltd. Mr Reid has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Reid consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.