

Perpetual Launches Metallurgical Test Work Program for Raptor REE Project

HIGHLIGHTS

- Perpetual's Raptor REE Project located in the globally recognised Caldeira Alkaline Complex, Minas Gerais, Brazil, has **commenced its maiden metallurgical test work program**. Objectives of Initial Metallurgical Testing:
 - Confirm the Raptor Project as an *Ionic Absorption Clay* (IAC) discovery,
 - Validate initial recovery factors,
 - Assess metallurgical characteristics for project advancement.
- **ANSTO Commissioned for Maiden Test Work:** Australia's Nuclear Science and Technology Organisation (ANSTO), with over 30 years of rare earth processing expertise, has supported prominent ionic clay REE deposits, including those near Raptor, such as Meteoric Resources and Viridis Mining & Minerals. ANSTO's involvement underscores confidence in advancing Raptor's potential as a significant REE project.
- Previously reported Raptor intercepts include¹
 - **5m @ 5,591ppm TREO (35% Nd+Pr)** ending in **5,533ppm TREO (33% Nd+Pr)**.
 - **3m @ 3,569ppm TREO (27% Nd+Pr)** from **6m, ending in 3,846ppm TREO (31% Nd+Pr)**.
 - **12m @ 4,601ppm TREO (23% Nd+Pr)** ending in **2,914ppm TREO (24% Nd+Pr)**.
 - **7m @ 4,240ppm TREO (23% Nd+Pr)** ending in **2,722ppm TREO (21% Nd+Pr)**.
 - **10m @ 2,546ppm TREO (21% Nd+Pr)** ending in **1,834ppm TREO (22% Nd+Pr)**.
- Drill results to date have shown that high grade REE mineralisation is evident across all three (3) Raptor Project area² (Pina Colada, Portao Verde and Pinheirinho prospects), where grades compare favourably to Meteoric Resources (ASX:MEI) nearby, which contains a JORC Mineral Resource Estimate of **545 million tonnes @ 2,561ppm³**.
- Positive metallurgical testing at the Raptor REE Project would underpin a path to a Maiden Mineral Resource Estimate in 2025.
- Results from initial metallurgical test work program are expected by the end of 2024.

Perpetual Resources Ltd ("Perpetual" or "the Company") (ASX: PEC) is pleased to announce the launch of a metallurgical test work program on drill samples obtained from the recent auger drilling at the Raptor REE Project, situated in the highly regarded Caldeira Alkaline Complex in Minas Gerais, Brazil.

The program will be conducted at ANSTO in Sydney, New South Wales, recognized as a global leader in metallurgical testing for rare earth element (REE) projects. Perpetual

¹ Please refer to ASX Announcement dated 13th September 2024.

² Please refer to ASX Announcement dated 13th September 2024.

³ For additional information, please refer to Meteoric Resources (ASX:MEI) ASX Announcement dated 14th May 2024, titled "150% Increase in Soberbo Mining Licence Mineral Resource".

anticipates receiving metallurgical results from ANSTO before the end of CY2024, further validating the project’s potential.

Perpetual’s Executive Chairman, Mr. Julian Babarczy, commented;

“The Caldeira Alkaline Complex in Brazil is renowned for hosting some of the most promising and established rare earth element projects in South America and the highest grade ionic absorption clay hosted projects in the world.. Our initial results from the auger program have been outstanding, demonstrating the strong potential for Perpetual to replicate the success seen by others in this world-class REE jurisdiction. These metallurgical tests aim to validate our belief in the area’s ionic absorption clay (IAC) potential and will be crucial in developing the process flowsheet as we advance our project”

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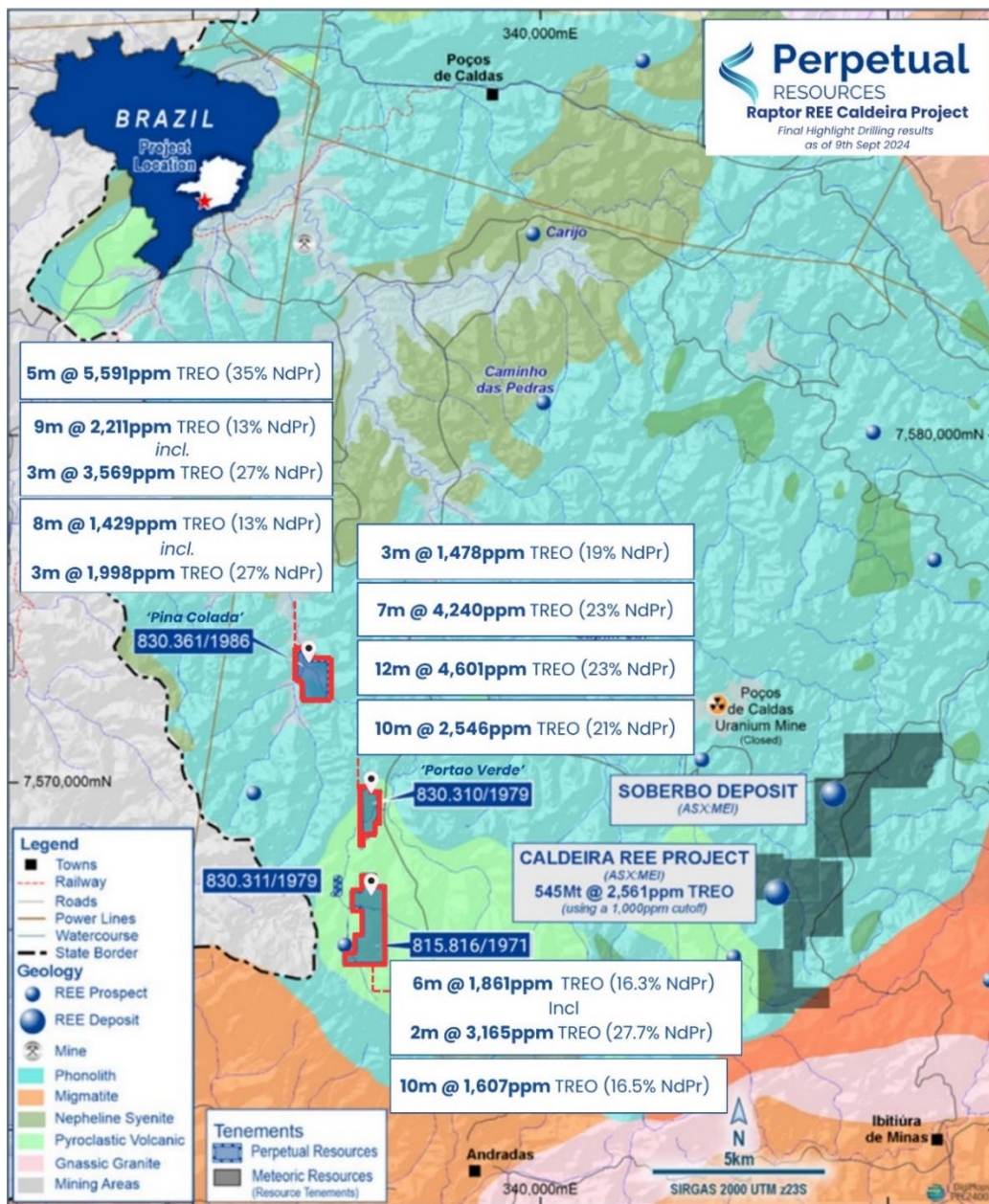


Figure 1: Highlights from PEC’s maiden drill program at the Raptor REE Project, Caldeira, Minas Gerais

Metallurgical Objectives

The primary aim of the metallurgical tests is to assess the leachability of rare earth element (REE) mineralisation from Raptor samples. This work will ultimately determine whether the Raptor Project represents an Ionic Absorption Clay (IAC) discovery and will establish initial recovery yields. These findings are expected to significantly enhance our understanding of the metallurgical potential of the Raptor REE Project.

Perpetual previously completed its maiden auger drilling campaign at the Raptor REE Project. The campaign confirmed high-grade REE mineralisation, featuring elevated ratios of neodymium (Nd) and praseodymium (Pr). Notably, all drill holes ended in REE mineralisation, indicating the potential for mineralisation to extend at depth.

Perpetual aims to demonstrate that the Raptor mineralisation is analogous to the IAC REE deposit at the nearby Meteoric Resources (ASX: MEI) project, which boasts a JORC Mineral Resource Estimate of 545 million tonnes at 2,561 ppm.

Positive outcomes from the metallurgical testing, particularly confirmation of the deposit as an IAC style, would pave the way for a Maiden Mineral Resource Estimate in 2025. Initial results from the metallurgical test work program are anticipated to be announced by the end of CY2024.

About ANSTO

ANSTO possesses extensive expertise in rare earth process development, with several team members having around 30 years of experience dating back to early investigations of the Mt Weld deposit (monazite mineralogy) in the early 1990s. In the past 10 to 15 years, they have been involved in numerous rare earth projects, focusing on process development, piloting (for companies such as Peak Resources, Arafura Resources, ASM, Northern Minerals, Hastings Technology Metals, Mkango Resources, and Iluka Resources), and providing expert consultancy.

In the last five years, ANSTO's focus has increasingly shifted toward IAC and clay-hosted REE projects, with over 15 currently underway. Their involvement includes advanced projects such as Aclara (Chile), Serra Verde (Brazil), Ionic Rare Earths (Uganda), and Australian Rare Earths (South Australia). Their work encompasses a range of activities, including leaching and desorption, solid-liquid separation, impurity removal, rare earth precipitation, mineralogical analysis, radionuclide deportment and removal, as well as process modelling and mini-plant circuit operations.

Project Geology

Perpetual's Raptor Project is situated within the Alkaline Intrusive Complex of Poços de Caldas, one of Brazil's most significant economic regions. This area hosts a variety of valuable deposits, including bauxite, clay, uranium, zirconium, REEs, and leucite, which is used as a fertilizer. The main rock types found in the Poços de Caldas Complex are intrusive and volcanic alkaline rocks of the nepheline syenite system comprising phonolites and foidolites. The complex spans approximately 800 km², representing the largest concentration of alkaline rocks in South America.

Ionic Adsorption Clay (IAC) Formation

Ionic Adsorption Clay (IAC) REE Deposits exhibit several defining geological characteristics:

- These deposits are located within the saprolite (clay) zone of the weathering profile.
- A significant portion of the rare earth elements (REEs) is adsorbed onto clay minerals, accumulating in the soil or clay layer of the regolith profile.
- REEs are ionically bonded to clay minerals and can be effectively liberated through washing with a weak ammonium sulfate solution (or other metal salts) at near-neutral pH levels.
- IAC REE Deposits are typically found near the surface, generally beginning at depths of less than 10 meters.
- Concentrations of uranium (U) and thorium (Th) in these deposits are typically low to very low, as these elements are less soluble in hydrothermal fluids and are not preferentially adsorbed by clay during the weathering and leaching processes.

- ENDS -

This announcement has been approved for release by the Board of Perpetual.

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About Perpetual Resources Limited

Perpetual Resources Limited (Perpetual) is an ASX listed company pursuing exploration and development of critical minerals essential to the fulfillment of global new energy requirements.

Perpetual is active in exploring for lithium, rare earth elements (REE) and other critical minerals in the Minas Gerais region of Brazil, where it has secured approximately 12,500 hectares of highly prospective lithium and REE exploration permits, within the pre-eminent lithium (spodumene) and REE bearing region that has become known as Brazil's "Lithium Valley".

Perpetual also operates the Beharra Silica Sand development project, which is located 300km north of Perth and is 96km south of the port town of Geraldton in Western Australia.

Perpetual continues to review complementary acquisition opportunities to augment its growing portfolio of exploration and development projects consistent with its critical minerals focus.

Brazilian Projects



Western Australian Projects



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COMPLIANCE STATEMENTS

No new information

Except where explicitly stated, this announcement contains references to prior exploration results, all of which have been cross-referenced to previous market announcements made by the Company. The Company confirms that it is not aware of any new information or data that materially affects the information included in the relevant market announcements.

Forward-looking statements

This announcement contains forward-looking statements which involve a number of risks and uncertainties. These forward-looking statements are expressed in good faith and believed to have a reasonable basis. These statements reflect current expectations, intentions or strategies regarding the future and assumptions based on currently available information. Should one or more of the risks or uncertainties materialise, or should underlying assumptions prove incorrect, actual results may vary from the expectations, intentions and strategies described in this announcement. No obligation is assumed to update forward looking statements if these beliefs, opinions and estimates should change or to reflect other future developments.

Competent Person Statement

The information in this report related to Geological Data is based on data compiled by Mr. Allan Harvey Stephens. Mr. Stephens is an Exploration Manager at Perpetual Resources Limited and is a member of both the Australasian Institute of Mining and Metallurgy (AusIMM) and the Australian Institute of Geoscientists (AIG). He possesses sound experience that is relevant to the style of mineralisation and type of deposit under consideration, as well as the activities he is currently undertaking. Mr. Stephens qualifies as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources, and Ore Reserves.' He provides his consent for the inclusion of the matters based on his information, as well as information presented to him, in the format and context in which they appear within this report.

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