

Resources Rising Stars

April 2024



**AUSTRALIAN
RARE EARTHS**
Metals for our future

Developing a portfolio of Energy Transition Metals

Leading the Development of a Multi-
Generational Rare Earths Province in Australia

Securing Australia's Energy Transition Metals for a Sustainable
Future

Travis Beinke – Managing Director & Chief Executive Officer

ASX: AR3

Australian Rare Earths Corporate Presentation – April 2024

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COMPETENT PERSONS STATEMENT

The information in this report that relates to Exploration results is based on information compiled by Australian Rare Earths Limited and reviewed by Mr. Rick Pobjoy who is the Technical Director of the Company and a member of the Australian Institute of Mining and Metallurgy (AusIMM). Mr. Pobjoy has sufficient experience that is relevant to the style of mineralisation, the type of deposit under consideration and to the activities 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. Pobjoy consents to the inclusion in this report of the matters based on this information in the form and context in which it appears.

The Company confirms that it is not aware of any new information or data that materially affects the information included in the relevant market announcement (ASX announcement dated 19 September 2023) and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement (ASX announcement dated 19 September 2023) continue to apply and have not materially changed. The company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement (ASX announcement dated 19 September 2023).

The information in this report that relates to metallurgical results is based on information compiled by Australian Rare Earths Limited and reviewed by Mr. Jon Weir who is the Technical Director of Wallbridge Gilbert Aztec and a member of the Australian Institute of Mining and Metallurgy (AusIMM). Mr. Weir has sufficient experience that is relevant to the metallurgical testing which was 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. Weir consents to the inclusion in this report of the matters based on this information in the form and context in which it appears.



Developing a Portfolio of Energy Transition Metals

AR3: Leading the Development of a Multi-Generational clay hosted Rare Earths Province in Australia

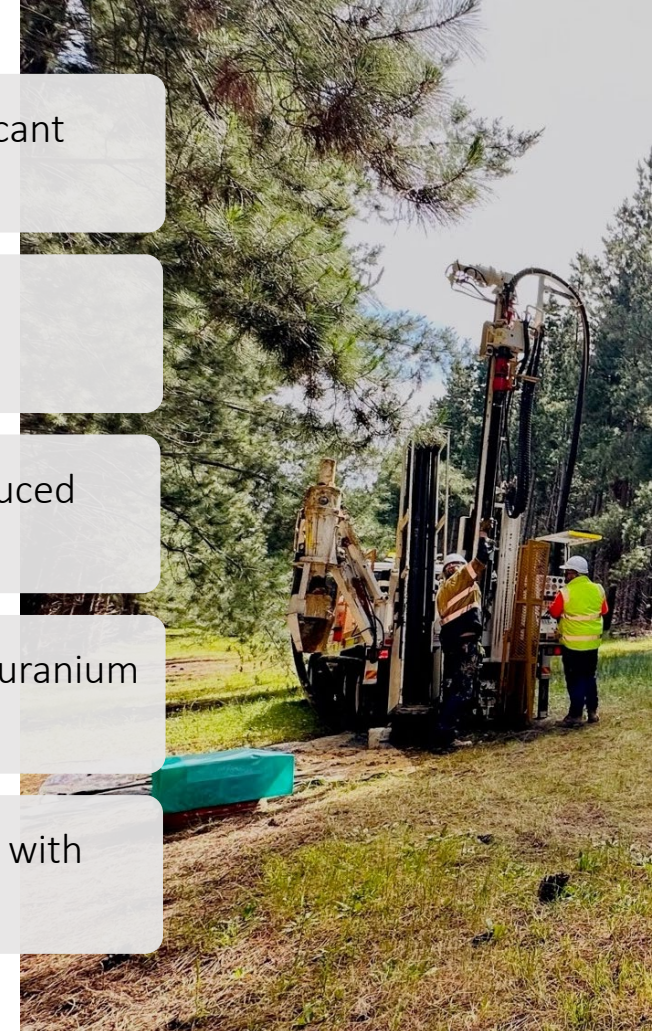
01 Significant Resource & Exploration Upside: Large, rare earth resource at Koppamurra with significant exploration target for expansion (186Mt @ 712ppm TREO with target of 340Mt to 3.1Bt).¹

02 Magnet Rare Earth Recoveries: High recoveries for critical magnet rare earths Nd, Pr, Dy & Tb during testwork.

03 Sustainable Development: Evaluating heap leaching for enhanced environmental credentials (reduced water consumption & energy use, rapid & progressive land rehabilitation, lower capex & opex).

04 Diversified Energy Transition Metals Portfolio: Expansion into other energy transition metals via uranium exploration, with the option to acquire the highly prospective Overland Project in South Australia.

05 Growth Focused Strategy: Diversified exploration projects across South Australia and Queensland with significant exploration upside and blue-sky potential.



¹ The potential quantity and grade of the Exploration Target is conceptual in nature. Further exploration is required to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource

Team & Corporate Snapshot

Experienced team, strong backing and well-funded



Angus Barker
Independent Non-Executive
Chairman

20 years experience as a mergers and acquisitions and capital markets adviser, working with global investment banks in Hong Kong, Australia and the United Kingdom.

- B.Com (Hons), University of Melbourne
- M.Phil, University of Cambridge Graduate
- Member of Australian Institute of Company Director
- Trusted adviser to corporations and governments for decades.
- Current NED of WAM Capital.



Pauline Carr
Independent Non-Executive
Director

Experienced company director in compliance, governance and risk over 30 years in resources sector.

- Chancellor of UniSA,
- Chancellor Transition Council, new Adelaide University
- Chair of National Pharmacies
- NED Highfield Resources
- Previous roles with Normandy Mining and Newmont



Bryn Jones
Non-Executive Director
Co-Founder of AR3

Skilled in process and technology development, specialising in uranium.

- MD entX Ltd, NED Boss Energy, NED DevEx Resources
- Previous roles with Laramide Resources, SO4 and Uranium Equities



Travis Beinke
Managing Director & CEO

Over 20 years' experience with both Australian and internationally listed resource companies. Broad range of strategic, commercial, finance and business development experience, particularly in exploration and growth projects.

- Previous roles with OZ Minerals, Ensign Energy Services and ExxonMobil Australia

Share price

\$0.12

3 April 2024

Shares on issue

155.9m

Market capitalisation

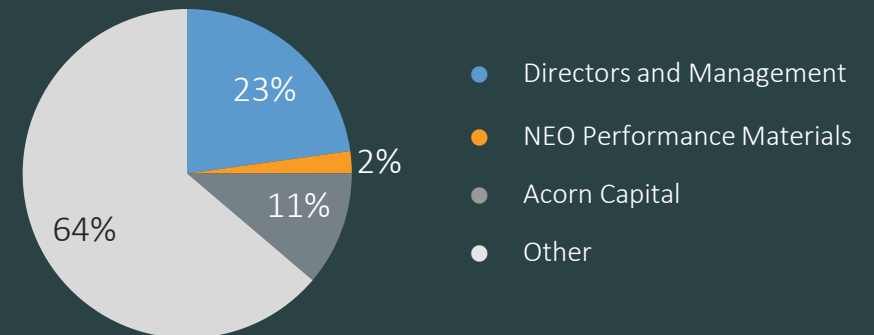
\$18.7m

Cash

\$10.1m

31 Dec 2023

DISTRIBUTION OF SHAREHOLDERS



Diversified Energy Transition Project Portfolio

Securing Australia’s Energy Transition Metals for a Sustainable Future



Koppamurra REE Development Project:

- 100% ownership spanning 7600km²
- Located ~300km SE of Adelaide, in southern Australia and Victoria
- Substantial JORC Resource of 186Mt at 712ppm TREO
- Significant Exploration Target range 340Mt to 3.1Bt

Overland Uranium Project:

- 1,981km² prospective tenure in new potential uranium province
- Located in South Australia, ~220km south of Honeymoon Mine

North Queensland REE Projects:

- Dalrymple Project ~1200km² of prospective tenure
- Kennedy Province ~1100km² of tenure includes the Massie Creek, Oaky Valley, Sandy Tate and Forty Mile Scrub prospects

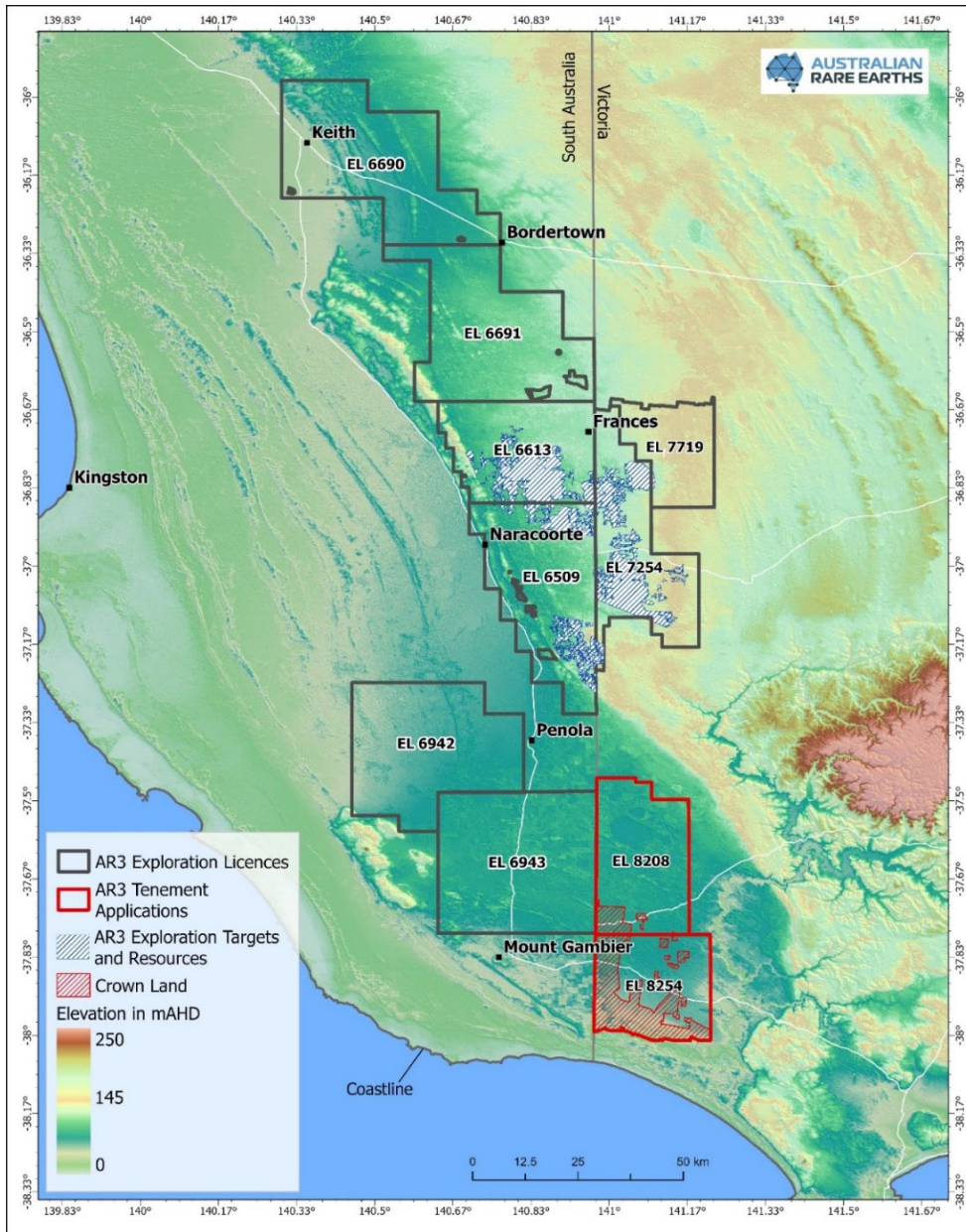
Koppamurra Rare Earths Province

Leading the Development of a Multi-Generational clay hosted Rare Earths Province in Australia

Koppamurra: Australia's most advanced ionic clay-hosted Rare Earths project

Multi-generational Rare Earth Province Potential

- **100%-owned** clay-hosted critical rare earths deposit located ~300km SE of Adelaide, in southern Australia
- **Multi-generational province:** one of the largest and most advanced ionic clay-hosted rare earths provinces in Australia spanning 7,600km²
- **Total Mineral Resource Estimate (MRE):** of 186Mt with an average TREO grade of 712ppm
- **Resource Growth Potential:** Exploration Target of up to 3.1Bt
- **Cost Advantage:** Favourable capex comparisons and low technical risk for clay-hosted projects



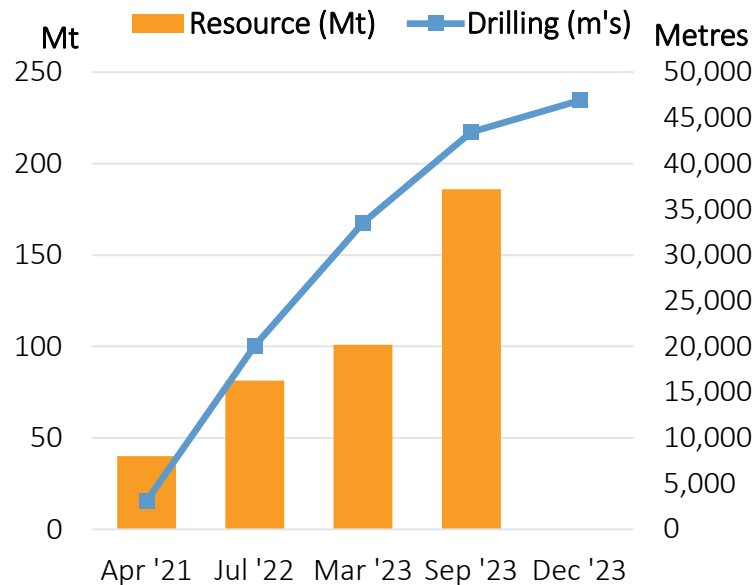
Koppamurra project area, SA and Victoria

Koppamurra Mineral Resource and Exploration Target

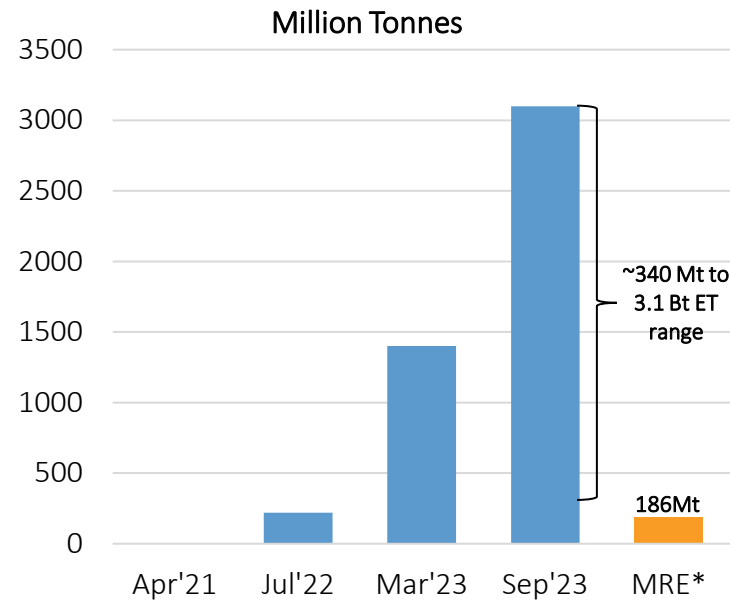
Demonstrating Province Potential with Increased Mineral Resource

- Mineral Resource Estimate **increased 84%** to 186 Mt at 712 TREO in Sep'23
- Contains all four key REEs including the **strategically important heavy rare earths Dysprosium & Terbium**
- Total of ~65,000 metres drilled since 2021

Mineral Resource Estimate*

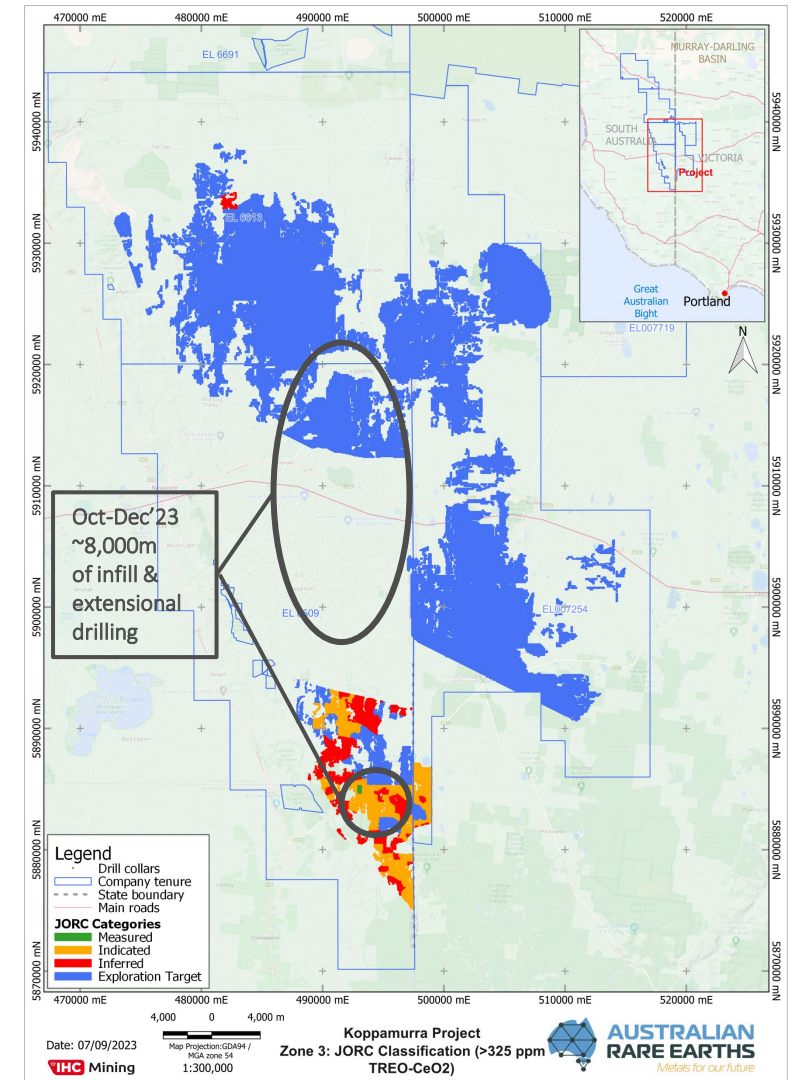


Exploration Target*



* Mineral Resource Estimate and Exploration Target as at September 2023

Koppamurra project area JORC Mineral Resource categories



Progressive Heap Leach Development Pathway at Koppamurra

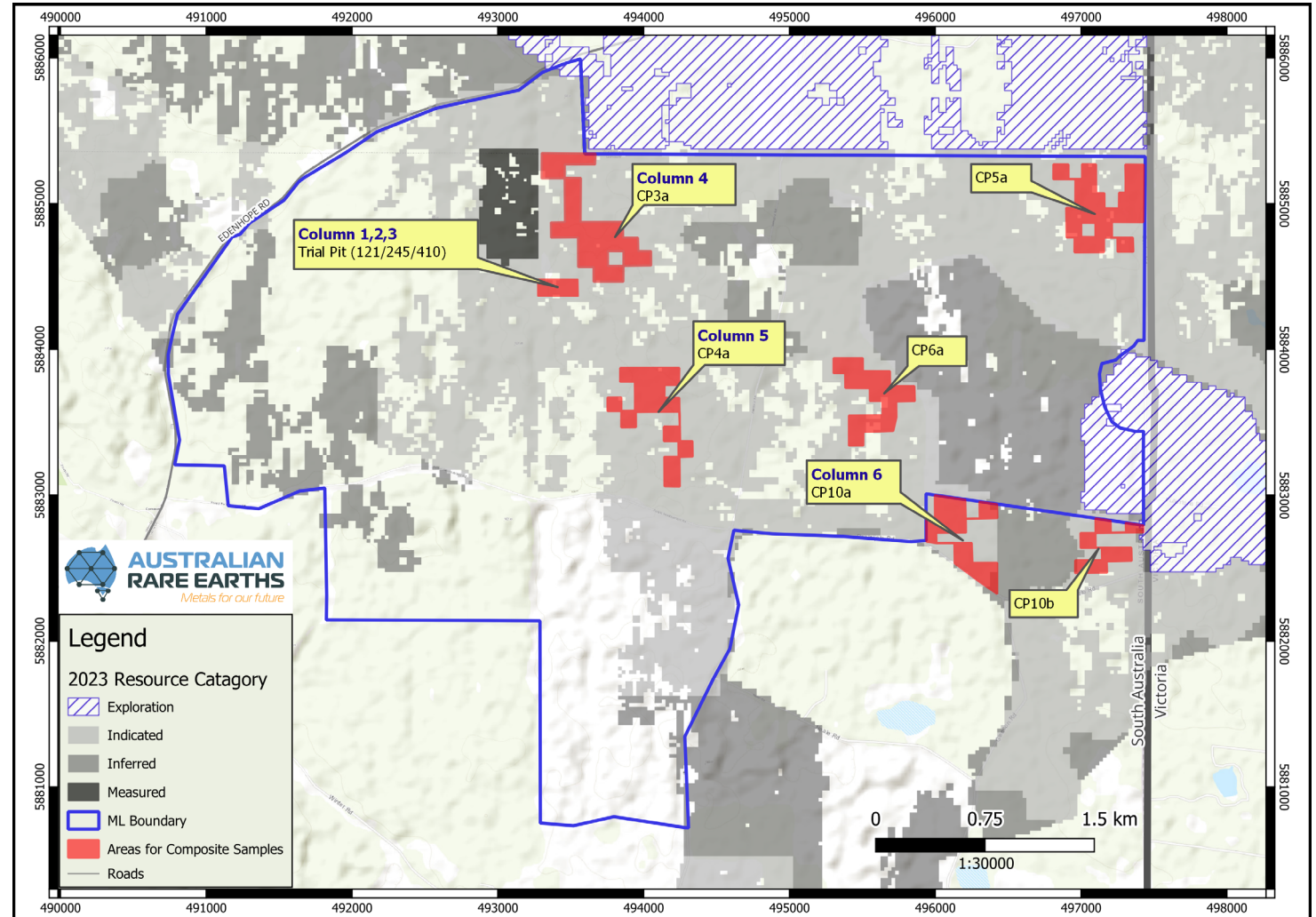
Initially targeting High-grade subset of Mineral Resource

- **High recoveries for Magnet Rare Earths up to 72%** (ranging from 42% to 72%) via recent column leach testwork¹
- **Lower capital & operating costs** compared to tank leach alternative
- **Easy expansion and scalability** across the province
- Validates potential **development pathway**
- **\$771k government funding** received for metallurgical testwork
- **Non-binding MOU with NEO** Performance Materials for an Offtake Agreement



¹ Using 0.3M magnesium sulfate with H₂SO₄ added to achieve a target pH or acid addition

Location of the bulk samples for the column test work.

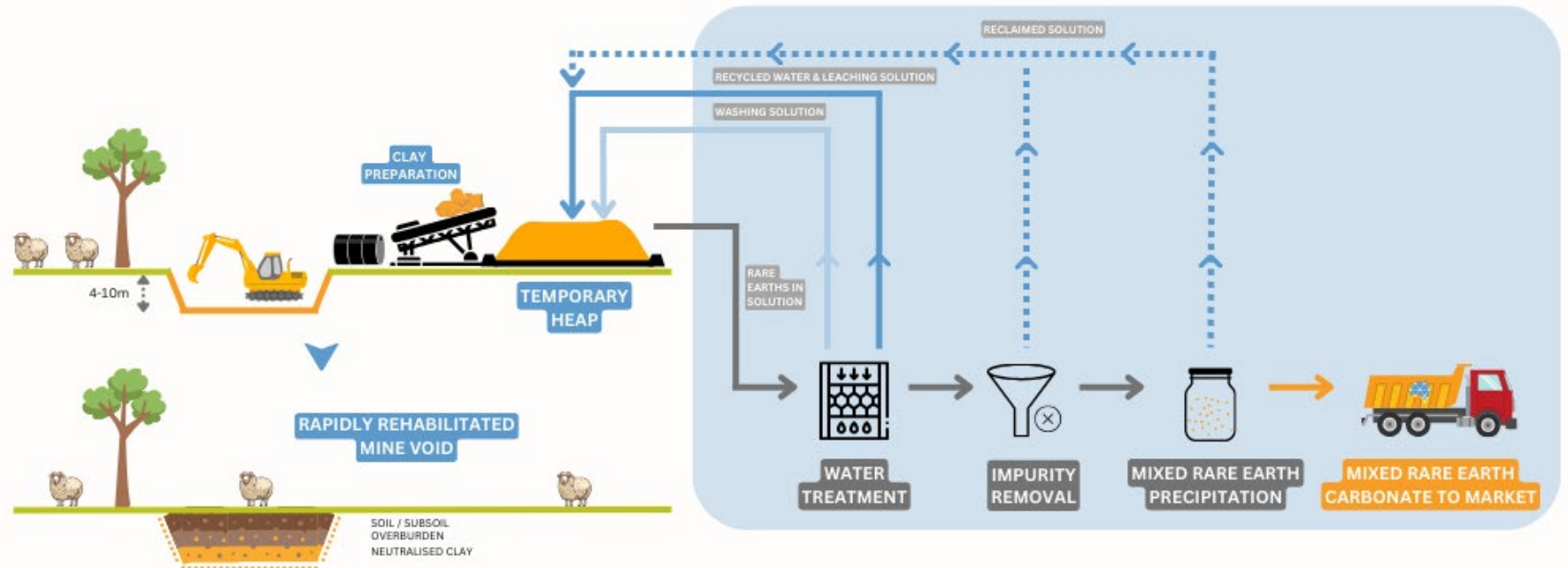


Sustainable Development Pathway for High-Grade Rare Earth Clays

Heap Leaching: A Scalable, Efficient & Sustainable Solution for Koppamurra

KOPPAMURRA CONCEPTUAL PROJECT FLOW SHEET

- Scalable, efficient REE production pathway with staged satellite developments
- Improved environmental sustainability characteristics:
 - Less water & energy usage
 - Enables rapid, progressive land rehabilitation



A SIMPLE PROCESS WITH LOW TECHNICAL RISKS AND IS ENVIRONMENTALLY SUSTAINABLE

Mine Design Incorporating Progressive Land Rehabilitation

Successful Trial Mining and Rehabilitation Program



April 2022



September 2022



September 2023

Koppamurra Next Steps

01

Flowsheet optimisation including further Heap Leach testwork



02

Finalise baseline environment baseline studies and progress work to support initial Mine Lease Application



03

Exploration Target and Resource updates based on recent drilling due in **H2'24**



04

Rapid exploration assessment of recently granted southern tenements



05

Continue to build strong stakeholder engagement



Uranium Portfolio

Overland Uranium Project: Untapped Uranium Exploration Potential

AR3 Strengthens Energy Transition Metals Focus with Overland Acquisition

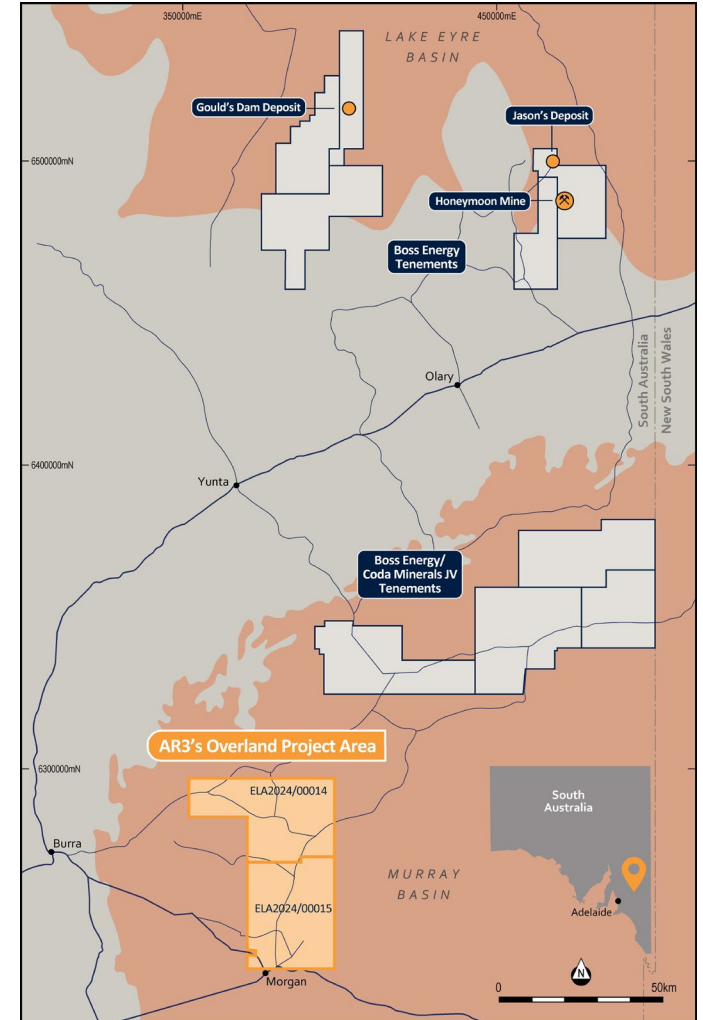
- Leverages **AR3's in-house expertise in uranium exploration and development**
- Positions AR3 for a **diversified portfolio of energy transition metals**
- Capability and capacity to advance uranium exploration alongside REE development

Overland Project:

- **1,981km²** of tenure prospective for **uranium**
- Located in South Australia, **~220km south of Honeymoon Mine**
- Targeting paleochannel sediments in **highly prospective new uranium province**
- Targets Renmark Group sediments, similar to successful Lake Eyre Basin
- **Option** to acquire 100% of project upon granting of exploration license

Next Steps:

- Preparation of exploration PEPR; compilation/interpretation of geological and geophysical data; planning for geophysical surveys

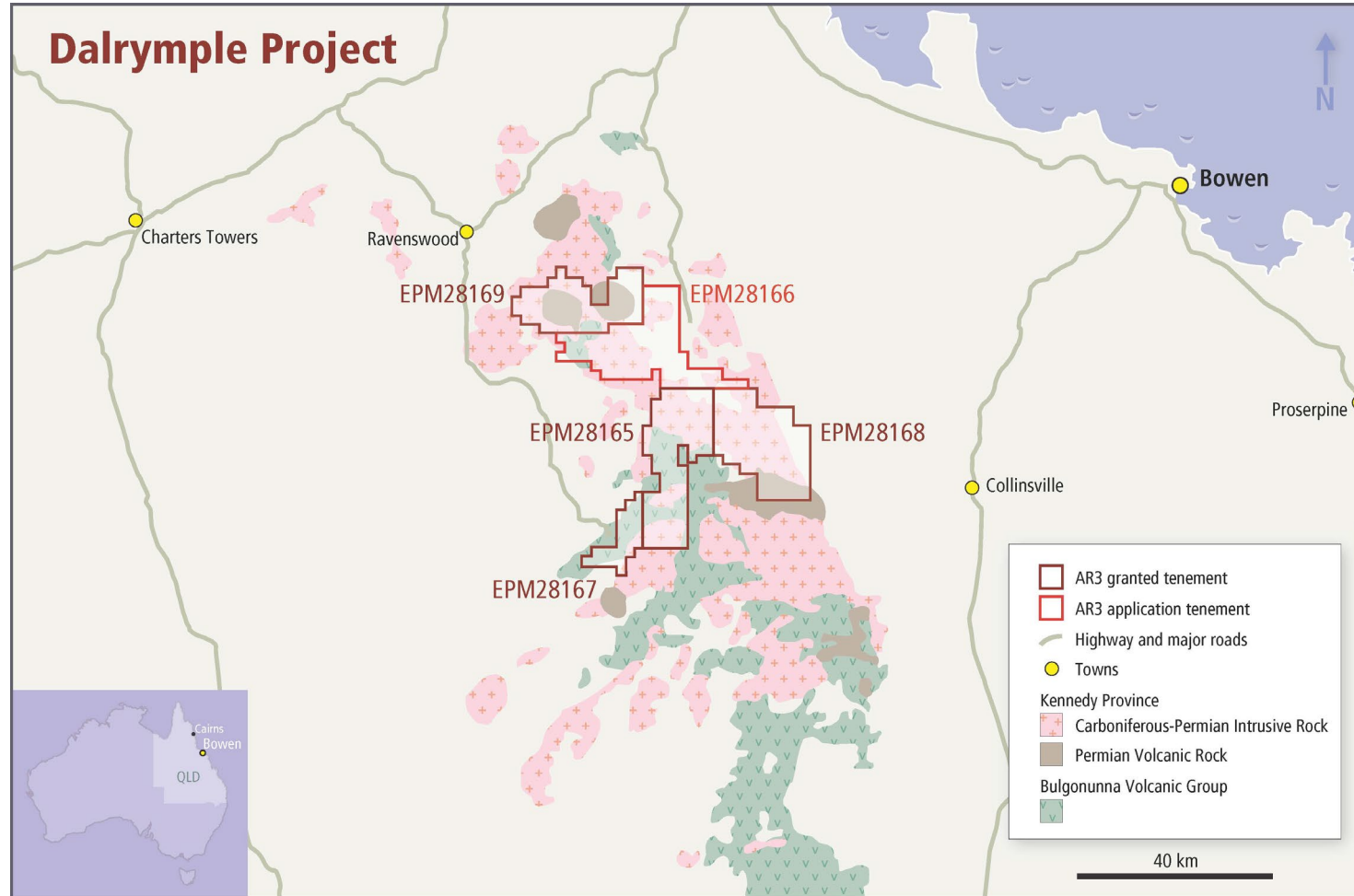


AR3's Overland Project location map

North Queensland Portfolio

Creating a Rare Earth Exploration Portfolio

We've built a team to identify and rapidly evaluate ionic clay rare earths prospects



Dalrymple location, North Queensland

Dalrymple Project

- ~1200km² of exploration tenure once all applications are granted
- Highly accessible ground near existing road and rail infrastructure
- Regional exploration by others in the sector has identified clay hosted rare earth mineral intersections of significance with positive metallurgical recoveries



Next Steps

Follow-up sampling and metallurgical test work

Diversified Rare Earth Exploration portfolio

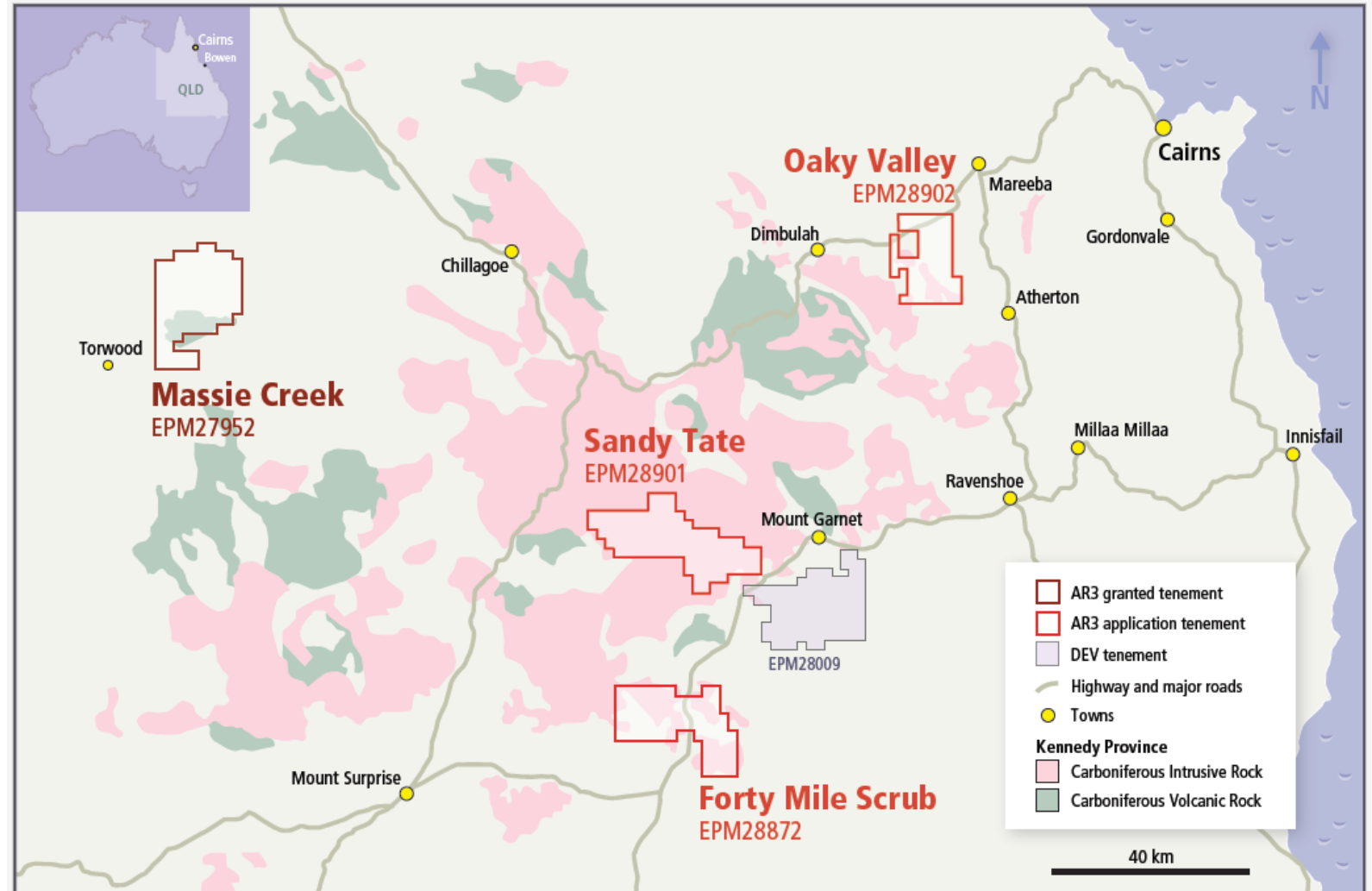
Kennedy Province

Prospect locations in Kennedy Province, North Queensland

- Four exploration prospects in emerging highly prospective ionic clay hosted rare earths region
- ~1100km² of exploration tenure once all applications are granted
- Regional exploration by others in the sector has identified clay hosted rare earth mineral intersections of significance with positive metallurgical recoveries

Next steps

- Once Exploration Licence applications are granted, commence rapid, on-ground, exploration assessment



Summary: Developing a Portfolio of Energy Transition Metals

AR3: A Leading Multi-generational Rare Earth Developer with Expansion into Uranium Exploration

Koppamurra REE Development Project:

- Large Mineral Resource, developing a multi-generational rare earth Province
- Scalable, efficient and sustainable development pathway
- Leading the development of clay hosted rare earths in Australia

01

Overland Uranium Project:

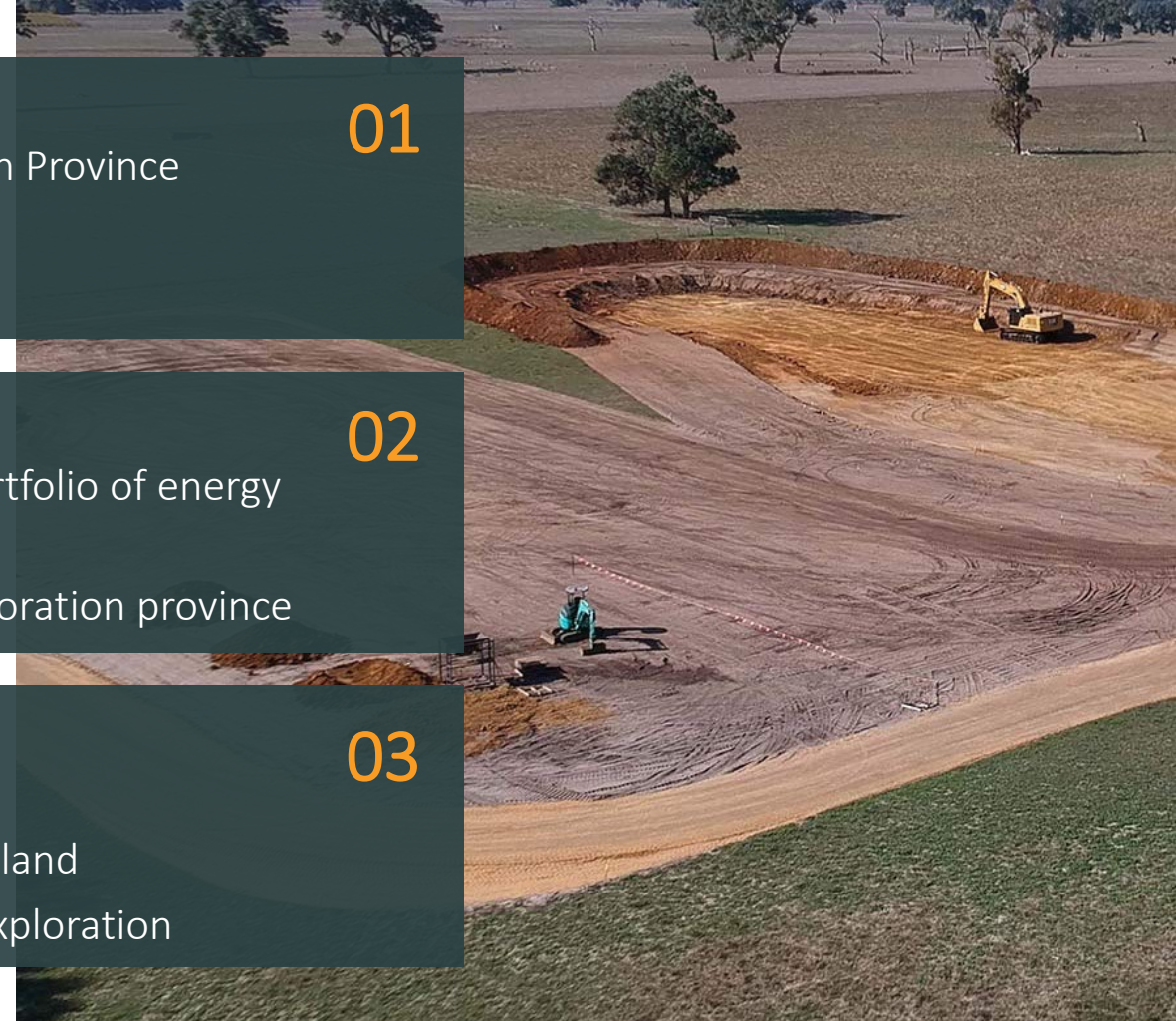
- Leverages in-house expertise to position AR3 with a diversified portfolio of energy transition metals projects
- Large ground holding in a frontier highly prospective uranium exploration province

02

Growth focused strategy:

- Pathway to be Australia's first ionic clay hosted rare earths mine
- Diversified exploration projects across South Australia and Queensland
- Blue-sky potential at the Overland project with frontier uranium exploration

03





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