

ASX Announcement

17 September 2025

ASX: OD6

METALLURGICAL DIAMOND CORE DRILLING COMMENCES AT SPLINTER ROCK TO DELIVER BULK SAMPLES FOR HEAP LEACH OPTIMISATION AND OFFTAKE DISCUSSIONS

Significant upside remains to increase the existing JORC Indicated Resource, with the mineralisation open to the NE & SW

Highlights:

- Metallurgical Diamond Core Program Commenced at Inside Centre
- 6 twinned drill core holes targeting previously tested AirCore sites which best represent earlystage mining areas to obtain representative bulk material
- 2 to 2.5 tonne of Rare Earth Bearing Core will be delivered to ANSTO to undertake a series of advanced optimisation and scale-up tests
- **Heap Leach Optimisation:** Work to date has validated the superior recovery and low-cost processing method, with multiple optimisation tests set to streamline the technique further
- Impurity Removal Verification: The innovate flowsheet will be further verified utilising Nanofiltration (NF), Ion Exchange (IX), to produce a Mixed Rare Earth Carbonate (MREC)
- Bulk High-quality MREC product: The program will aim to produce more than 1 kg of a premium, high grade and low-impurity MREC and Mixed Rare Earth Hydroxide (MREH)
- Offtake Samples: MREC and MREH samples will be utilised for offtake discussions, to assess commercial payability options for the products
- Inside Centre Resources Upside: Significant upside remains to increase the <u>existing JORC</u>
 Indicated Resource of 119Mt @ 1,632ppm TREO with the mineralisation open to the NE & SW
- Strategic partnerships with ANSTO and CPC Engineering continue to guide the testwork program and optimal development pathway

Managing Director Brett Hazelden, commented:

"It's pleasing to have our metallurgical diamond core program underway at Inside Centre, the cornerstone rare earth deposit within Splinter Rock.

This key program aims to produce 2 to 2.5 tonnes of representative core that will be sent to ANSTO for heap leach scale-up and impurity-removal optimisation, with the goal of producing >1 kg of Mixed Rare Earth Carbonate (MREC) for customer qualification and offtake progression.

OD6 has already produced high-quality MREC (~56% TREO) and MREH (~59% TREO) from our simplified heap leach flowsheet, with this new work to build on our recent flowsheet breakthroughs with ANSTO and the ongoing CPC optioneering study that continues to provide positive outcomes."



OD6 Metals Limited (OD6 or the Company) is pleased to advise that metallurgical core drilling has commenced at its 100% owned Splinter Rock Rare Earth Project, located in Western Australia. Core samples will be sent to ANSTO as part of the planned optimisation and scale-up program aimed at refining the heap leach and impurity removal flowsheet and providing final product samples for offtake discussions. Splinter Rock hosts a JORC Mineral Resource of 682Mt @ 1,338ppm TREO.

Program Overview

The metallurgical core program is targeting zones within Inside Centre that best represent planned early-stage mining areas (refer Figure 1). Six existing AirCore drill sites (Table 1) will be twinned with predominantly PQ/HQ diamond core (63 to 85mm core) to provide bulk rare earth bearing material (~2.0 to 2.5 tonnes) for scale-up testwork. Samples will be composited at ANSTO for a series of advance campaigns focused on:

• Heap leach Optimisation;

- Heap Leach duration and kinetics
- Acid strength and consumption
- o Counter current heap configuration
- o Particle agglomeration methodology

• Impurity Removal Verification:

- Nanofiltration (NF) acid recovery and liquor concentration tuning
- o Ion Exchange (IX) selectivity and elution to reduce Fe/Al and trace U/Th prior to precipitation
- o Impurity removal (IR) two stage pH optimisation to achieve target impurity specifications

Bulk MREC and MREH Production

 Precipitation to produce >1 kg of MREC and/or MREH for customer qualification, offtake discussions, and to assess commercial payability options for the products.

Why Inside Centre?

Inside Centre has delivered standout metallurgy and forms the Indicated component of the current resource (119Mt @ 1,632ppm TREO), supporting near-term development studies. There remains significant upside to increase the existing JORC with mineralisation open to the SW and NE within the modelled clay basins (Refer to Figure 1 and <u>ASX Announcement Mineral Resource Estimate Doubles</u>)

Prior work shows heap leach recoveries of ~79% MagREE (Nd, Pr, Dy, Tb) at Inside Centre, with consistently high Nd/Pr recoveries (~80%). The adoption of NF has demonstrated acid recovery of ~84.5%, materially lowering acid consumption and shrinking downstream IR circuit size, which together are expected to improve project economics.



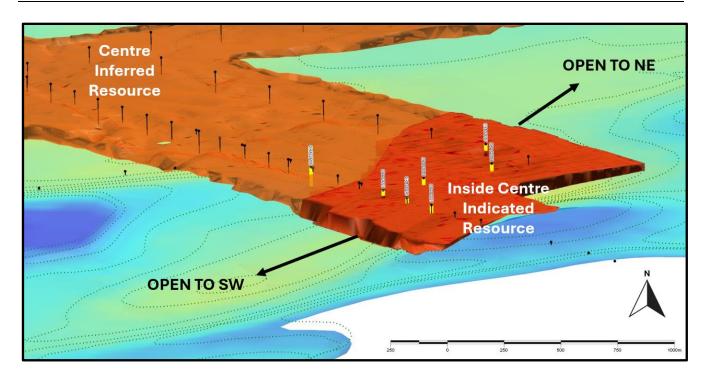


Figure 1: The Inside Centre Indicated Resource (shown in red) and the selected holes to be twinned (shown in yellow). The figure also shows the Existing Centre Inferred Resource (shown in orange) plus shows mineralisation remains open to the SW and NE within the modelled clay basin airborne electromagnetic survey

Table 1: Metallurgical drill hole locations based on selected AirCore site to be twinned

Hole ID	Туре	Easting	Northing	RL (m)	Dip (degrees)	Depth(s)
SRAC0225	Aircore	501815	6336021	204.1	-90	33-86
SRAC0226	Aircore	501953	6335879	204.4	-90	21-81
SRAC0266	Aircore	501399	6336445	205.4	-90	21-58
SRAC0357	Aircore	502068	6336999	204.9	-90	39-90
SRAC0358	Aircore	502177	6336615	204.0	-90	36-84
SRAC0359	Aircore	501939	6336293	203.5	-90	27-87

Pathway to Offtake

The core program directly supports OD6's ongoing testwork and studies with ANSTO and CPC Engineering by supplying bulk test material and enabling production of more than 1 kg of a premium, high grade and low impurity Mixed Rare Earth Carbonate (MREC) and Mixed Rare Earth Hydroxide (MREH).

Offtake Samples of MREC and MREH can then be sent to global separation facilities that will be utilised for offtake discussions and to assess commercial payability options for the products

Engagement with potential offtake partners is continuing.



Metallurgical and Study Outcomes to Date

As part of its advanced metallurgical program, OD6, CPC and ANSTO has successfully demonstrated a multi-stage processing pathway (Figure 1 below) that efficiently extracts and purifies rare earth elements from Splinter Rock's clay-hosted deposits. The flowsheet consists of:

- 1. **Heap Leaching** Simple, low-acid usage leaching of rare earth-bearing clays to generate enriched leachate solution (refer <u>ASX 16 October 2024</u>)
- Nanofiltration (NF) Recycling of Acid, concentration of REEs and reduction of liquid volume produced downstream (refer ASX 4 August 2025)
- 3. **Ion Exchange (IX)** Concentration of rare earth elements and enhanced removal of iron (Fe) and aluminium (Al) reducing downstream processing risk (refer <u>ASX 7 August 2025</u>)
- 4. **Impurity Removal (IR)** Final removal of residual deleterious elements (e.g. Al, Ca, Fe, U, Th, P) to meet high product quality and low impurity specifications.
- 5. **Product Precipitation** Recovery of high-grade Mixed Rare Earth Carbonate (**MREC**) or Mixed Rare Earth Hydroxide (**MREH**) from purified solution (refer <u>ASX 13 August 2025</u>)
- 6. **Chlor-Alkali Facility (CAF)** Confirmed as a cost-reduction measure, producing key reagents onsite and materially lowering operating costs (refer ASX 2 September 2025)

The final MREC/MREH products contain elevated concentrations of **Nd**, **Pr**, **Dy** and **Tb**, collectively representing a **high-value magnetic rare earth mix** highly sought after in permanent magnet supply chains. Benchmark payability for MREC and MREH typically ranges between 70–85% of REO basket value.

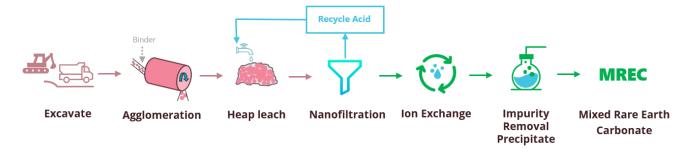


Figure 2: Indicative processing steps including Heap Leach, Nanofiltration plus Ion Exchange & Impurity Removal

Next Steps

Complete Metallurgical Core Program: Dispatch core samples to ANSTO

ANSTO Testwork Scale Up: Heap Leach and Impurity Removal testwork as described above

Optioneering Study: CPC Engineering (CPC) and ANSTO are continuing to review the testwork performed with the aim to identify a preferred flowsheet based on cost, recovery, scalability, and product quality.

Engagement with potential offtake partners: To assess commercial payability options for MREC and MREH products.

Engagement with government and potential financing partners: OD6 has and continues to engage government and potential financing organisations. This is anticipated to be a continuous process over the development cycle.



Forward Looking Statements

Certain information in this document refers to the intentions of OD6 Metals, however these are not intended to be forecasts, forward looking statements, or statements about the future matters for the purposes of the Corporations Act or any other applicable law. Statements regarding plans with respect to OD6 Metals projects are forward looking statements and can generally be identified by the use of words such as 'project', 'foresee', 'plan', 'expect', 'aim', 'intend', 'anticipate', 'b elieve', 'estimate', 'may', 'should', 'will' or similar expressions. There can be no assurance that the OD6 Metals plans for its projects will proceed as expected and there can be no assurance of future events which are subject to risk, uncertainties and other actions that may cause OD6 Metals actual results, performance, or achievements to differ from those referred to in this document. While the information contained in this document has been prepared in good faith, there can be given no assurance or guarantee that the occurrence of these events referred to in the document will occur as contemplated. Accordingly, to the maximum extent permitted by law, OD6 Metals and any of its affiliates and their directors, officers, employees, agents and advisors disclaim any liability whether direct or indirect, express or limited, contractual, tortuous, statutory or otherwise, in respect of, the accuracy, reliability or completeness of the information in this document, or likelihood of fulfilment of any forward-looking statement or any event or results expressed or implied in any forward-looking statement; and do not make any representation or warranty, express or implied, as to the accuracy, reliability or completeness of the information in this document, or likelihood of fulfilment of any forward-looking statement or any event or results expressed or implied in any forward-looking statement; and disclaim all responsibility and liability for these forward-looking statements (including, without limitation, liability for negligence).

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.

The information in this report relating to the Mineral Resource estimate for the Splinter Rock Project is extracted from the Company's ASX announcements dated 24 May 2024. OD6 confirms that it is not aware of any new information or data that materially affects the information included in the original announcement and that all material assumptions and technical parameters underpinning the Mineral Resource estimate continue to apply

This announcement has been authorised for release by the Board of OD6 Metals Limited



About OD6 Metals

OD6 Metals is an Australian public company pursuing exploration and development opportunities within the critical minerals sector, namely rare earths and copper.

Rare Earth Elements

OD6 Metals has successfully identified clay hosted rare earths at its 100% owned **Splinter Rock Project** which is located in the Esperance-Goldfields region of Western Australia.

The Company released a Mineral Resource Estimate (MRE) for Splinter Rock in May 2024, confirming that the project hosts one of the largest and highest-grade clay-hosted rare earths deposits in Australia with an Indicated Resource of 119Mt @ 1,632ppm TREO and an Inferred Resource of 563Mt @ 1,275ppm TREO with an overall ratio of ~23% high-value Magnetic Rare Earths (MagREE).

OD6 Metals believes that Splinter Rock has all the hallmarks of a world class rare earths project with a conceptual heap leach development which utilises the large and high-grade Splinter Rock resource to support a long-life REE operation.

Copper

The Company is advancing the **Gulf Creek Copper-Zinc VMS Project** located near the town of Barraba in NSW, Australia.

Gulf Creek was mined at around the turn of the 20th century and was once regarded as the highest-grade copper mine (2% to 6.5% Cu) in NSW until its closure due to weak copper prices in 1912. Very little exploration has occurred at the project in over 100 years, with OD6 aiming to apply modern day exploration technologies.

The 2025 maiden drilling program successfully defined high grade copper below the historical mine plus confirmed the strong relationship between magnetism and massive sulphide mineralisation. Geophysical modelling has identified multiple, high priority and untested targets ready for drilling providing over >3km of untested strike in the immediate mine-stratigraphy, and over >10km across the tenement.

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