

3 April 2024

# AR3 Strengthens Energy Transition Metals Portfolio with Option to acquire Overland Uranium Project in South Australia

## Highlights:

- AR3 secures an option to acquire 100% of Valrico Resources Pty Ltd, holder of the Overland Uranium Project.
- The Project encompasses a substantial 1,981 km<sup>2</sup> of prospective land in the North-Western Murray Basin, South Australia.
- AR3 targeting paleochannel sediments in highly prospective potential new uranium province.
- The Project aligns with AR3's clean energy transition focus and leverages the Company's proven in-house uranium exploration expertise.

Engage with this announcement at the AR3 [investor hub](#).

## AR3 Chief Executive Travis Beinke said:

*“Today’s announcement signals a major step in expanding our exploration portfolio with projects strongly linked to the energy transition, providing AR3 opportunities for growth, flexibility and value creation. The option to acquire of the Overland Uranium Project in South Australia leverages the significant uranium experience and knowledge of the AR3 team.*

*Incorporating uranium into our portfolio complements our early-stage rare earth exploration projects in North Queensland and exploration opportunities at our flagship multi-generational Koppamurra clay-hosted rare earth project in South Australia.*

*As we consider how best to maximise the skills and experience of our exploration team and evaluate the current market and macro environment, especially the dynamics of each commodity our team is proficient in, the inclusion of uranium into the portfolio opens up a significant new opportunity to create value for AR3 shareholders.*

*We are very fortunate to have built a team that has the capability to identify and explore for greenfield exploration projects across various energy transition metals, while concurrently progressing our flagship Koppamurra rare earth project.*

*Given our strong cash position, I'm excited at the prospect of assessing additional opportunities to further enhance our exploration portfolio of energy transition metals and generate value for our shareholders."*

**Australian Rare Earths Limited (ASX: AR3)** is pleased to announce it has entered into an Option Agreement (Agreement) to purchase 100% of Valrico Resources Pty Ltd ("Valrico"), the entity that holds the rights to the Overland Uranium Project ("Overland" or "the Project"). The Project comprises Exploration License applications ELA 2024/14 and 2024/15 located within the Murray Basin, South Australia.

This strategic transaction significantly bolsters AR3's exploration portfolio, adding a new uranium project to its existing focus on rare earths. The Overland Uranium Project encompasses approximately 1,981 square kilometers of land and is situated ~220km southwest of Boss Energy's Honeymoon Mine. AR3 believes the Project area holds similar promise, targeting paleochannel sediments of the Renmark Group which are geologically analogous to those in the Eyre Formation, host to Boss Energy's successful uranium operations.

### **Leveraging Expertise to Drive Exploration Success**

The option to acquire the Overland Uranium Project is a testament to AR3's commitment to capitalising on the global energy transition. Uranium is a critical fuel source for clean and reliable nuclear energy, and AR3 is well-positioned to leverage its extensive experience in uranium exploration to maximise the potential of the Overland Uranium Project. By combining its highly skilled exploration team with this promising new landholding, AR3 is poised to deliver significant value for its shareholders.

**Rick Pobjoy, Technical Director:** Rick's comprehensive knowledge of the Murray Basin's geology is a result of his significant 11 year tenure with Heathgate Resources, which is owned by US based nuclear company General Atomics. Heathgate is the owner and operator of the Beverley and Beverley North Uranium Mines in South Australia, one of Australia's only two producing in-situ recovery (ISR) uranium mines. His career highlights include his role as Chief Geologist at the Beverley Uranium Mine and his contributions to the initial start-up of the Honeymoon uranium mine. Additionally, Rick has carried out in-depth exploration of mineral sands deposits in the Murray Basin, a potential source of Rare Earths given their Monazite and Xenotime content.

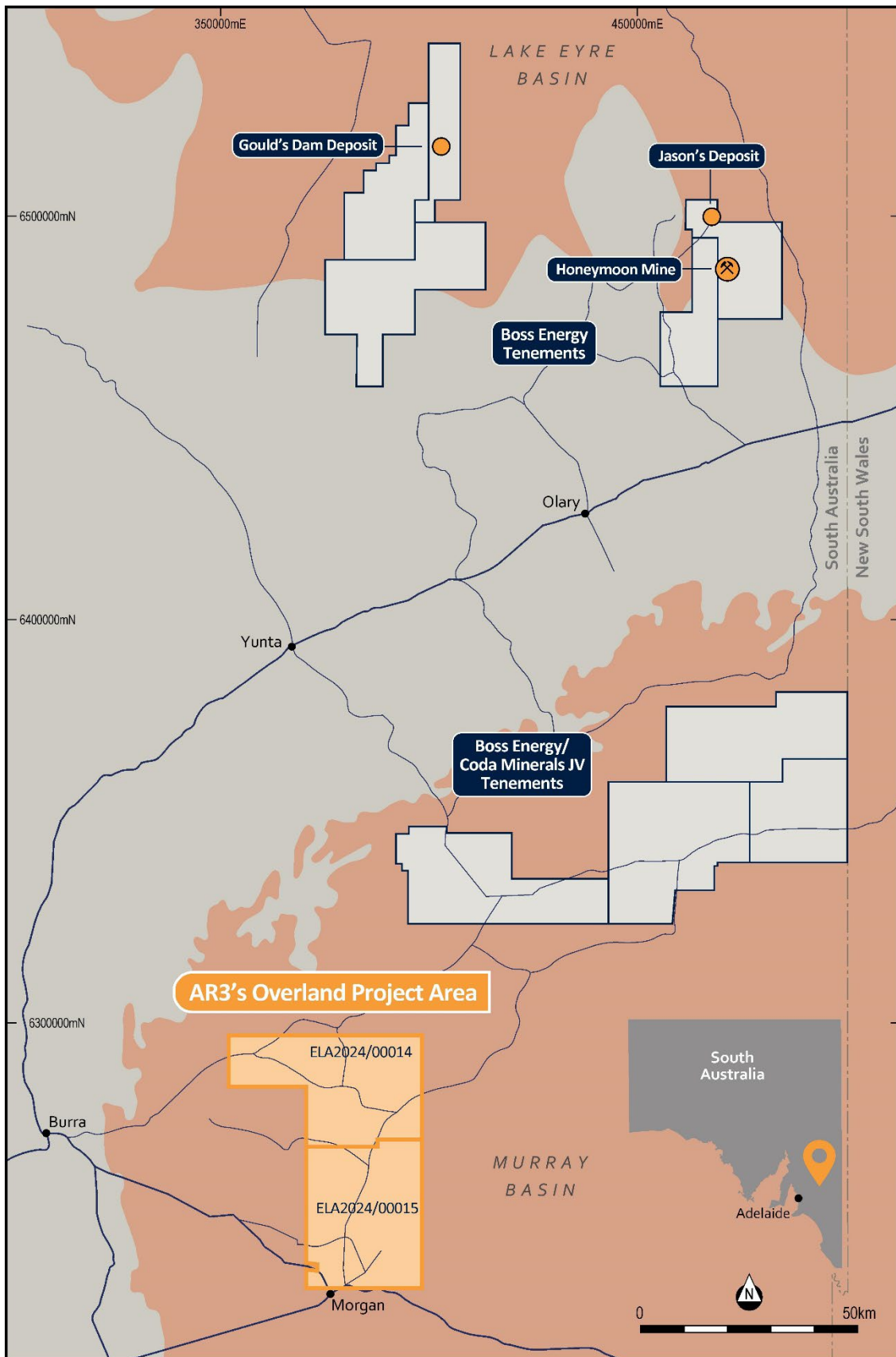


Figure 1: Overland Project area

## Overland – Sedimentary Hosted Uranium Prospectivity

The deposition of a sedimentary hosted uranium deposit relies on the presence of three key attributes / characteristics;

- a **source** rock shedding uranium in solution,
- a pathway via permeable sediments into a **host** basin and
- reductants (a **trap**) in place to precipitate the uranium from solution.

All three ‘keys’ are present in AR3’s Overland Project area. Prospective horizons of Murray Basin sediments have been identified which have all the key ingredients for ISR amenable uranium deposits at Overland.

Exploration for sedimentary hosted uranium in the northern margin of the Murray Basin in South Australia has previously comprised airborne radiometric and scintillometer surveys, geochemical surveys of water bores, rotary drilling to basement, chemical and radioactivity analyses of drill cuttings and core, and stratigraphic and structural mapping of Tertiary and Quaternary sediments.

Sedimentary hosted uranium deposits occur in medium to coarse-grained sedimentary sequences deposited in a continental fluvial or marginal marine sedimentary environment. Impermeable shale/mudstone units are interbedded in the sedimentary sequence and often occur immediately above and below the mineralised sediments. Uranium is precipitated under reducing conditions caused by a variety of reducing agents within the permeable sediments including carbonaceous material (detrital plant debris, amorphous humate, marine algae), sulphides (pyrite, H<sub>2</sub>S), and hydrocarbons.

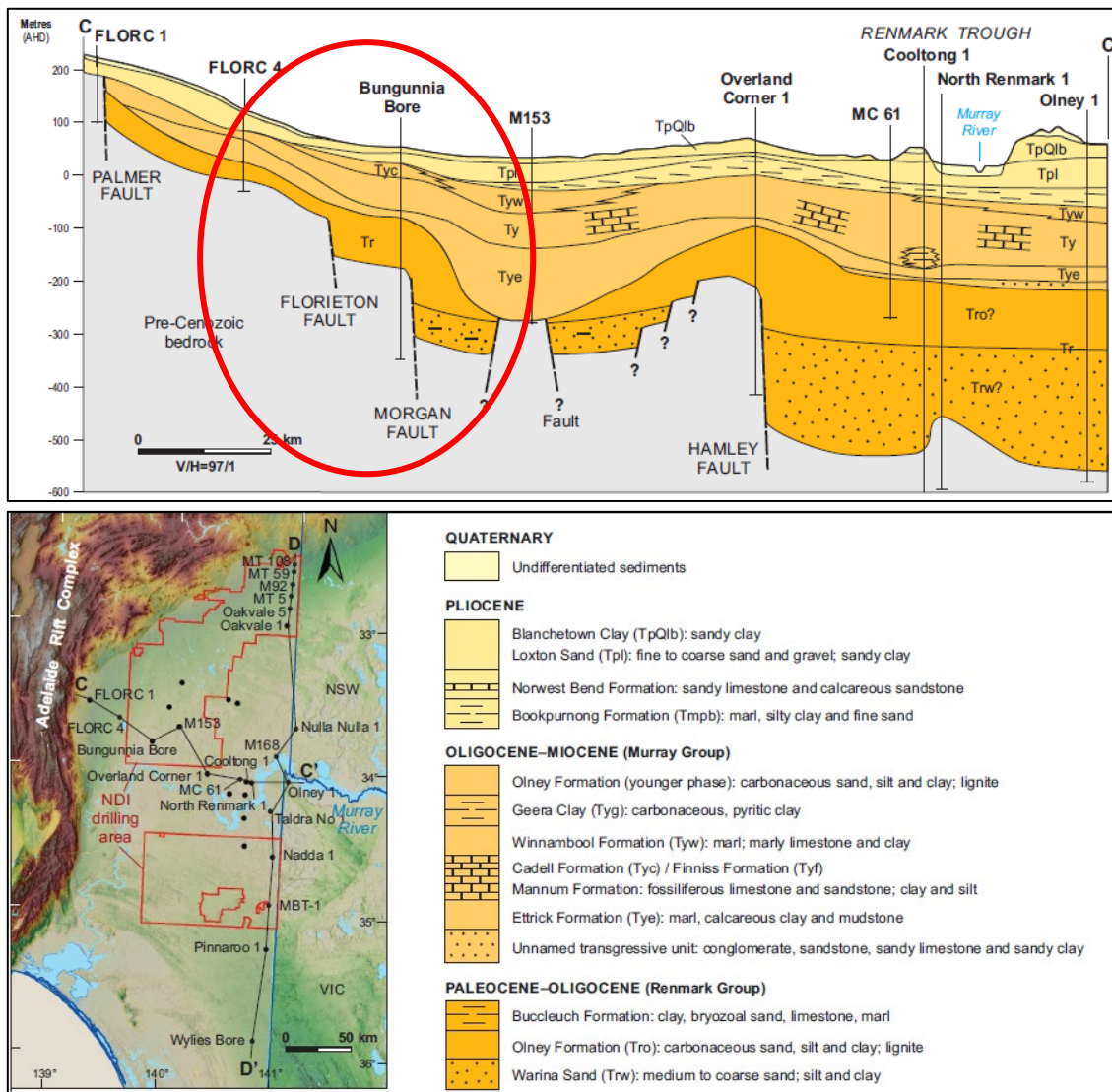
Anomalous uranium within the Murray Basin occurs in carbonaceous clay and lignite of the Winnambool Formation and Geera Clay (Murray Group) of the Murray Basin, however the Renmark Group sediments have never been effectively targeted for uranium in the South Australian portion of the Murray Basin and therefore represent a highly promising new frontier for uranium exploration.

The North-western Murray Basin within South Australia has previously been noted as prospective for palaeochannel hosted roll front deposits within fluvial channel sands of the Renmark beds for the following reasons<sup>1</sup>;

- Drainage into the northern Murray Basin sources granites and meta sediments anomalous in uranium
- Basal Tertiary sediments of the Murray Basin include the Onley formation and channel fill Warina Sand. The Warina Sand is an ideal host for uranium mineralisation
  - Deposited in a fluvial environment
  - Medium to coarse grained quartz sands
  - Interbedded clays and carbonaceous material (variably pyritised)

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<sup>1</sup> Fabris, A.J. North-Western Murray Basin geological synthesis. Report Book, 2003/13.

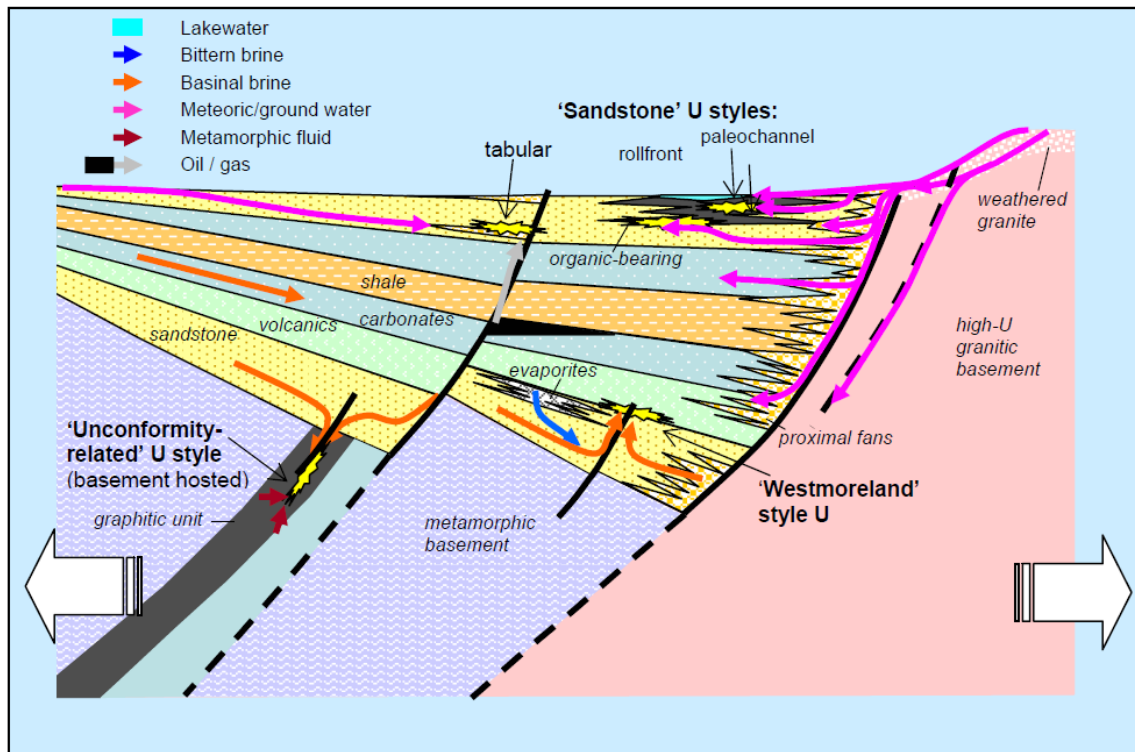


**Figure 2.** West-east (C-C') cross-section through the western Murray Basin in South Australia (after Rogers et al. 1995)  
Source: MESA Journal 94 2021 – Issue 1 page 55. Highlighted in red on the section is the area of the sedimentary package where the Overland tenure sits.

The exploration tenement applications are centred approximately 30 km north of the town of Morgan and 80km east of the town of Burra, 250km north-east of Adelaide and cover an area of ~1,981 km<sup>2</sup>. The region is prospective for sedimentary hosted deposits of uranium within the Murray Basin sedimentary sequence.

Figure 3, below, illustrates a hypothetical basin with a range of settings for uranium mineral systems and deposit. A uranium mineral system in this context is envisaged as a volume of crust through which fluids of surface or basin origin passed to form one or more uranium deposits, possibly of different styles within or adjacent to the basin. For example, meteoric waters sourced outside the basin may leach uranium from basement rocks or basin sediments and carry the

uranium in ground waters to depositional sites within paleochannels or tabular sandstone units to produce 'roll front' or 'tabular' mineralisation styles<sup>2</sup>.



**Figure 3.** Model of basin-related uranium mineralising systems, during the extensional stage of basin evolution. A range of uranium depositional sites and deposit styles are represented in this district- to deposit scale mineral systems model<sup>2</sup>.

## Key Commercial Terms

AR3 has entered into an Option Agreement (Agreement) to purchase 100% of Valrico Resources Pty Ltd, the entity that holds the rights to the Overland exploration licence applications ELA 2024/14 and 2024/15. The key commercial terms are as follows:

**Option Fee:** \$50,000 cash payment within 5 days of the Agreement.

**Upon granting of Exploration Licences:** \$570,000 cash payment and \$230,000 in AR3 shares calculated using 30 day VWAP prior to entering the Option Agreement for a total of 2,041,855 Ordinary shares.

Upon completion of the transaction AR3 will hold a 100% interest in ELA 2024/14 and 2024/15.

<sup>2</sup> Skirrow, R.G., Jaireth, S., Huston, D.L., Bastrakov, E.N., Schofield, A., van der Wielen, S.E., Barnicoat, A.C., 2009. Uranium mineral systems: Processes, exploration criteria and a new deposit framework. Geoscience Australia Record 2009/20. 44p.

### Related Party Details

AR3 Technical Director Rick Pobjoy and Non-executive Director Bryn Jones each hold an indirect beneficial interest in Valrico Resources Pty Ltd that will entitle a related party to each of them to the following consideration:

- Rick Pobjoy \$425,000 cash payment and nil AR3 shares
- Bryn Jones \$70,833.30 cash payment and nil AR3 shares

The related party consideration is included in the Key Commercial Terms above and is not an additional amount. A special subcommittee of the Board comprising solely of its independent directors has reviewed and approved the terms of the transaction.

### Next steps

The grant of the Exploration Licenses is anticipated to be completed during the September 2024 quarter.

AR3 will now commence extensive stakeholder engagement in preparation for on ground exploration activities, along with the preparation of an exploration PEPR and compilation/interpretation of all available geological and geophysical data. This will feed into the planning for regional geophysical surveys designed to define basement architecture and identify potential palaeochannel sequences within the Renmark Group.

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The announcement has been authorised for release by the Board of Australian Rare Earths Limited.

### For further information please contact:

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**Engage and Contribute at the AR3 investor hub: <https://investorhub.ar3.com.au/>**

### Competent Person's 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.*

## **About Australian Rare Earths Limited**

*Australian Rare Earths is committed to the timely exploration and development of its 100% owned, flagship Koppamurra Project, located in the new Koppamurra rare earths Province in southeastern South Australia and western Victoria. Koppamurra is a prospective ionic clay hosted rare earth deposit, uniquely rich in all the elements required in the manufacture of rare earth permanent magnets which are essential components in electric vehicles, wind turbines and domestic appliances. In addition, AR3 is actively reviewing other potential prospective areas which may also host uranium and ionic clay hosted rare earth deposits throughout Australia.*

*The Company is focused on executing a growth strategy that will ensure AR3 is positioned to become an independent and sustainable source of energy transition metals, playing a pivotal role in the global transition to a green economy.*

<https://investorhub.ar3.com.au/link/IPdK7r>