



**AUSTRALIAN  
RARE EARTHS**  
*Metals for our future*

Corporate Presentation

Noosa Mining Conference, November 2024

# Developing a Portfolio of Energy Transition Metals

- Developing Australia's Next Rare Earths Province
- Exploring a Strategic Portfolio of Uranium Assets in South Australia

Travis Beinke – Managing Director & Chief Executive Officer

**ASX: AR3**



# AR3 Corporate Presentation

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## COMPETENT PERSONS STATEMENT

The information in this report that relates to Exploration results and the Exploration Target is based on information compiled by Australian Rare Earths Limited and reviewed by Mr. Rick Pobjoy who is the Chief Technical Officer 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 Mineral Resource estimate and Exploration Target information included in the relevant market announcement (ASX announcement dated 30 September 2024) and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement (ASX announcement dated 30 September 2024) 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 30 September 2024).

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 Multi-generational Rare Earths Province with Expansion into Uranium Exploration

- 01 **Significant Rare Earth Resource:** 236Mt @ 748ppm TREO<sup>1</sup> with significant upside potential (Exploration Target ranges from 500Mt at 780 ppm to 3.2Bt at 520ppm TREO)<sup>2</sup>; resource includes 68Mt grading over 1000ppm TREO
- 02 **Sustainable Development Approach:** Advancing the Koppamurra Rare Earths project with focus on progressive heap leach and rapid rehabilitation approach for reduced environmental impact and lower capex.
- 03 **Expansion into Uranium Exploration:** Overland Project: 3,000 km<sup>2</sup> prospective uranium tenure in the Murray Basin of South Australia; Triggs Bore and Hamilton Creek: Securing 450 km<sup>2</sup> tenure to unlock untapped uranium potential in the Callabonna Sub-basin.
- 04 **Inaugural Uranium Drill Program:** First drill program targeting sedimentary hosted uranium at Overland, a frontier uranium play commenced in October'24
- 05 **Growth Focused Strategy:** Multiple exploration projects across South Australia and Queensland with significant potential for future discoveries.



<sup>1</sup> Mineral Resource estimate of 236Mt at 748ppm, comprises of 0.7Mt at 813ppm Measured, 112Mt at 750ppm Indicated and 123Mt at 747ppm Inferred TREO

<sup>2</sup> 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**  
Chairman

Over 30 years of professional experience, including at top-tier global investment banks and as a senior adviser to Australian Government Ministers in key economic portfolios.

- Director of Vulcan Energy Resources
- Director 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 Adelaide University
- Chair of National Pharmacies
- NED Highfield Resources
- Previous roles with Normandy Mining and Newmont



**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



**Rick Pobjoy**  
Chief Technical Officer & Co-  
Founder of AR3

Geologist with more 25 years' experience in the mining and minerals exploration industry.

- Extensive experience in definition, development, and production from sedimentary hosted deposits.
- Successful project delivery for VHM Exploration, Murray Zircon, and Heathgate Resources.

Share price

**\$0.13**

8 November 2024

Shares on issue

**158m**

Market capitalisation

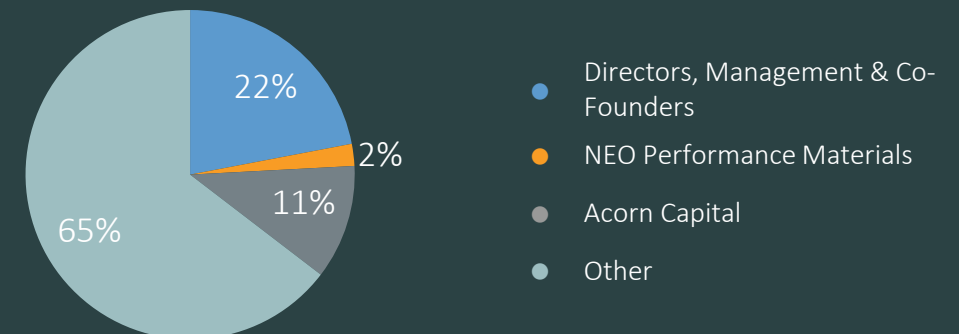
**\$20.5m**

Cash

**\$5.6m\***

30 Sep 2024

Distribution Of Shareholders



\* Excludes \$0.7m R&D cash refund received 10 October 2024



# Diversified Energy Transition Project Portfolio

Securing Australia's Energy Transition Metals for a Sustainable Future



## Koppamurra REE Development Project:

- 100% ownership spanning 7,600km<sup>2</sup>
- Located ~300km SE of Adelaide, in southern Australia and Victoria
- Resource of 236Mt @ 748ppm TREO<sup>1</sup> with significant upside potential (Exploration Target ranges from 500Mt at 780 ppm to 3.2Bt at 520ppm TREO)

## South Australia Uranium Projects:

- Overland Project: ~3,000km<sup>2</sup> prospective tenure, ~200km south of Honeymoon Mine; Multiple drill targets identified in a frontier uranium play, first drill program commenced October'24
- Triggs Bore & Hamilton Creek: strategic ~450km<sup>2</sup> brownfields exploration tenure with drill-ready follow-up uranium targets

## North Queensland REE Projects:

- Dalrymple Project ~1,200km<sup>2</sup> of prospective tenure
- Kennedy Province ~1,100km<sup>2</sup> of tenure includes the Massie Creek, Oaky Valley, Sandy Tate and Forty Mile Scrub prospects

<sup>1</sup> Mineral Resource estimate of 236Mt at 748ppm, comprises of 0.7Mt at 813ppm Measured, 112Mt at 750ppm Indicated and 123Mt at 747ppm Inferred TREO



# Koppamurra Rare Earths Province

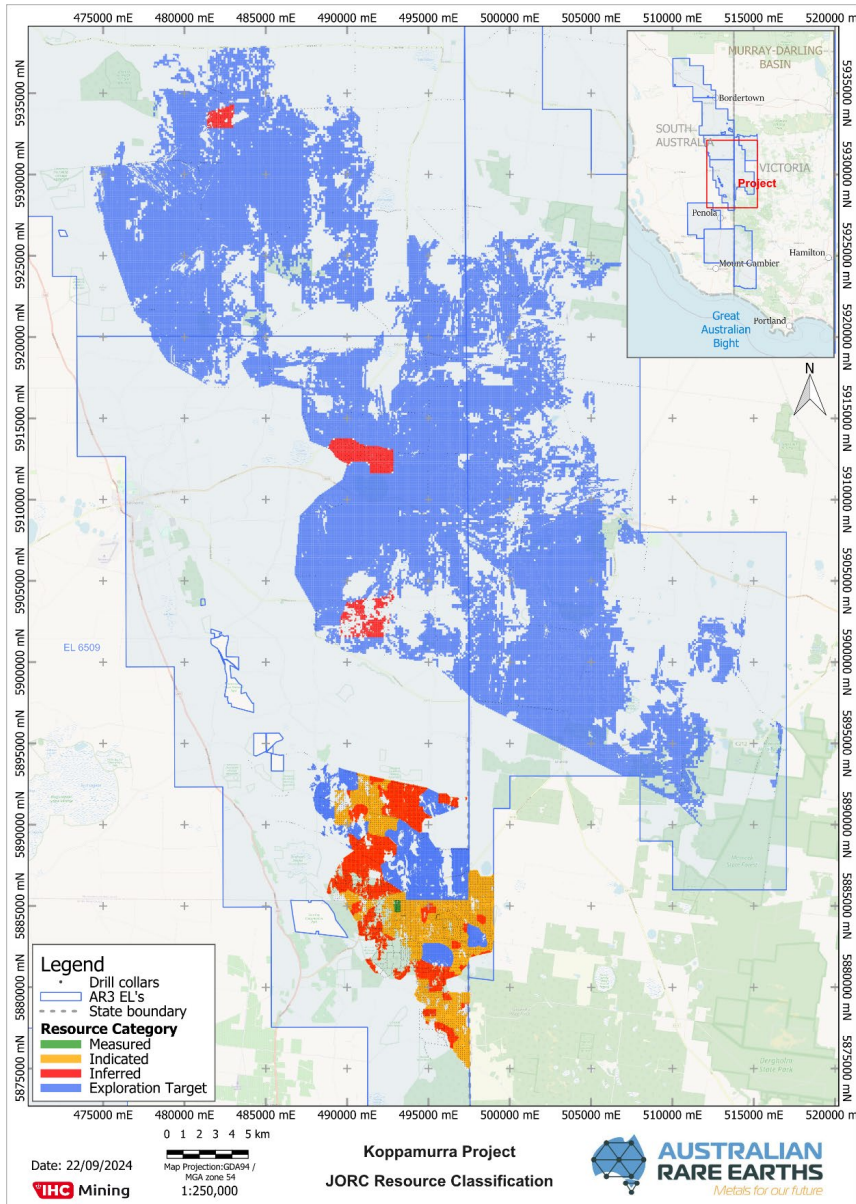
Leading the Development of a Multi-  
Generational clay hosted Rare Earths  
Province in Australia



# Koppamurra: Advanced ionic clay-hosted Rare Earths project

## Multi-generational Rare Earth Province Potential

- **100%-owned** clay-hosted critical REE deposit ~300km SE of Adelaide
- **Multi-generational province:** one of the largest ionic clay-hosted REE provinces spanning 7,600km<sup>2</sup>
- **Total Mineral Resource estimate (MRE):** of 236Mt with an average TREO grade of 748ppm<sup>1</sup>
- **Resource Growth Potential:** Exploration Target ranges from 500Mt at 780 ppm to 3.2Bt at 520ppm TREO
- **Cost Advantage:** Favourable capex and low technical risk
- **Potential Offtake agreement:** (Non-binding MOU with NEO)



Koppamurra Mineral Resource and Exploration Target area, SA and Victoria

<sup>1</sup> Mineral Resource estimate of 236Mt at 748ppm, comprises of 0.7Mt at 813ppm Measured, 112Mt at 750ppm Indicated and 123Mt at 747ppm Inferred TREO

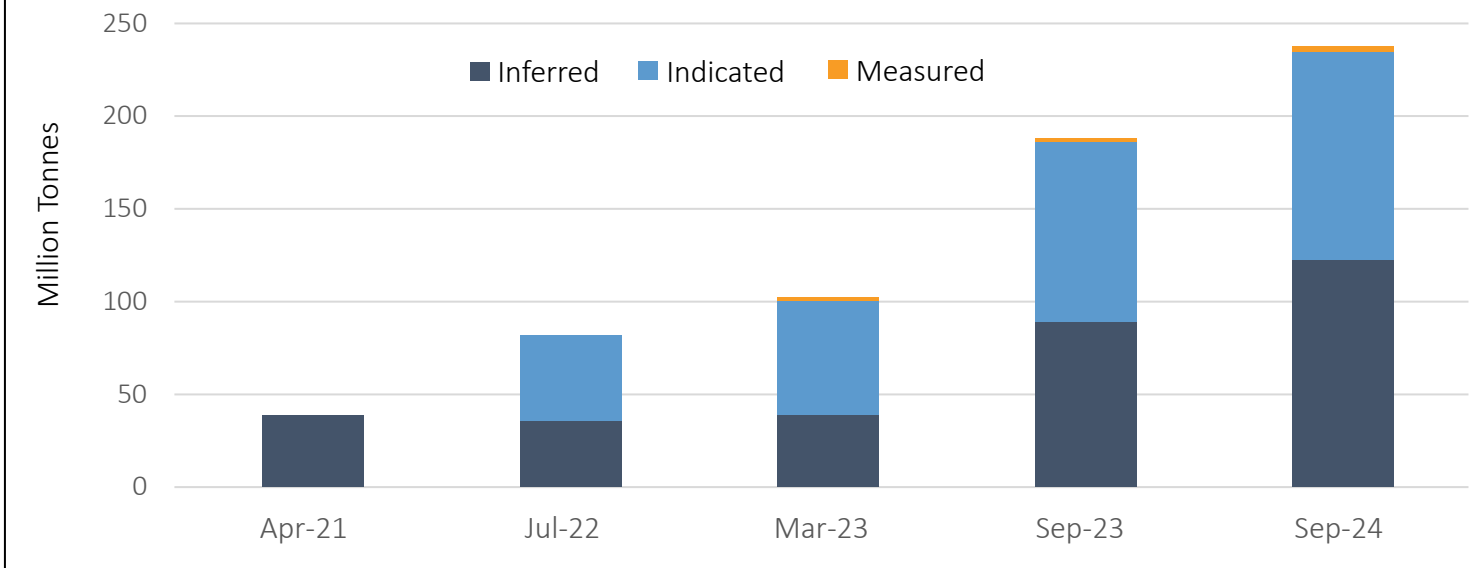


# Koppamurra Mineral Resource and Exploration Target

## Demonstrating Province Potential with Increased Mineral Resource

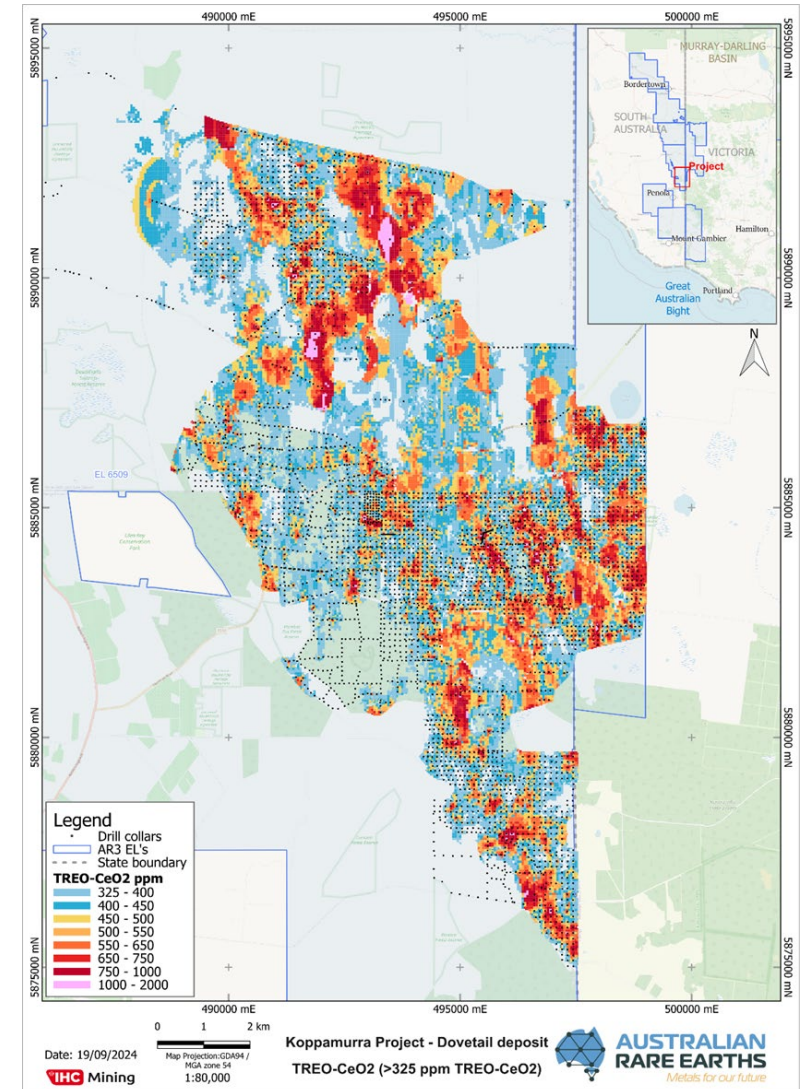
- Mineral Resource estimate **increased 27%** to 236 Mt at 748 TREO<sup>1</sup> in Sep'24
- Includes higher-grade subset of **68Mt grading over 1000ppm**
- Valuable **Magnet Rare Earth ~25%** of TREO with all **four key REEs present** (including heavy REE's **Dysprosium & Terbium ~3%**)
- Total of ~64,000 metres drilled since 2021

### Mineral Resource Estimate<sup>1</sup>



<sup>1</sup> Mineral Resource estimate of 236Mt at 748ppm, comprises of 0.7Mt at 813ppm Measured, 112Mt at 750ppm Indicated and 123Mt at 747ppm Inferred TREO

Heat map showing high value TREO (TREO-CeO<sub>2</sub>) for the southern Resource Area

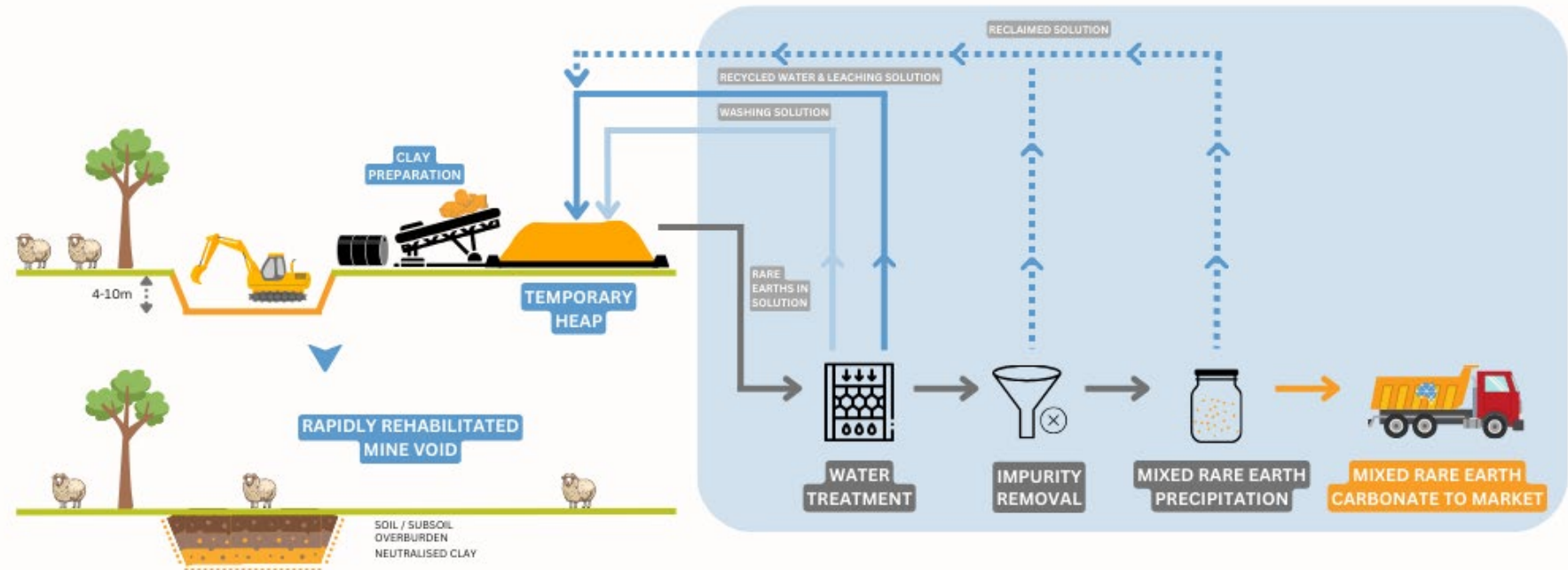


# Sustainable Development Pathway for High-Grade Rare Earth Clays

Progressive Heap Leach and Rapid Rehabilitation: A Scalable, Efficient & Sustainable Solution for Koppamurra

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

## KOPPAMURRA CONCEPTUAL PROJECT FLOW SHEET



A SIMPLE PROCESS WITH LOW TECHNICAL RISKS  
AND IS ENVIRONMENTALLY SUSTAINABLE



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# Mine Design Incorporating Progressive Land Rehabilitation

Successful Bulk Sample Pit and Rehabilitation Program



April 2022



September 2022



August 2024

# 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

Advance project studies and engineering



04

Ongoing exploration assessment of recently granted southern tenements



05

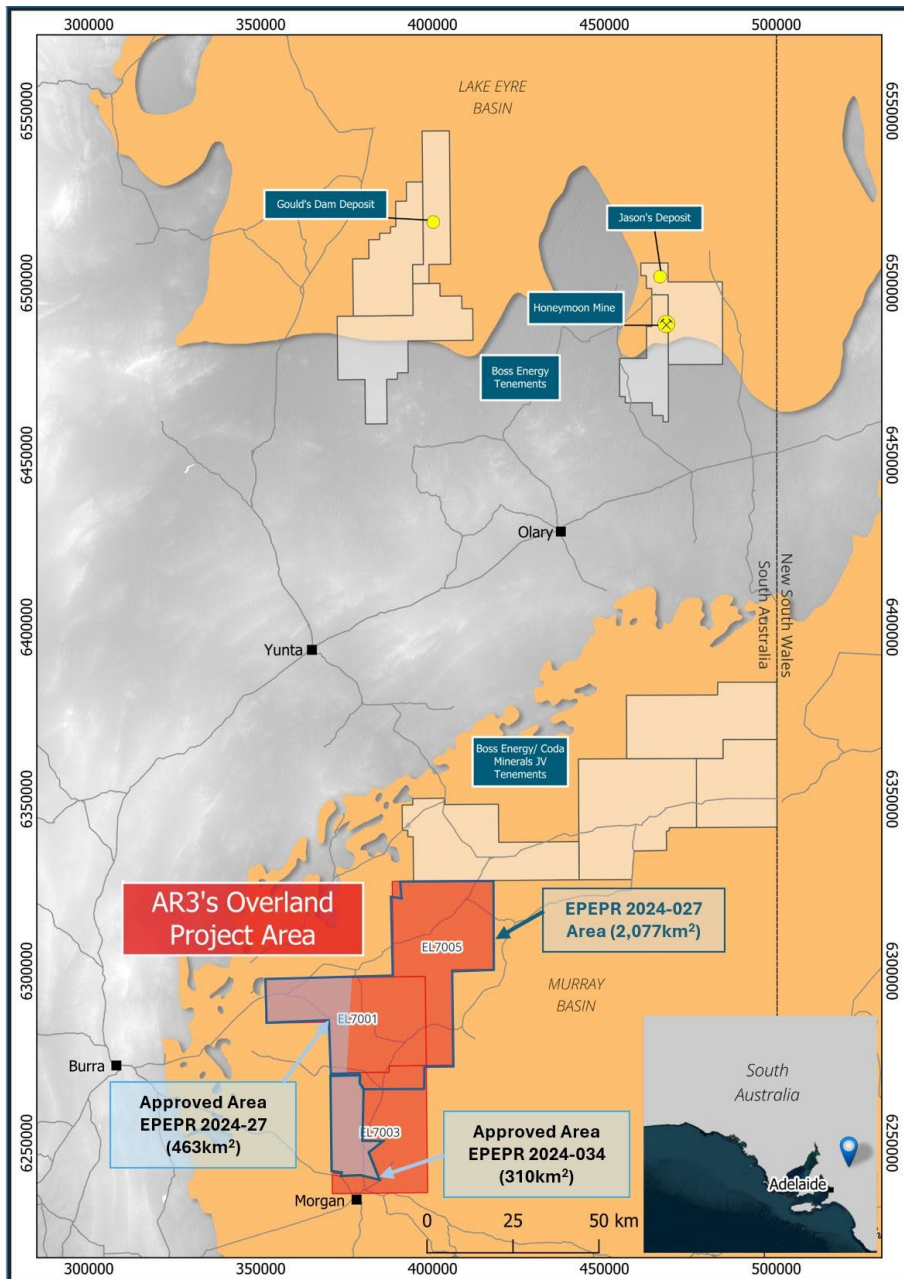
Continue to build strong stakeholder engagement





# Uranium Portfolio





# Overland Uranium Project: Untapped Uranium Exploration Potential

Leveraging AR3's Existing Expertise in Uranium Exploration and Development



**Overland Project: 3,000 km² prospective uranium tenure in South Australia:** Targeting Murray and Renmark Group sediments equivalent to Namba and Eyre formations host to Beverly and Honeymoon deposits.



**SA Gov EPEPR Approvals:** Enables early access to key drill targets, with more areas accessible across ~3,000 km² tenure area in 2025.



**Inaugural Drill Program:** Aircore drilling underway (mid-Oct), ~30 holes for ~5,000m, targeting high-priority uranium targets.






AR3's Overland Project location map

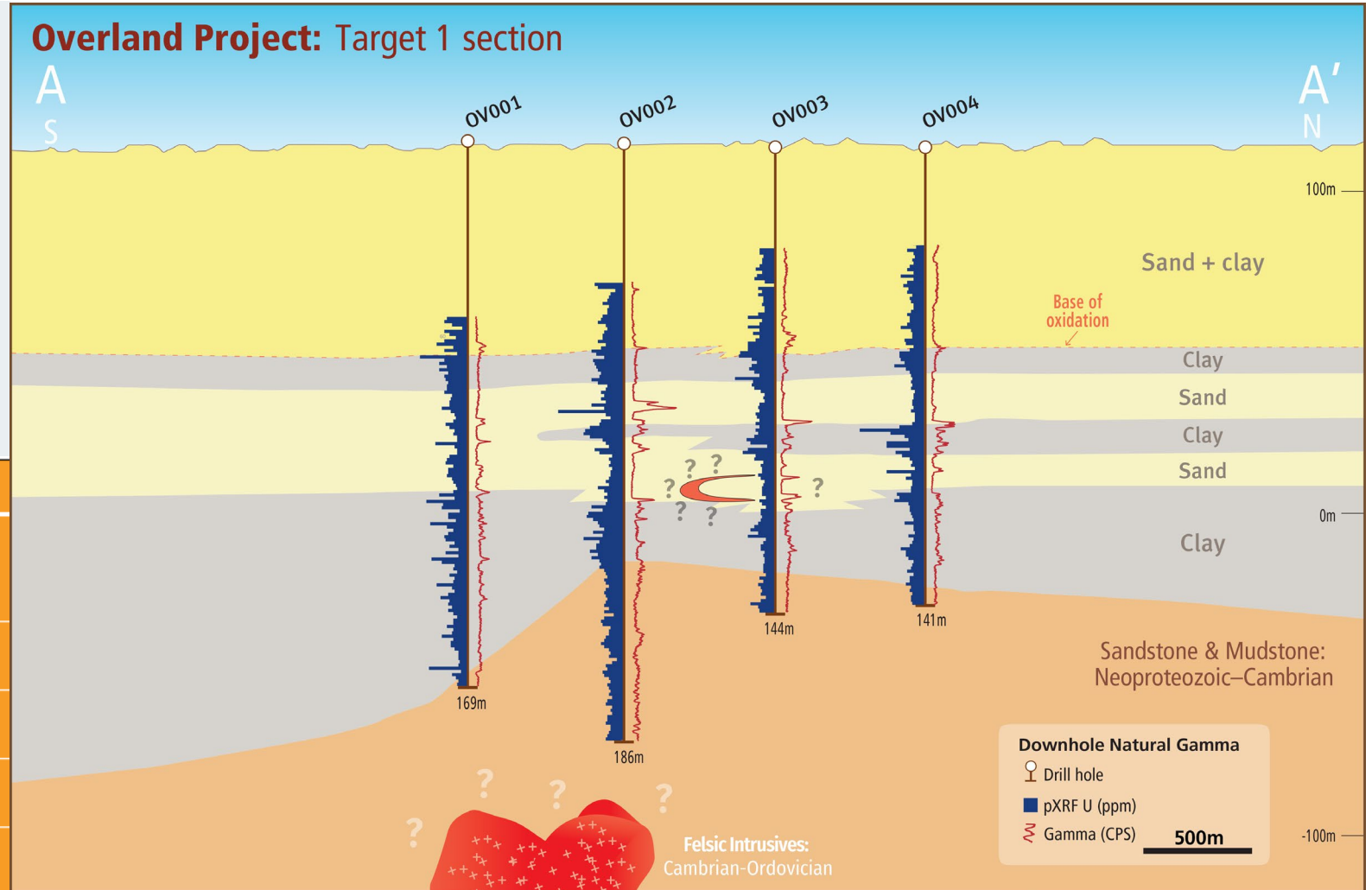


# Overland Uranium Project: Drill Results

## Initial drilling confirms strong uranium potential

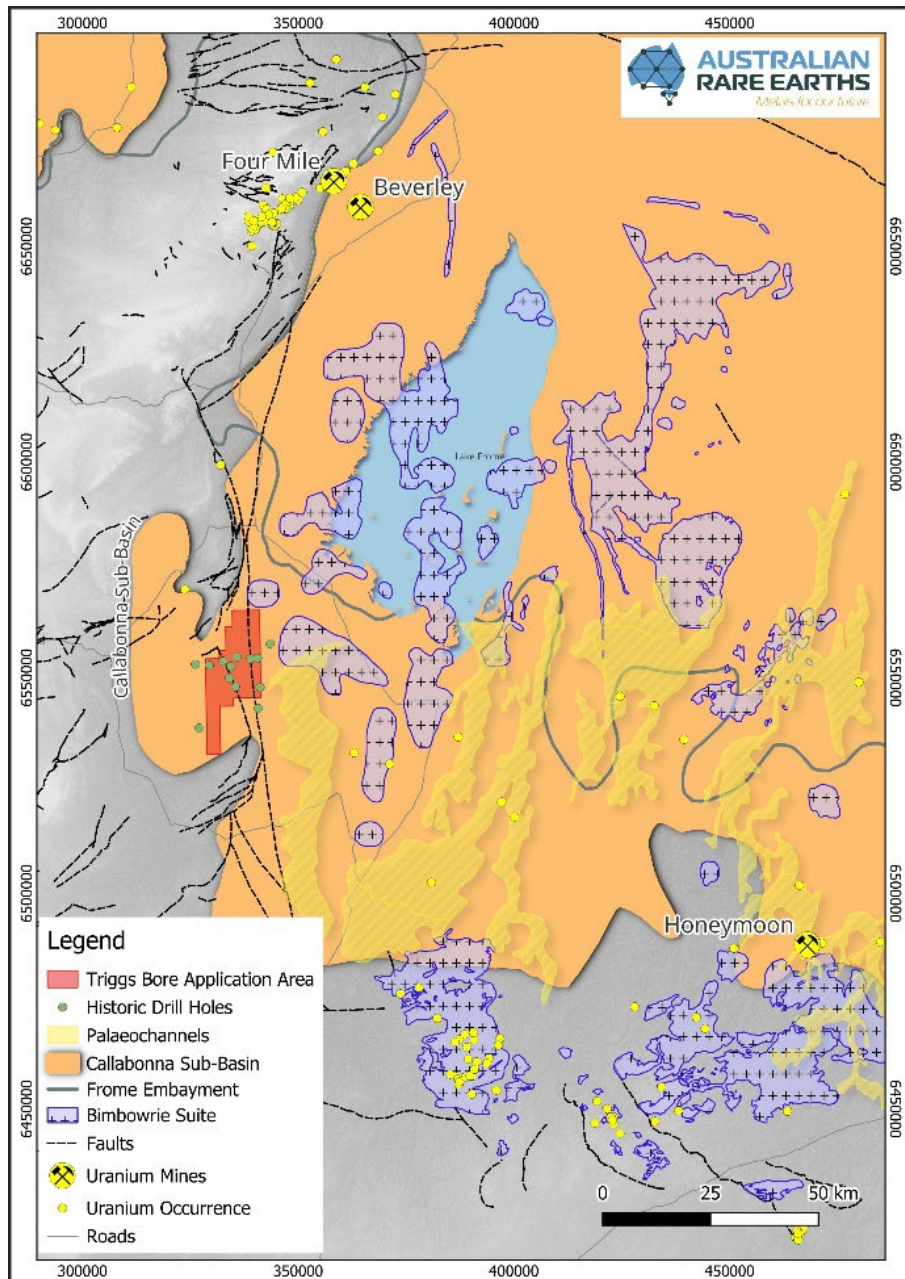
- First 4 holes in a **new frontier uranium** play indicate **presence of uranium**
- All holes intersected thick sequences of Murray group containing interbedded sands and clays; **suitable pathway/host**
- All holes returned anomalous gamma and pXRF indicating presence of uranium **confirming prospectivity of area**

Requirements	AR3 interpretation	Status
 <b>Source</b>	Granites on the western margin of the Murray Basin, emplaced at the same time, and from the same processes as U rich Granites in the Mount Painter Province and the Curnamona Province - home to Beverley / Four Mile, and Honeymoon	✓
 <b>Pathway</b>	Paleochannel definition through interpretation of base of Cenozoic contours (Geoscience Australia), and drill testing	✓
 <b>Host</b>	Targeting Renmark Group and Murray Group sediments (Eyre and Namba equivalents)	✓
 <b>Trap</b>	Reduced sediments containing carbonaceous matter, pyrite and lignite (identified to occur now through drill testing at first target)	✓
 <b>Uranium Mineralisation</b>	Drill testing at first target has identified anomalous gamma responses in sands, the contact between sands and clay, and within lignite horizons	✓



Refer to ASX announcement 13 November 2024





## Triggs Bore: Advancing Uranium Exploration

Securing a Strategic 250 km<sup>2</sup> Tenure Position to Unlock Untapped Uranium Potential in the Callabonna Sub-basin



**Exploration License:** Granted, covering ~250km<sup>2</sup> of prospective tenure targeting uranium mineralisation within the Callabonna Sub-basin.



**Untested Uranium Potential:** indications of uranium mineralisation previously discovered in 2011 but remain untested.



**Eyre Formation Sediments:** Triggs Bore hosted within the Eyre Formation sediments, a known uranium-bearing formation, also host to nearby Four Mile, Beverley and Honeymoon uranium deposits.

*Triggs Bore relative to regional geology*



# Hamilton Creek: Advancing Uranium Exploration

Securing a Strategic 200 km<sup>2</sup> Tenure position to Unlock Untapped Uranium Potential in the Callabonna Sub-basin



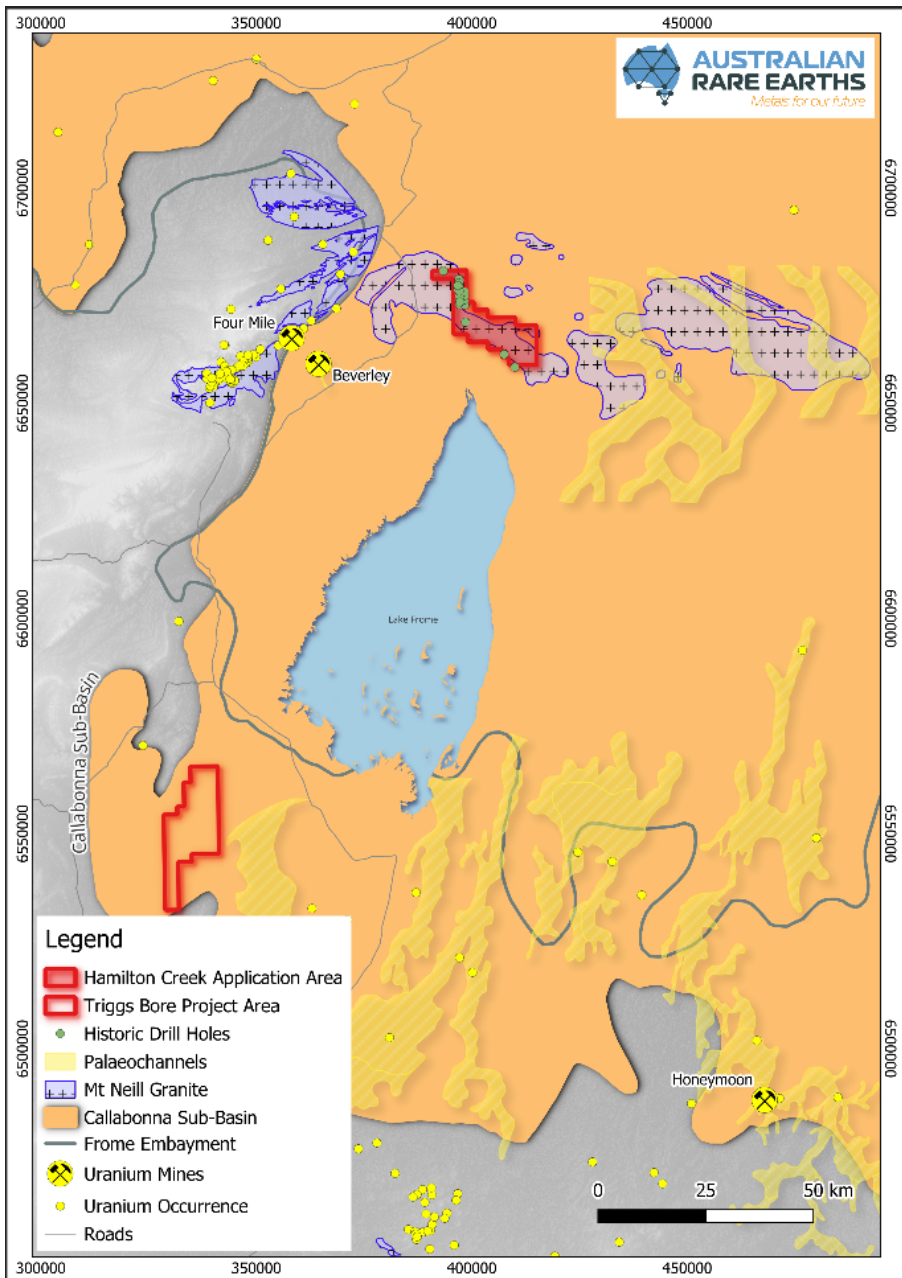
**Exploration License:** Granted covering ~200km<sup>2</sup> of prospective tenure targeting uranium mineralisation within the Callabonna Sub-basin.



**Untested Uranium Potential:** indications of anomalous uranium mineralisation from historic reporting.



**Namba Formation Sediments:** Hamilton Creek hosted within the Namba Formation sediments, same formation as the nearby Beverley uranium deposit.



*Hamilton Creek relative to regional geology*





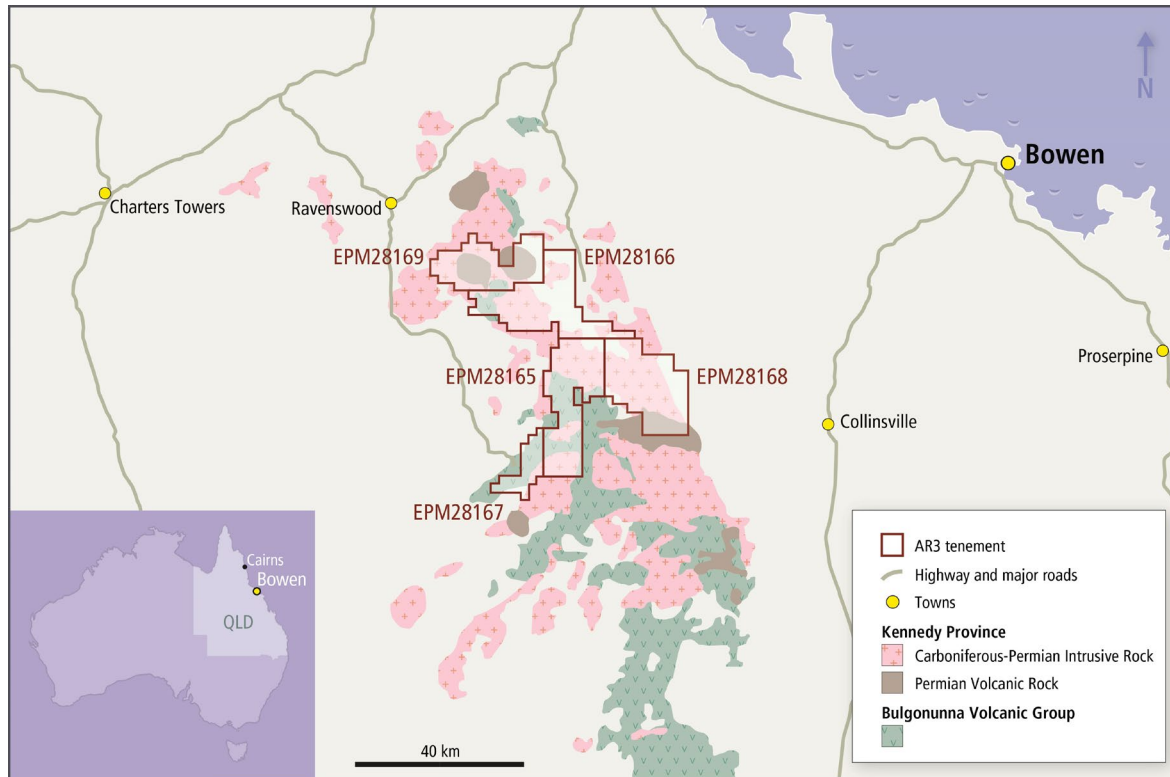
# North Queensland Portfolio



# Creating a Rare Earth Exploration Portfolio

## Dalrymple Project and Kennedy Province in Queensland

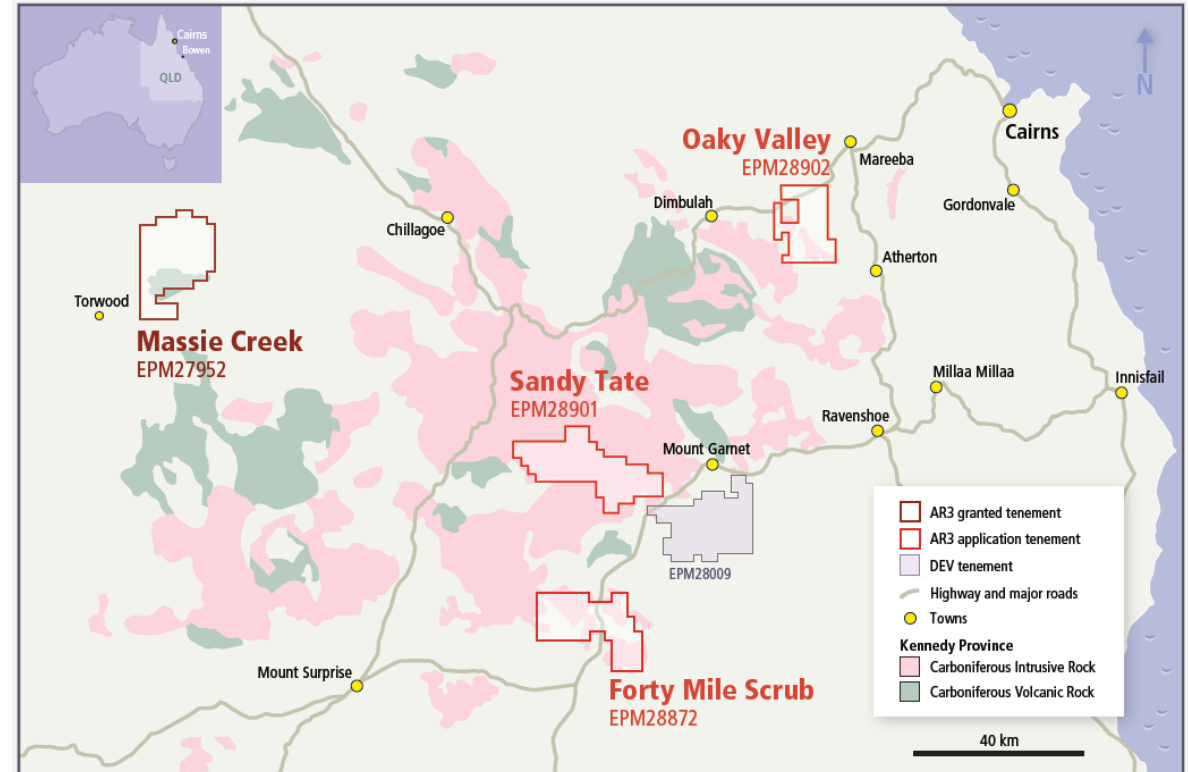
### Dalrymple Project



#### Next Steps:

Follow-up sampling and metallurgical test work

### Kennedy Province



#### Next Steps:

Rapid, on-ground, exploration assessment post granting of Exploration Licence applications

# Summary: Developing a Portfolio of Energy Transition Metals

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

### **Koppamurra REE Development Project:**

Large, multi-generational REE Mineral Resource with a sustainable development pathway, pioneering clay-hosted rare earths in Australia

01

### **Overland, Triggs Bore & Hamilton Creek Uranium Projects:**

Leveraging internal expertise to advance frontier, prospective uranium exploration projects

02

### **Growth focused strategy:**

Pathway to be Australia's first ionic clay hosted REE mine with a portfolio of diversified, energy transition metals exploration projects across South Australia and Queensland

03







# Securing Australia's Energy Transition Metals for a Sustainable Future



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## Contact us

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## Investor Relations

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