

# **Australian Critical Rare Earth Minerals**

**2022 South-West Connect ASX Showcase** 

20 October 2022

ASX I OD6



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#### **Competent Person Statement**

The information contained in this presentation that relates to exploration results is based on and fairly represents information and supporting documentation prepared Mr Jeremy Peters, Director of Burnt Shirt Pty Ltd. Mr Peters is a Fellow of the Australasian Institute of Mining and Metallurgy and a Chartered Professional Geologist and Mining Engineer of that organisation. Mr Peters has sufficient experience relevant to the style of mineralisation and type of deposits under consideration, and to the activity which he has undertaken to qualify as a Competent Person as defined in the JORC Code. Mr Peters consents to the inclusion of the matters based on his information in the form and context in which the exploration results and supporting information are presented in this presentation.

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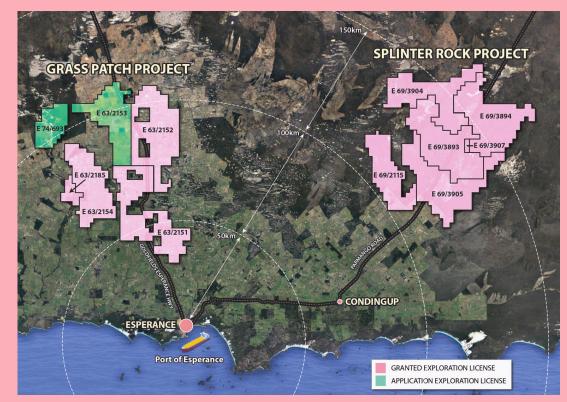
#### **Massive Landholding**



Substantial 4,828 km<sup>2</sup> tenement package of **Clay Hosted Rare Earth** Projects

Close to existing port, sealed roads and essential infrastructure

Excellent concentrations of neodymium (Nd) and praseodymium (Pr), which are essential elements needed for the green economy

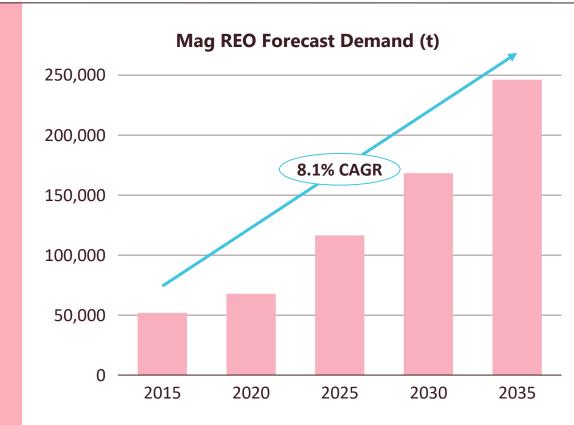


## **Insatiable Demand for Rare Earth Magnets**



Transition from carbon to renewable economy is creating a forecast explosion in demand for critical rare earth magnet metal oxides

Compound annual growth rate of 8.1% for Mag REO



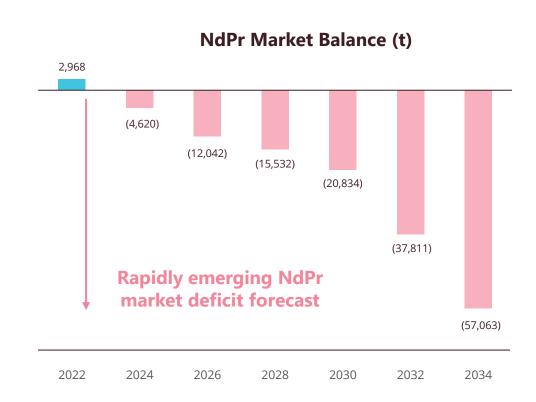
#### **Growing NdPr Rare Earth Supply Deficit**



Analysts expect significant NdPr supply deficits as demand grows

Demand underpinned by growth from EVs, wind power and consumer electronics

**NdPr** = Two of the critical rare earth elements Neodymium (Nd) and Praseodymium (Pr), which are used to make permanent magnets in electric vehicles, electricity generators (wind turbines) and consumer electronics. They represent the major value and revenue sources from Rare Earth Element production.



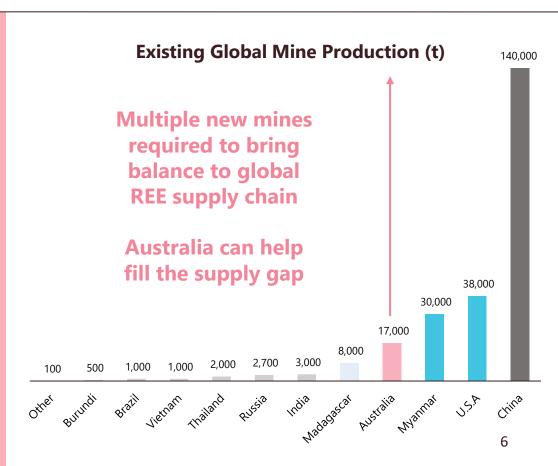
**Source:** Adamas Intelligence, June 2022

#### **New Australian Supply Needed**



Mine concentration is a significant risk to the global supply chain

Diversity of supply now a priority for governments and corporations with Australia well placed to provide additional capacity



**Source:** USGS Mineral Commodity Summaries, Rare Earths: https://pubs.usgs.gov/periodicals/mcs2021/mcs2021.pdf

#### **Low Carbon Rare Earth Production Potential**

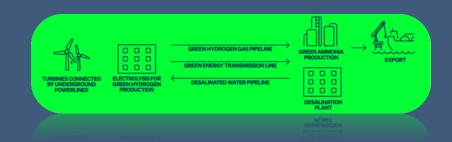


The urgency to lower global emissions is driving a rapid ramp up in demand for green energy globally

Esperance earmarked as a potential location for a major renewable energy and hydrogen hub

Using wind, solar + green hydrogen = Potential Green Rare Earth

Fortescue Future Industries assessing South East Western Australia (Esperance Region) as a priority location for development of a green hydrogen hub<sup>1</sup>





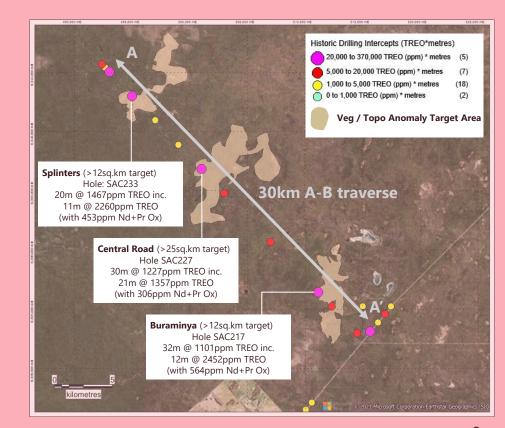


Six granted exploration licenses spanning 2,579km<sup>2</sup>

Historic high grade TREO drill intercepts across a 30km drilling traverse

The target area at Splinter Rock covers over 30 x 60km, making this one of the largest known clay REE target areas in Australia

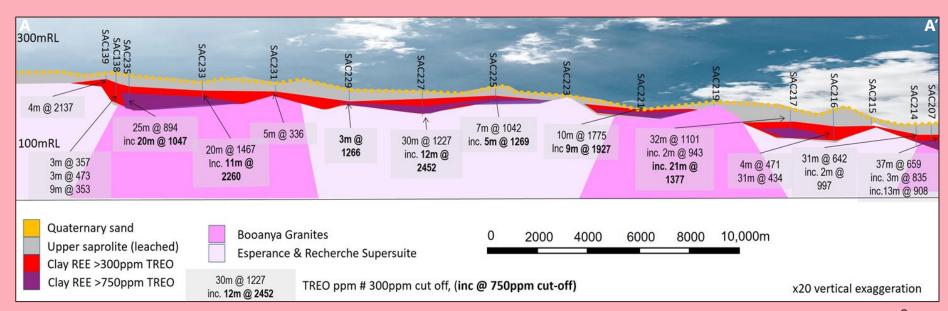
 $\textbf{TREO (Total Rare Earth Oxide)} = La_2O_3 + CeO_2 + Pr_6O_{11} + Nd_2O_3 + Sm_2O_3 + Eu_2O_3 + Gd_2O_3 + Tb_4O_7 + Dy_2O_3 + Ho_2O_3 + Er_2O_3 + Tm_2O_3 + Yb_2O_3 + Lu_2O_3 + Y_2O_3 \\$ 







Intersections up to 37m in thickness over the historic drilling traverse close to surface NdPr oxides make up over 20% of the total TREO basket in higher grade zones





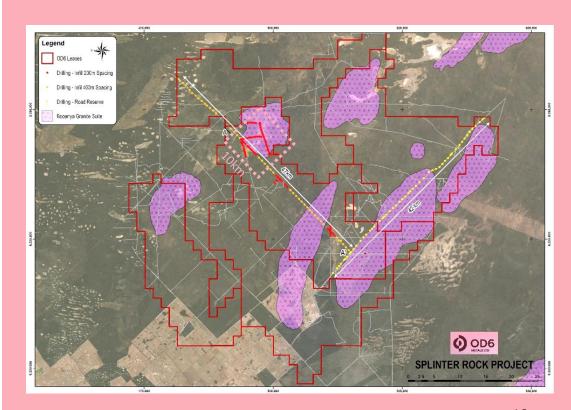


The clay rare earth mineral enrichment is considered to be formed from weathering of the granites in the area

Initial 192-hole AC drilling program completed

**Extensive clays encountered** across 100km of drill lines

Assay results to be received through Q4 2022



## **Airborne Electromagnetics – Clay Mapping**



Airborne geophysics survey across Splinter Rock and Grass Patch to be completed during October 2022

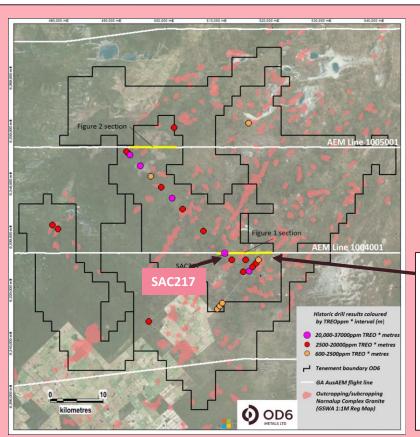
Aiming to identify and map clay locations, expanse, depth and thickness across all granted OD6 Tenements

Analysis of data to be completed during Q4 2022



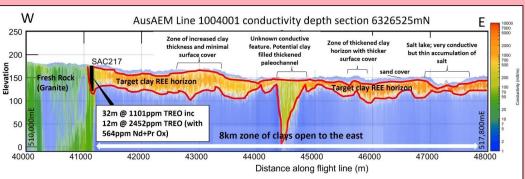
## **Initial Clay Mapping Success at Splinter Rock**





CSIRO and OD6 Metals are collaborating on techniques to improve rare earth exploration

- Identified clays of 10-50m in thickness
- Clays zones of multiple kms in length
- Enables future targeted drilling of shallow, thick clay horizons



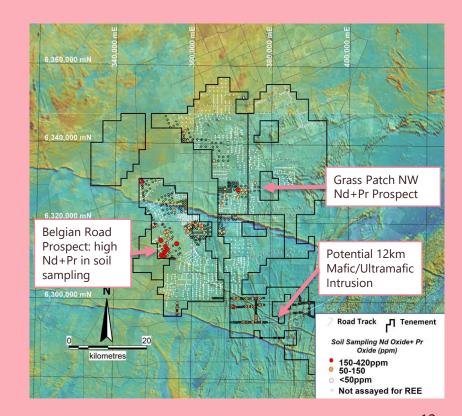




Four granted exploration licenses and two applications spanning over 2,248km<sup>2</sup>

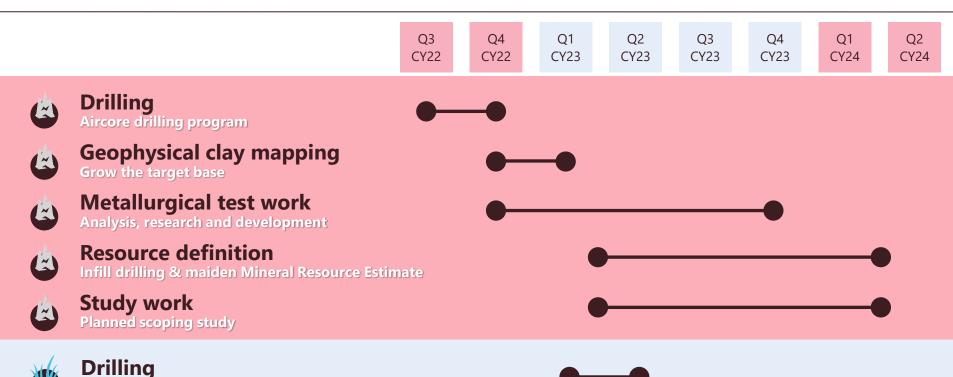
Soil geochemistry and water bore anomalies indicate high level of prospectivity for REE

Three key exploration priority areas identified by OD6 Metals



## **Planned Work Program**



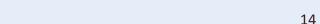




#### **Geophysical clay mapping**

**Grow the target base** 

Aircore drilling program



# **Splinter Rock Work Program**





#### **Corporate Snapshot**



Capital Structure	ASX: OD6
Price per share <sup>1</sup>	A\$0.19
Total number of shares on issue <sup>2</sup>	102.45M
Performance rights and options <sup>2</sup>	32.70M
Market capitalisation (undiluted) <sup>1</sup>	A\$19.47M
Cash <sup>2</sup>	A\$7.08M
Debt <sup>2</sup>	A\$0.00M
Enterprise value <sup>1</sup>	A\$12.38M





Dr Darren Holden NON-EXECUTIVE CHAIR



Mr Brett Hazelden MANAGING DIRECTOR



Mr Piers
Lewis
NON-EXECUTIVE
DIRECTOR



Dr Mitch Loan NON-EXECUTIVI DIRECTOR

#### Register Detail



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# **Key Highlights**



- ✓ Explosion in demand for critical rare earth minerals
- ✓ Drilling has confirmed thick, near surface, clay hosted rare earth elements
- ✓ Airborne geophysics aiming to map clay locations, expanse, depth and thickness across all granted OD6 Tenements
- ✓ Strong potential for globally-significant REE resource definition across a 30 x 60km target area
- ✓ Close proximity to Esperance port, town and roads
- ✓ Low carbon "Green Rare Earth" potential



#### **Registered Office**

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