



ASX ANNOUNCEMENT

MRD PRESENTATION STOCKHEAD BATTERY METALS VIRTUAL CONFERENCE

9 March 2022

Mount Ridley Mines Limited (“the Company”) is pleased to advise that its Technical Manager, David Crook, presented to the Stockhead Battery Metals Virtual Conference. A copy of the presentation is attached to this announcement.

The presentation can also be viewed via the link below.

<https://vimeo.com/683283961>

For and on behalf of the Board

Johnathon Busing
Company Secretary
+61 8 6165 8858



M O U N T R I D L E Y M I N E S L T D

RARE EARTHS PROJECT - March 2022 ASX: MRD

General Presentation

Disclaimers & Forward-Looking Statements

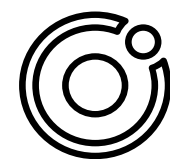
- This presentation contains forward-looking statements. Where the Company expresses or implies an expectation or belief as to future events or results such expectation or belief is expressed in good faith and believed to have a reasonable basis. However, “forward looking statements” are subject to risks, uncertainties and other factors, which could cause actual results to differ materially from future results expressed, projected or implied by such “forward looking statements”.
- Such risks include but are not limited to commodity values, currency fluctuations, variations in production costs, in grades and/or recovery rates from those assumed in mining plans. Risks may also include political and operational in the countries and states in which the Company operates or sells product and governmental regulation and judicial outcomes.
- The Company does not undertake any obligation to release publicly any revisions to any “forward looking statement” to reflect events or circumstances after the date of this presentation or to reflect the occurrence of unanticipated events, except as may be required under applicable securities laws.
- The information contained in this presentation that relates to exploration strategy or to exploration results is based on information generated by Mount Ridley, and compiled by, or reviewed by, Mr David Crook who is a Member of the Australasian Institute of Mining and Metallurgy and the Australian Institute of Geoscientists. Mr Crook has sufficient experience which is relevant to the activities reported herein to qualify as a Competent Person as defined in the 2012 edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Minerals Resources and Ore Reserves. Mr Crook consents to the inclusion in the presentation the matters based on his information in the form and context in which it appears.



Ionic Rare Earths: (ASX: IXR) 51-60% project equity

Makuutu Project: 66Mt at 820 TREO

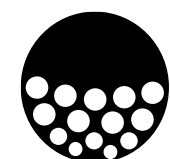
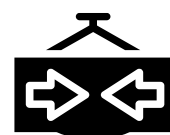
Market Cap \$198M



Australian Rare Earths: (ASX: AR3)

Koppamurra Project: 40Mt at 725 TREO

Market Cap \$61M (down from >\$100M)



American Rare Earths: (ASX: ARR)

La Paz Project: 128Mt at 370 TREO

Market Cap \$167M



MSV:

Sierra Verde Project: 911Mt at 1200 TREO

Market Cap



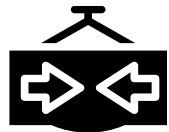
PEERS and Value Proposition



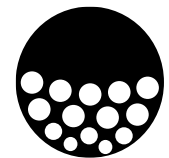
Mount Ridley Rare Earths Project is showing potential to host a major quantity of critical rare earths mineralisation.



Mineralisation model is Ionic Adsorption Clay, thought similar to Chinese deposits.



3,400km² Tenements predominantly 100%-owned.



Mineralisation is already evident in drilling over an area of 25 km 3 km and is open to further delineation in all directions.



Hosted in the large Eocene-aged Bremmer sedimentary basin. MRD has the dominant land position when agricultural land is excluded.



Results returned to date compare favourably with the Makuutu REE Project, Uganda.

about the Mount Ridley REE Project



MOUNT RIDLEY MINES

a clean energy strategy needs rare earth elements



As the focus on **limiting climate change** increases, many countries are implementing green strategies.

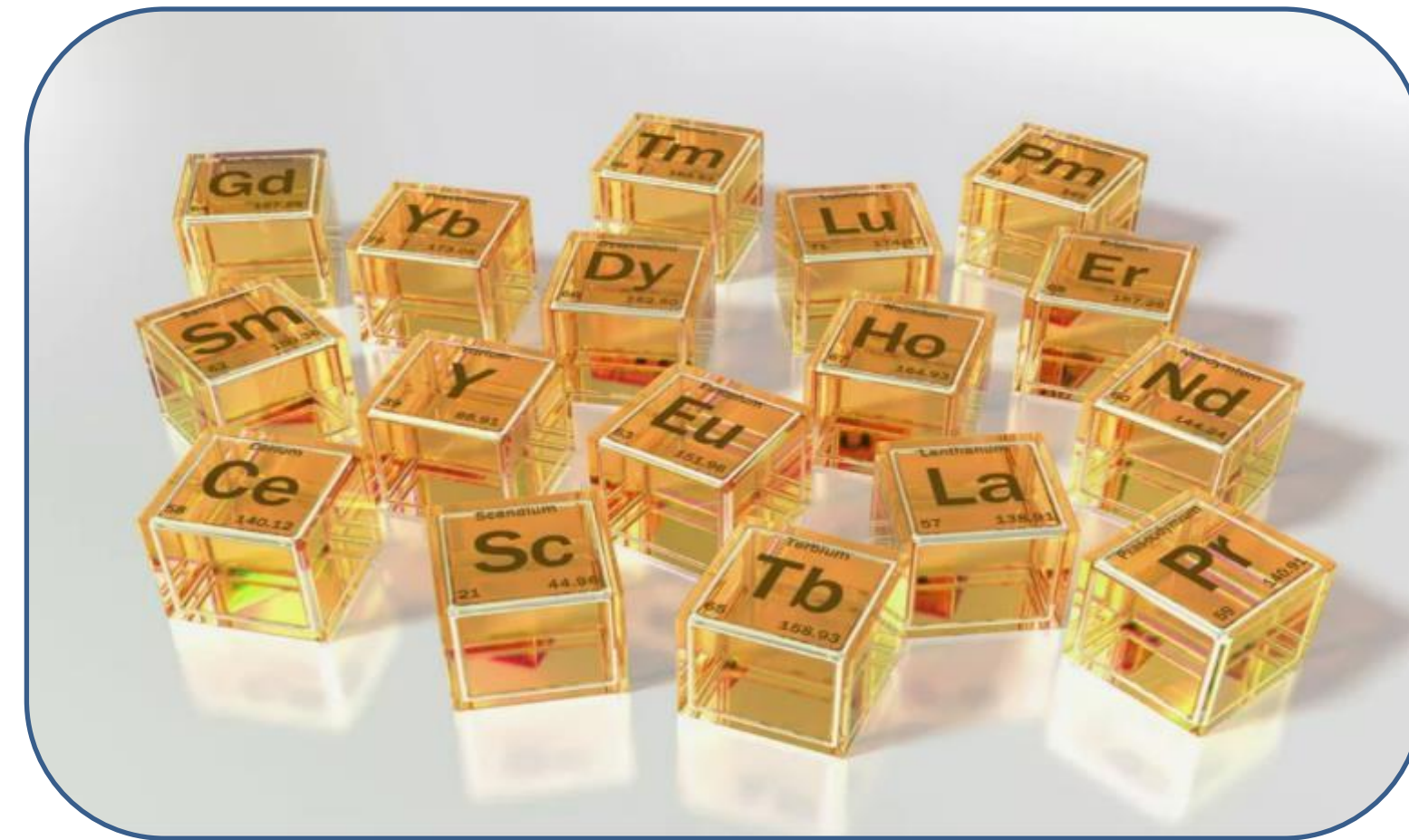


This is **increasing demand** for materials used to manufacture key components.

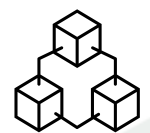


A number of these components have been identified as Critical Raw Materials, and concerns have been raised about the security of supply.

critical rare earth elements



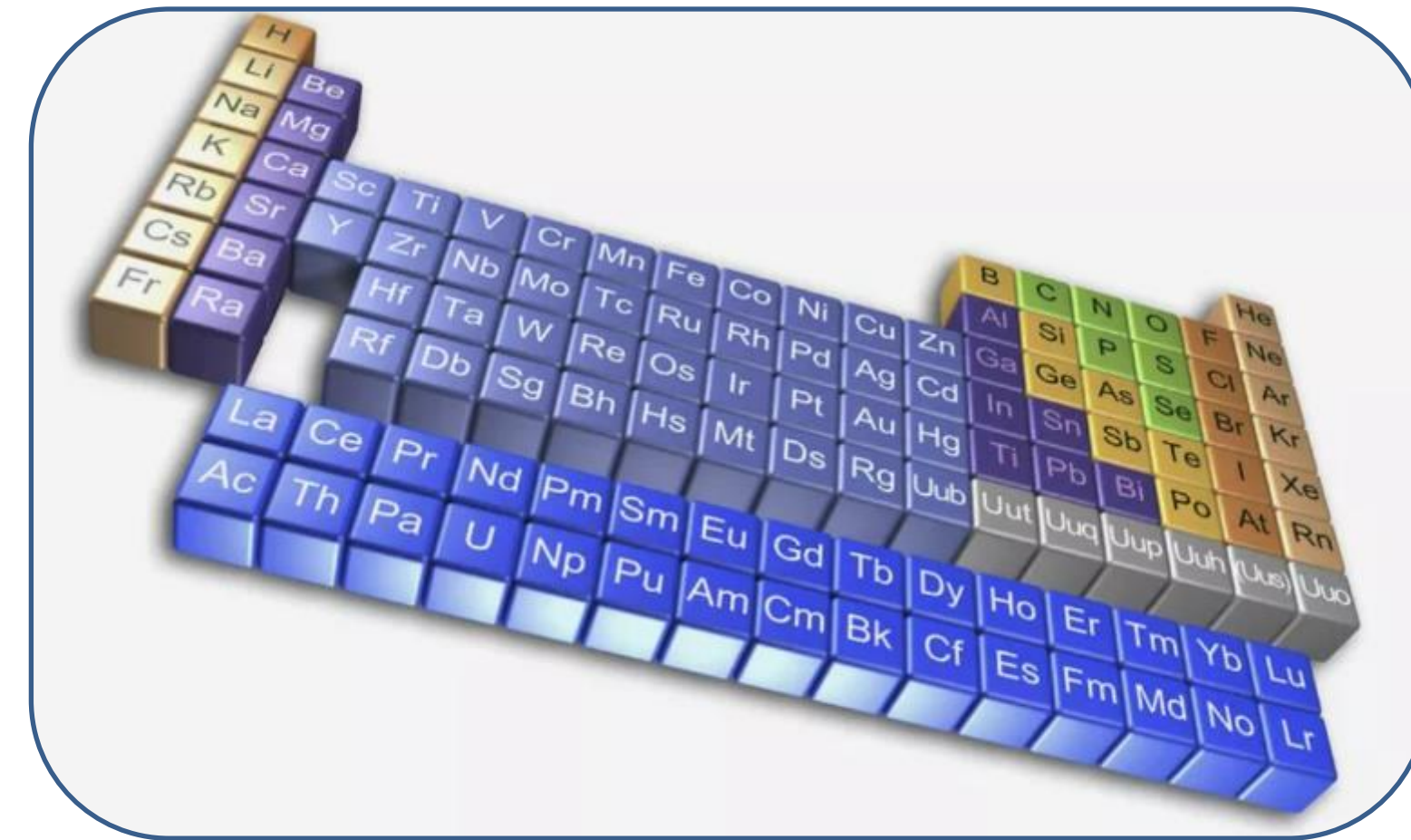
REEs here refers to 14 elements plus yttrium¹.



Critical REEs² are neodymium (l), praseodymium (l), dysprosium (h), terbium (h) and yttrium



out of
interest



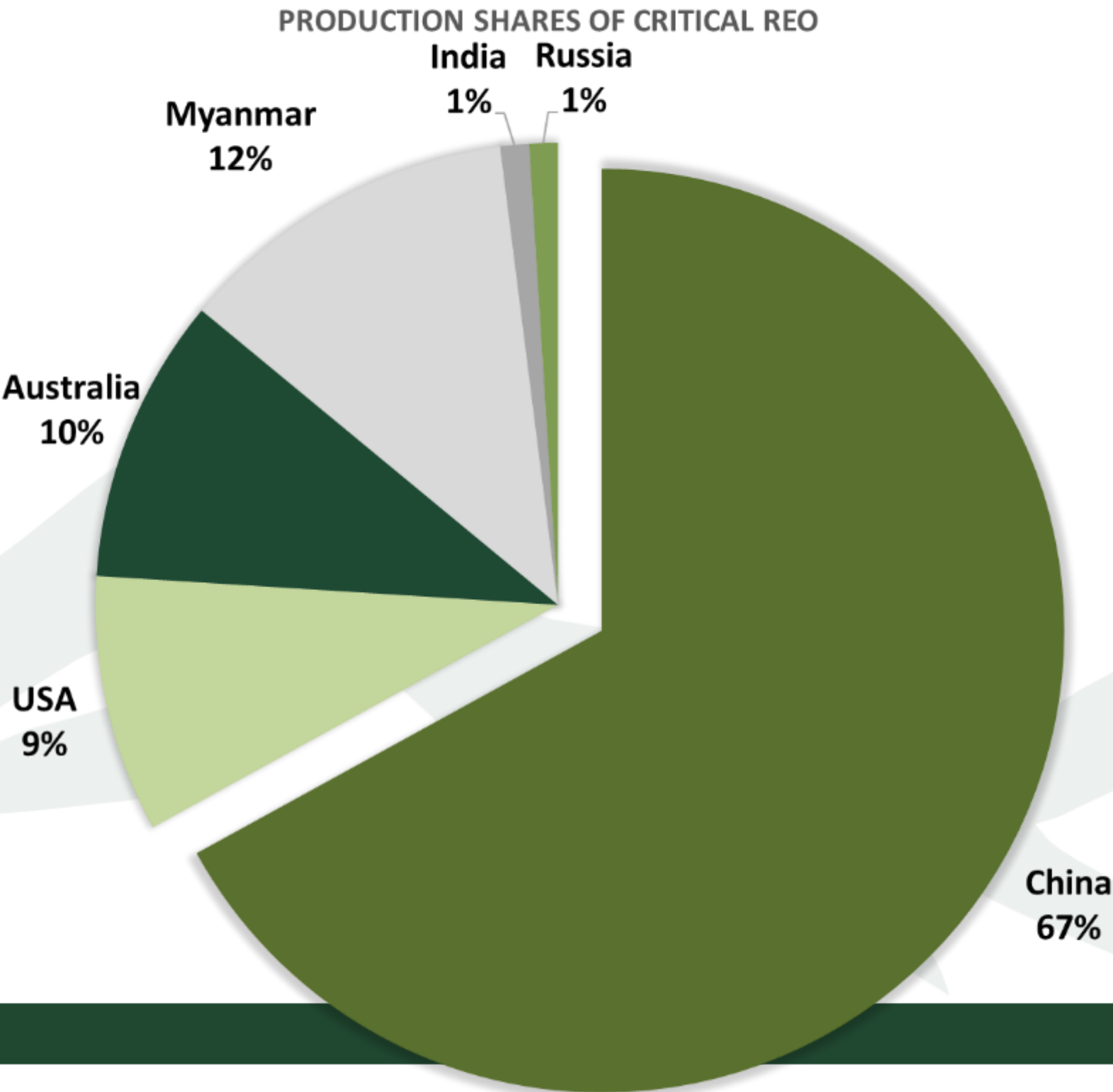
REEs make the world's strongest permanent magnets, that are fundamental to the manufacture of electric generators and hybrid vehicle power systems^{eg 3}.



For wind turbines, a single 3MW [direct-drive] wind turbine needs 2 tons of REE⁴ or ~216kg of neodymium per megawatt of capacity⁵ (600-800kg per turbine)



PRODUCTION LEADERS OF RARE EARTH



Critical Elements (including REE) are considered essential in the modern shift towards CLEAN ENERGY outcomes.

CRITICAL REE WORLD'S PRODUCTION



67%



10%

very close to
key
infrastructure



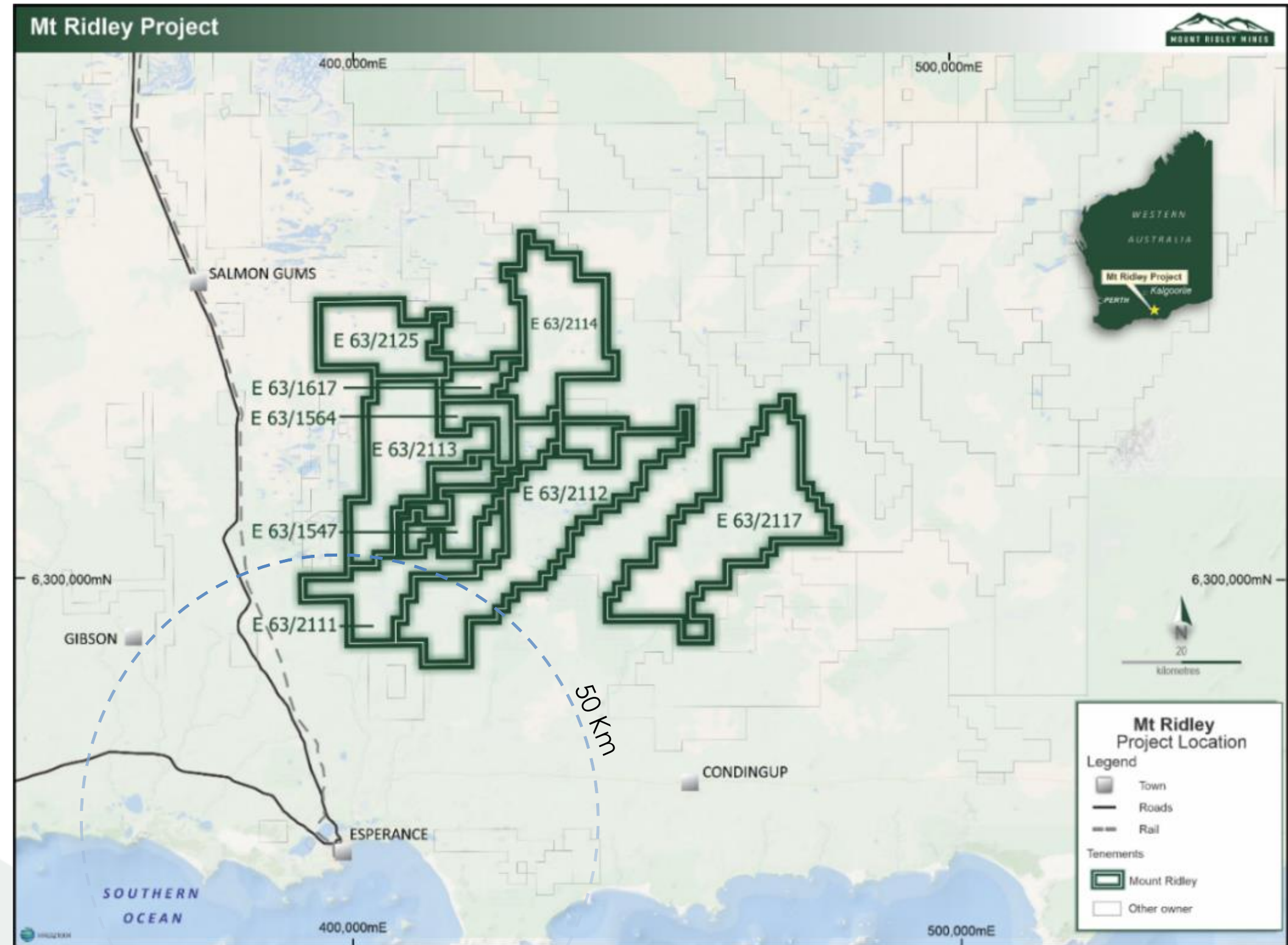
Located 35 kilometres northeast of
the deep-water port of Esperance,



Adjacent to Goldfields Esperance
Highway, railway and gas pipeline



Near Esperance airport

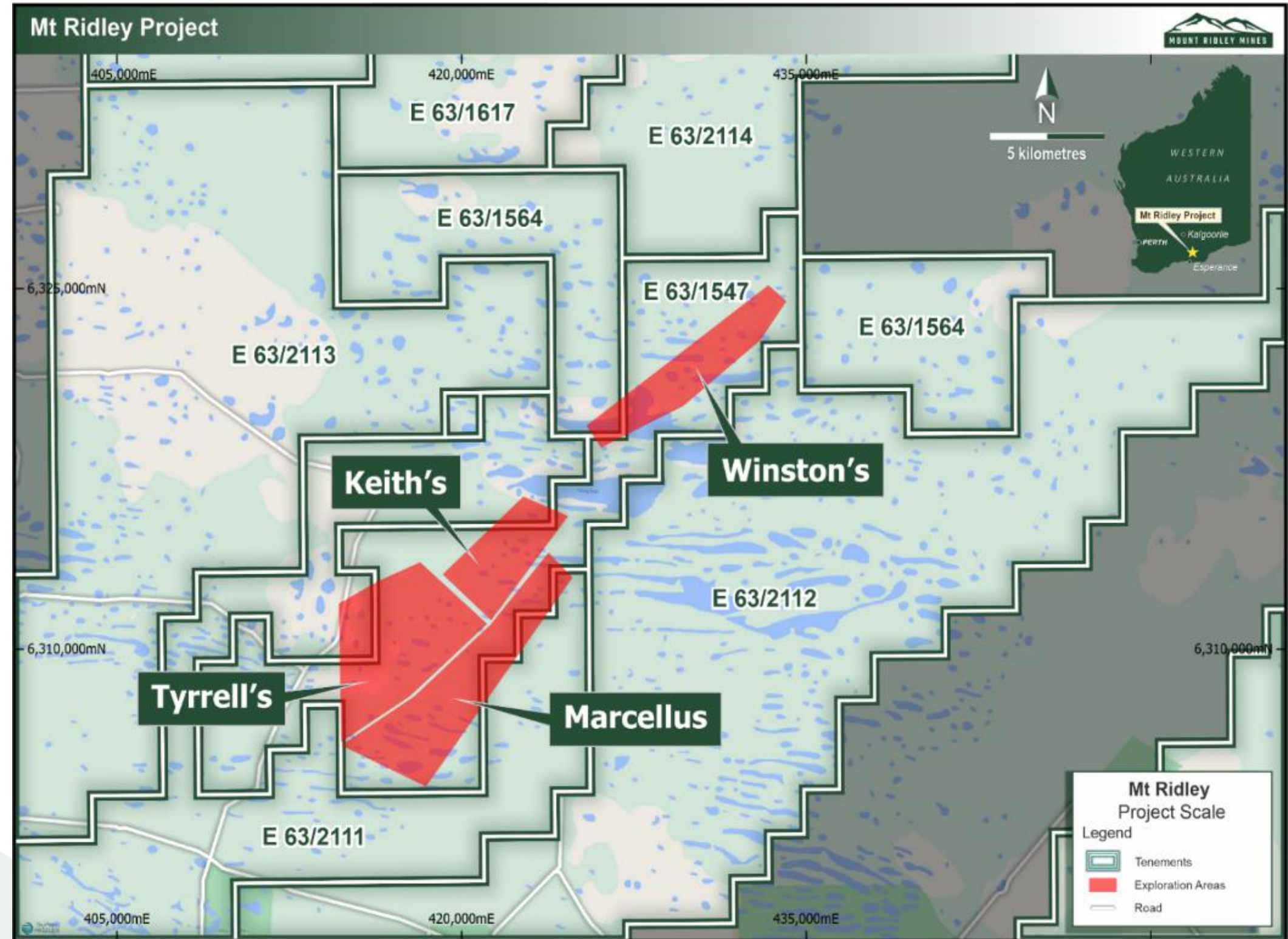


25km by 3km or
2% of Project
area drilled

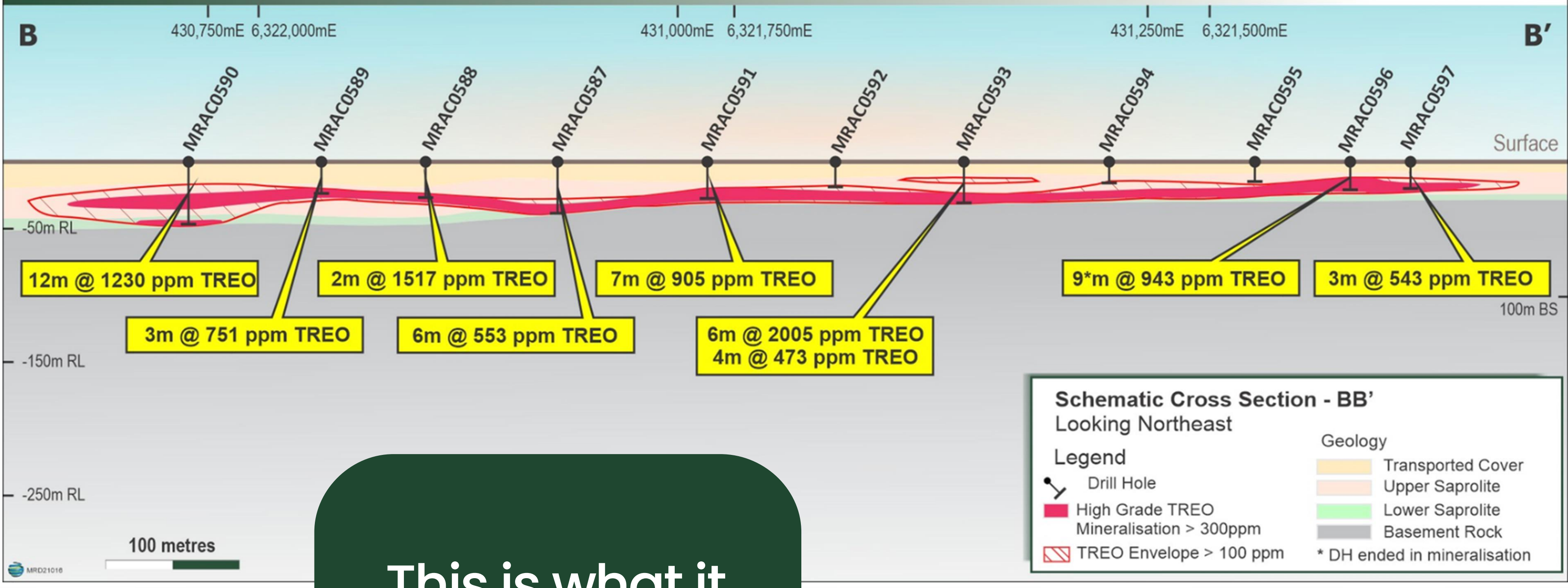
🧭 Drilling returned elevated REE in an area 25km by 3km wide. Open in all directions.

! This represents 2% of the Project area!

🏞️ REE mineralisation hosted in Eocene-aged sediments, of the onshore Eucla (Bremmer) Basin.



Mt Ridley Project - Winston's Prospect



This is what it looks like
(267 holes)



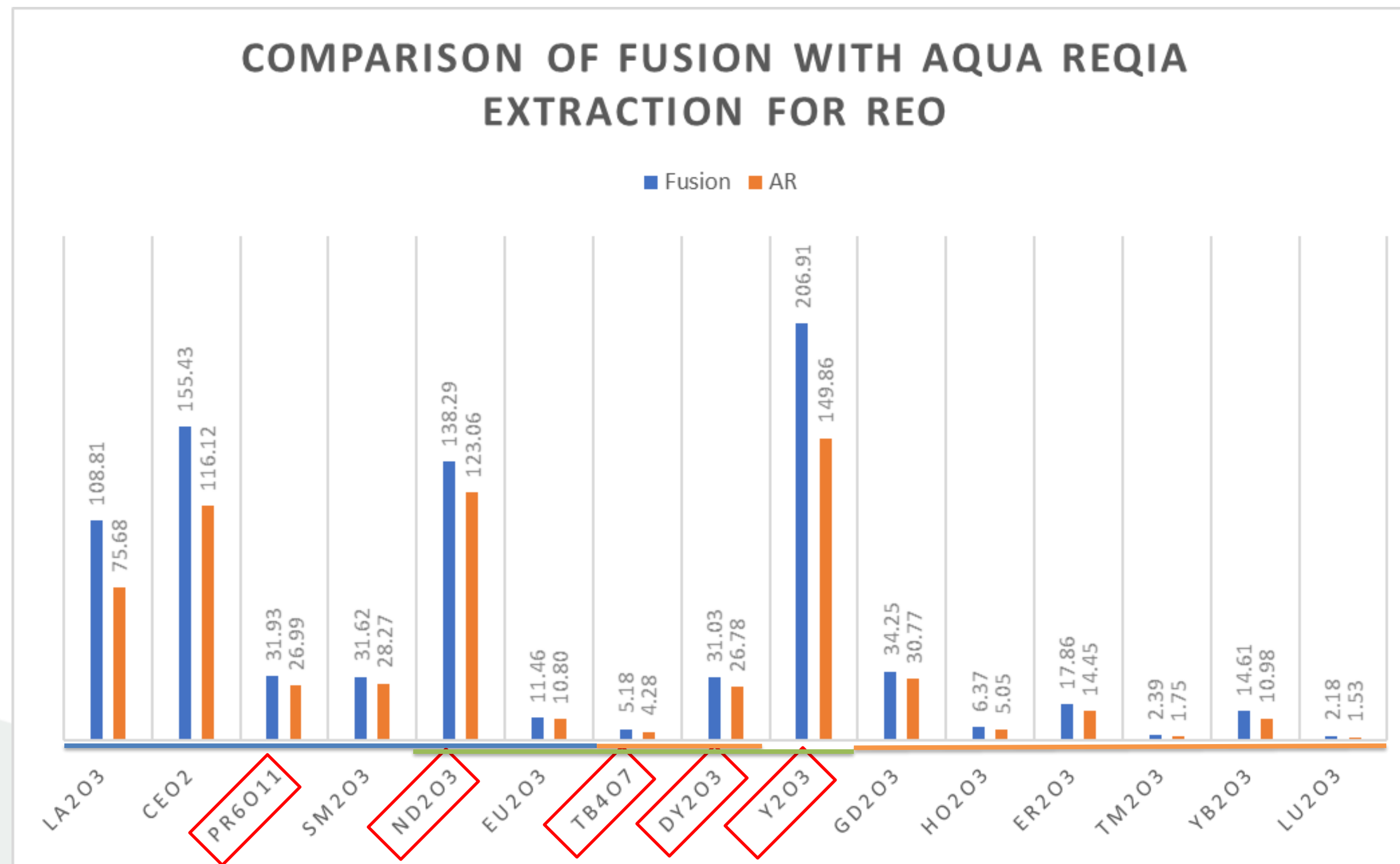
high recoveries from AR partial digestion test (215 holes)

| Winston's | Fusion | Weak Aqua Regia | Recovery |
|-----------------------------|-----------------------|-----------------------|----------|
| MRAC0590: 24 to 36m | 12m at 1,231 ppm TREO | 12m at 1,107 ppm TREO | 89.90% |
| MRAC0593: 24 to 30m | 6m at 2,006 ppm TREO | 6m at 1,980 ppm TREO | 98.70% |
| MRAC0605: 36 to 47m | 11m at 1,623 ppm TREO | 11m at 1,488 ppm TREO | 91.70% |
| MRAC0617: 24 to 36m | 12m at 1,540 ppm TREO | 12m at 1,224 ppm TREO | 79.50% |
| MRAC0637: 16 to 23m | 7m at 1,338 ppm TREO | 7m at 1,141 ppm TREO | 85.30% |
| MRAC0638: 24 to 40m | 16m at 1,581 ppm TREO | 16m at 1,109 ppm TREO | 70.10% |
| MRAC0721: 52 to 68m | 16m at 2,119 ppm TREO | 16m at 1,718 ppm TREO | 81.10% |
| MRAC0439: 40 to 48m | 8m at 2,349 ppm TREO | 8m at 1,871 ppm TREO | 79.65% |
| MRAC0456: 28 to 38m | 10m at 1,850 ppm TREO | 10m at 1,385 ppm TREO | 74.86% |
| MRAC0632: 4 to 17m | 13m at 1,289 ppm TREO | 13m at 940 ppm TREO | 72.92% |
| MRAC0474: 32 to 50m | 18m at 879 ppm TREO | 18m at 788 ppm TREO | 89.65% |
| MRAC0471: 28 to 39m | 11m at 1,259 ppm TREO | 11m at 1,107 ppm TREO | 87.93% |
| MRAC0726: 40 to 47m | 7m at 1,857 ppm TREO | 7m at 1,470 ppm TREO | 79.16% |
| MRAC0667: 36 to 40m | 4m at 3,044 ppm TREO | 4m at 2,513 ppm TREO | 82.56% |
| MRAC0441: 20 to 25m | 5m at 2,301 ppm TREO | 5m at 2,009 ppm TREO | 87.31% |
| Keith's | | | |
| MRAC0484: 32 to 40m | 8m at 3,357 ppm TREO | 8m at 1,916 ppm TREO | 57.10% |
| MRAC0514: 16 to 21m | 5m at 1,261 ppm TREO | 5m at 1,150 ppm TREO | 91.20% |
| MRAC0518: 16 to 21m | 5m at 3,950 ppm TREO | 5m at 2,627 ppm TREO | 66.50% |
| MRAC0568: 32 to 38m | 6m at 1,882 ppm TREO | 6m at 1,720 ppm TREO | 91.40% |
| MRAC0695: 24 to 40m | 16m at 1,136 ppm TREO | 16m at 996 ppm TREO | 87.70% |
| MRAC0711: 16 to 24m | 8m at 2,792 ppm TREO | 8m at 2,215 ppm TREO | 79.30% |
| Marcellus, Tyrrell's | | | |
| MRAC0679: 16 to 28m | 12m at 914 ppm TREO | 12m at 833 ppm TREO | 91.10% |
| MRAC0684: 24 to 31m | 7m at 1,503 ppm TREO | 7m at 903 ppm TREO | 60.10% |

Weak Aqua Regia ("AR") is a partial digestion technique that uses an acid mix of 1 molar hydrochloric acid (HCl) and 1 molar nitric acid (HNO₃).



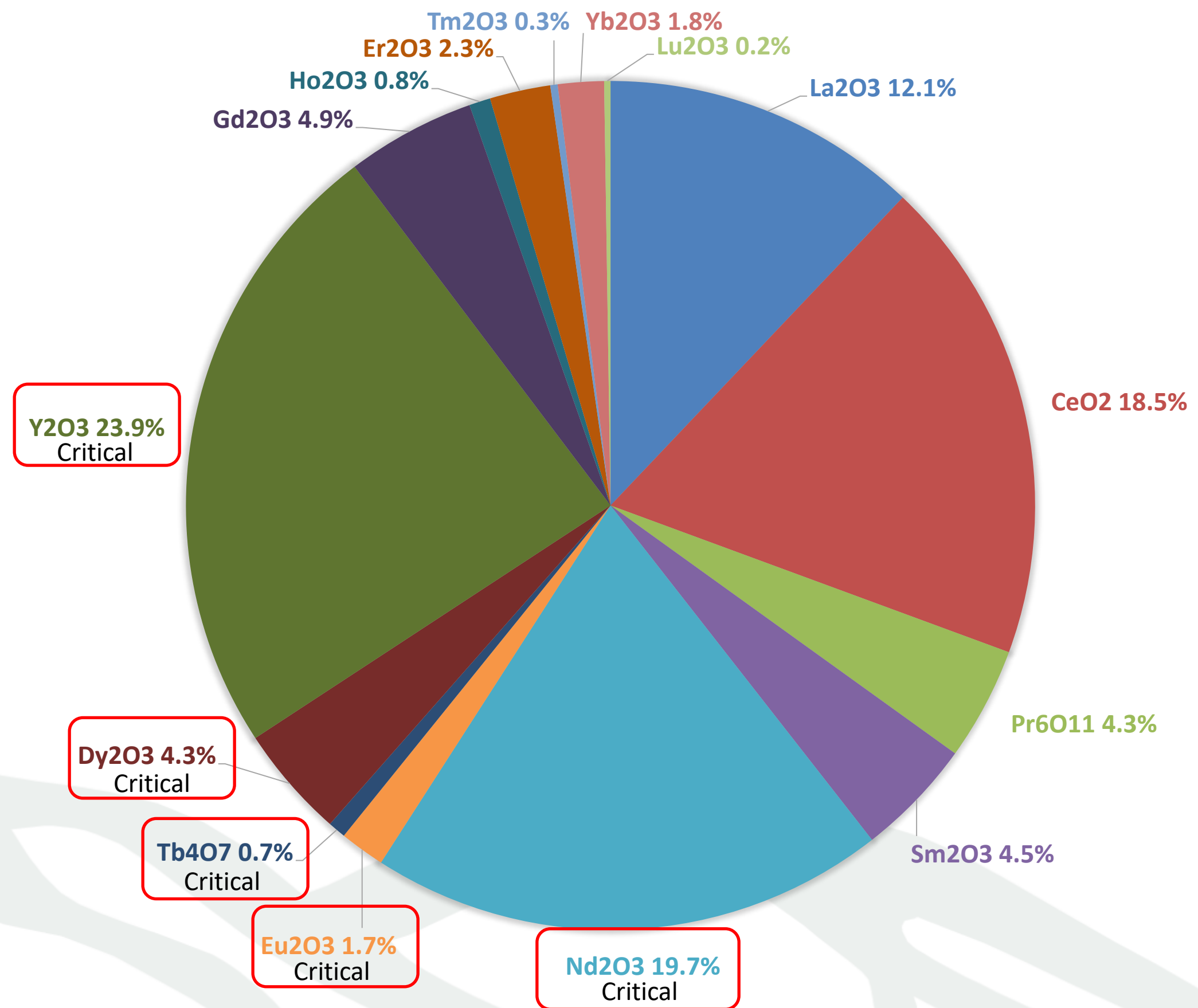
AR partial digestion shows high recovery across all REO



Weak Aqua Regia ("AR") is a partial digestion technique that uses an acid mix of 1 molar hydrochloric acid (HCl) and 1 molar nitric acid (HNO₃).



critical rare earths
50% of Mt Ridley
REE basket



DISTRIBUTION OF RECOVERED RARE EARTH OXIDE BY WEAK AQUA REGIA EXTRACTION





Holistic approach to Heritage Flora and Fauna protection through management plan with ETNTAC (Esperance Tjaltjraak people).



Drilling to expand footprint well beyond the current 25 km x 3 km drilled to date. Mineralisation already known elsewhere within the Bremmer Basin.



Fully funded, major drilling program for 2022, with opening Indicated Resource inventory completed by end of the year.

**drilling
resources
metallurgy**



Corporate Summary

Board and Consultants

| | |
|---------------------------|---------|
| Share Price | \$0.008 |
| Shares (m) | 5,641 |
| Market Capitalisation (m) | \$45.1 |
| Options (m) | 2,048 |
| Cash+ Liquid Securities: | |
| Cash at Bank (m) | \$3.60 |
| Liquid Assets (m) | \$2.15 |
| Unlisted Securities | \$1.25 |
| Total (m) | \$7.00 |



Peter Christie
Chairman

25 yrs Accountant / Public and
resource sector



Graeme Johnston
Non-Executive Director

30 yrs Geologist / Iron, Gold and
Lithium



Johnathon Busing
Company Secretary/CFO

10 yrs accounting/corporate
resource sector



Simon Mitchell
Non-Executive Director

>30 yrs Geologist / Technical &
Corporate



Guy Le Page
Non-Executive Director

30 yrs Exploration and Finance /
Corporate and resource sector



David Crook
Technical Manager

>40 yrs Technical & Corporate
Nickel, Gold, Lithium, Iron



summary

- 🎯 The Mount Ridley Rare Earths Project has the hallmarks of being a large rare earth element deposit.
- 🎯 The exploration model is for an ionic adsorption clay REE –style deposit.
- 🎯 First world jurisdiction and close to infrastructure
- 🎯 The Company is well funded and anticipates an active drilling program in 2022

Contact Information



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Nedlands, WA 6009**

1. REE refers to 14 rare earth elements: cerium (Ce), dysprosium (Dy), erbium (Er), europium (Eu), gadolinium (Gd), holmium (Ho), lanthanum (La), lutetium (Lu), neodymium (Nd), praseodymium (Pr), samarium (Sm), terbium (Tb), thulium (Tm), ytterbium (Yb), plus yttrium (Y)
 2. Critical or CREO means Critical Rare Earth Oxides; the sum of Dy₂O₃, Eu₂O₃, Nd₂O₃, Tb₄O₇, plus Y₂O₃
 3. Alves Dias, P., Bobba, S., Carrara, S., Plazzotta, B. (2020), The role of rare earth elements in wind energy and electric mobility, EUR 30488 EN, Publication Office of the European Union, Luxembourg, ISBN 978-92-79-27016-4, doi:10.2760/303258, JRC122671
 4. Northwest Mining Association quoted in [Kirby Mountain: Rare earths and wind turbines: Yes, it's a problem \(kirbymtn.blogspot.com\)](http://kirbymtn.blogspot.com)
 5. Wind Energy in the United States and Materials Required for the Land-Based Wind Turbine Industry From 2010 Through 2030, by U.S. Geological Survey, U.S. Department of the Interior, Scientific Investigations Report 2011–5036
 6. [Badgingarra Wind Farm | APA Group](#)
 7. [What is decarbonisation? \(westernpower.com.au\)](http://westernpower.com.au)
 8. MRD announcement to ASX dated 21 October 2021. "Encouraging Rare Earth Extraction Results"
 9. AR means weak aqua regia acid, a mix of 1 molar hydrochloric acid (HCl) and 1 molar nitric acid (HNO₃).
- REO means the rare earth element converted to its element oxide equivalent using the factors provided at [Element-to-stoichiometric oxide conversion factors - JCU Australia](#). TREO means the sum of the 15 REO.
 - Light REO or LREO means Light Rare Earth Oxides; the sum of La₂O₃, CeO₂, Pr₆O₁₁, Nd₂O₃, Sm₂O₃, Eu₂O₃.
 - Heavy REO or HREO means Heavy Rare Earth Oxides; the sum of Gd₂O₃, Tb₄O₇, Dy₂O₃, Ho₂O₃, Er₂O₃, Tm₂O₃, Yb₂O₃, Lu₂O₃, Y₂O₃.

Also refer to Mount Ridley Mines Limited announcements to ASX dated:
1 July 2021, 2 August 2021, 13 September 2021, 21 October 2021

notes