

31 October 2024

Muckanippie Titanium Drilling Successfully Completed

Highlights

- Petratherm's maiden drilling program at the Muckanippie Project successfully completed ahead of schedule with 100 air-core holes drilled for a total of 3,444m.
- The program tested previously reported high grade Titanium-Vanadium mineralised areas at Rosewood and Claypan Prospects as well as other early-stage Targets at Nardoo, Duke and M1 Prospects¹.
- Initial batch samples have arrived in Adelaide with the remainder in transit. Samples will undergo a range of heavy mineral and geochemical assaying.
- First batch of assay results are anticipated as soon as early December with subsequent batches of results to follow.

Petratherm Limited (ASX: PTR) ("**PTR**" or "**the Company**") is pleased to announce that its maiden drilling program at the Muckanippie Project Area, in the northern Gawler Craton of South Australia has been successfully completed. In total, 100 vertical air-core holes were drilled for a total of 3,444 metres. The drill program ran exceptionally well, with all planned targets tested and was completed ahead of schedule.

The program was designed as a regional scale assessment of the Rosewood and Claypan Prospects to follow up on the high grade titanium rich heavy mineral sands (HMS) mineralisation identified in previous exploration work¹. Drilling additionally tested high Titanium-Vanadium bearing source rock horizons for primary Vanadiferous Titanomagnetite (VTM) style mineralisation at Claypan and other early-stage potential VTM targets at Nardoo, Duke, and M1 Prospects (Figure 1).



Photo 1 – Bags of samples after a days drilling at Muckanippie.

¹ PTR ASX release 11/09/2024 – High-Grade Titanium Rich Heavy Mineral Sands at Muckanippie

Petratherm CEO, Peter Reid, commented:

"The Muckanippie Drilling Program has gone exceedingly well with 100 air-core holes and almost 3,500m metres drilled in just over two weeks. The field crews have worked exceptionally hard to achieve this result and I commend them for their great efforts."

"The critical minerals, Titanium and Vanadium, have been identified by previous exploration work over large areas and in a variety of target forms in the Muckanippie area."

"This maiden drill program by Petratherm will assist in determining the extent of mineralisation of the prospect areas and the potential for future economic mineral resources. We look forward to providing assay results from the drilling as they come to hand."

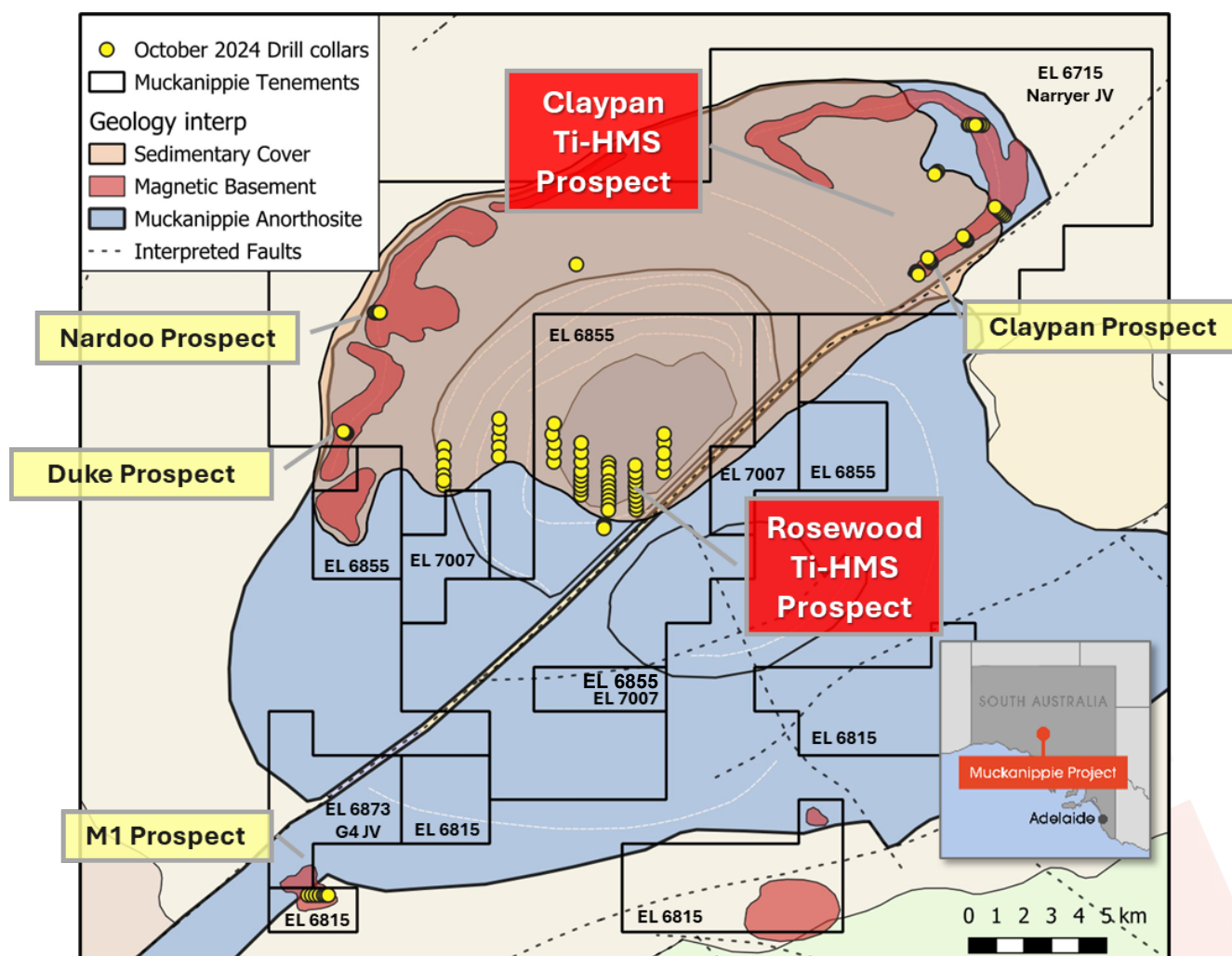


Figure 1 – Interpreted Geology Map of Muckanippie Project Area, High TiO_2 basement source rock prospects (yellow labels)², HMS Titanium Prospects (red labels).

Composite (3 metre) samples from the entire drill program have arrived at the Company's Adelaide office and are in the process of being dispatched for geochemical assaying. The Muckanippie Suite Rocks are additionally fertile for other precious and base-metals such as gold, platinum group metals, nickel and cobalt, hence a broad suite of assaying will be undertaken. Sample splits from every metre drilled were additionally collected and these samples are currently in transit and expected in Adelaide tomorrow.

² PTR ASX release 14/11/2022- Muckanippie Project Tenement Granted

The HMS style mineralised areas encountered at Rosewood and Claypan Prospects will undergo heavy liquid separation to determine heavy mineral concentrations. Following this, QEMSCAN mineralogical analysis will be undertaken to determine the make-up of the titanium rich heavy mineral assemblage. It is currently expected initial geochemical assays may be ready for reporting from early December with HMS results to follow. Given the wide range of analyses to be performed and number of prospect areas drilled, results will be reported in stages as they come to hand.

About the Muckanippie Project

In September, PTR announced a high-grade heavy mineral sand (HMS) discovery at its Muckanippie Project area southwest of Coober Pedy in South Australia (Figure 1). The Muckanippie Titanium Project contains both 100% owned Petratherm tenure and the JV tenement EL 6715, owned by Narryer Metals Limited (ASX:NYM)³. Reconnaissance mapping and surface sampling along with assaying of historic drill core stored at the South Australian Government's Core Library identified previously unknown high-grade Titanium mineralisation spanning many square kilometres at two prospect sites, Rosewood and Claypan.

Outcrop samples recorded exceptional grades ranging between 10% and 50% titanium dioxide (TiO₂). The mineralisation occurs from or near surface (<10 metres) and is present as heavy mineral bands forming sheet-like Heavy Mineral Sand (HMS) mineralisation. Re-assaying of historical wide spaced drilling confirms HMS mineralisation extends at least 6 kilometres to the North.

At Claypan significant Titanium-Vanadium mineralisation has also been identified in the underlying basement source rock, returning grades up to 21.0% TiO₂ and 0.44% V₂O₅, and additionally has potential for primary basement mineralisation (Refer to PTR ASX Release 11/09/2024 for details and JORC Table 1 information).



Photo 2 – Drilling Operations at Rosewood Prospect.

ENDS

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

³ PTR ASX Release 18/04/2024 – Farm-in Expands Muckanippie Project

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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.

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 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