

# Investor Presentation – Yinnietharra Lithium Project Acquisition

Exploring for critical minerals in  
Western Australia and the Northern  
Territory

September 2023

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## Competent Person Statement

Mr Bill Oliver, a Director of the Company, is a Member of The Australasian Institute of Geoscientists and the Australasian Institute of Mining and Metallurgy and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration to qualify as a Competent Person as defined in the 2012 Edition of the JORC ‘Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves’. Mr Oliver consents to the inclusion in the report of the information in the form and context in which it appears. The Exploration Results are based on standard industry practices for drilling, logging, sampling, assay methods including quality assurance and quality control measures as detailed in the ASX Announcements stated in the text and in the Independent Geologist’s Report contained within the Prospectus released to the ASX on 11<sup>th</sup> October 2022.

# Corporate Snapshot



*Bubalus has been established with a strong Board and management team with the skills and experience required to create value for shareholders.*

## Capital Structure

### Capital Structure (Pre -Transaction)

**ASX Code** ASX: BUS

**Share price 15/09/23** \$0.145

**Total shares on issue** 33,661,750

**Total options on issue (subject to escrow period)** 12,561,750

**Market Capitalisation (undiluted)** \$4.88m

**Cash approximate** \$3.8m

**Enterprise value (EV)** \$1.08m

**Top 20 shareholders** 51.53%

**Escrowed securities** 5,190,575

## Board and Management



### Alec Pismiris – Executive Chairman

Mr Pismiris has over 30 years of experience in the securities, finance and mining industries. Mr Pismiris completed a Bachelor of Commerce degree at UWA, is a member of the Australian Institute of Company Directors and a fellow of The Governance Institute of Australia. Other current directorships include Agrimin Limited, Sunshine Gold Limited, The Market Herald Limited and Pacton Gold Inc (TSX-V).



### Bill Oliver – Non Executive Director

Mr Oliver is a geologist with over 20 years of experience in the resources industry. Mr Oliver has served as director of a number of ASX listed companies and is familiar with the requirements of the ASX Listing Rules and the JORC Code. He's a member of the AusIMM and the Australian Institute of Geoscientists and holds an honours degree in Geology from UWA, as well as a post-graduate diploma in finance and investment from FINSIA.



### Scott Deakin – Non Executive Director

Mr Deakin has over 12 years' experience working in the exploration and resources sector. He's a director of Mining People International, specialising in technical and executive mining search. Mr Deakin holds a commerce degree from Curtin University, a Grad Dip in Mineral Exploration and Geoscience through Curtin University's WASM where he's also presently completing his Masters in Mineral Economics. Additionally, he's a Graduate of the Australian Institute of Company Directors.



### Melanie Ross – CFO and Company Secretary

Ms. Ross is an accounting and corporate governance professional with over 20 years' experience in financial accounting and analysis, audit, business and corporate advisory in Australia.



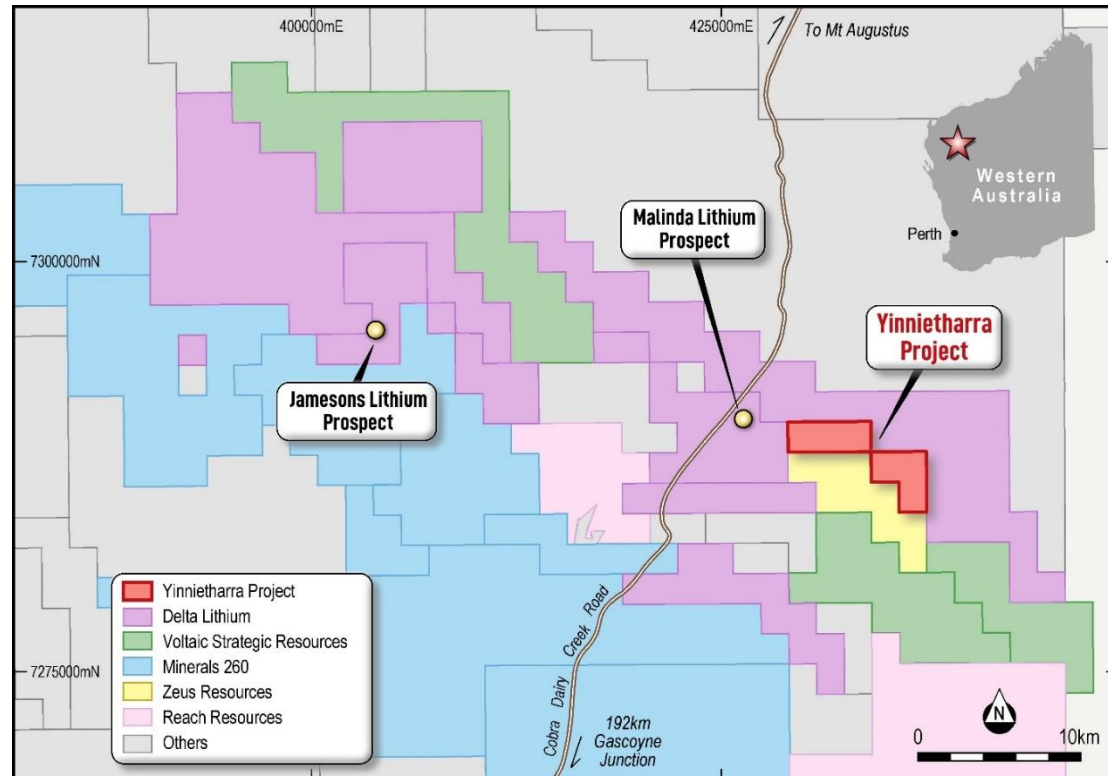
Substantial Shareholders – Inyati Fund Ltd 8.82%

# Transformational Acquisition – Yinnietharra Lithium Project



***Bubalus acquires highly prospective Yinnietharra Lithium Project, in Western Australia's emerging Gascoyne region – 2km's from Delta Lithium's Malinda Project***

- Located <2km's from Delta's Malinda Prospect, which is proven to host spodumene bearing pegmatites, with intercepts<sup>1</sup> of 43m @ 1.22% Li<sub>2</sub>O and 55.6m @ Li<sub>2</sub>O.
- Mineralisation at the Malinda Prospect is hosted in 6 pegmatite dykes which dip to the south and are open to the east, in the direction of Bubalus' Yinnietharra Lithium Project.
- No previous exploration for lithium has occurred across the Yinnietharra Project, which is located 2 - 3 kms away from the Thirty Three Supersuite source granite, in potential "goldilocks" zone
- Immediate plan to mobilise boots on the ground exploration team to undertake surface mapping of potential outcropping pegmatites and systematic soil sampling, to define targets for drill testing

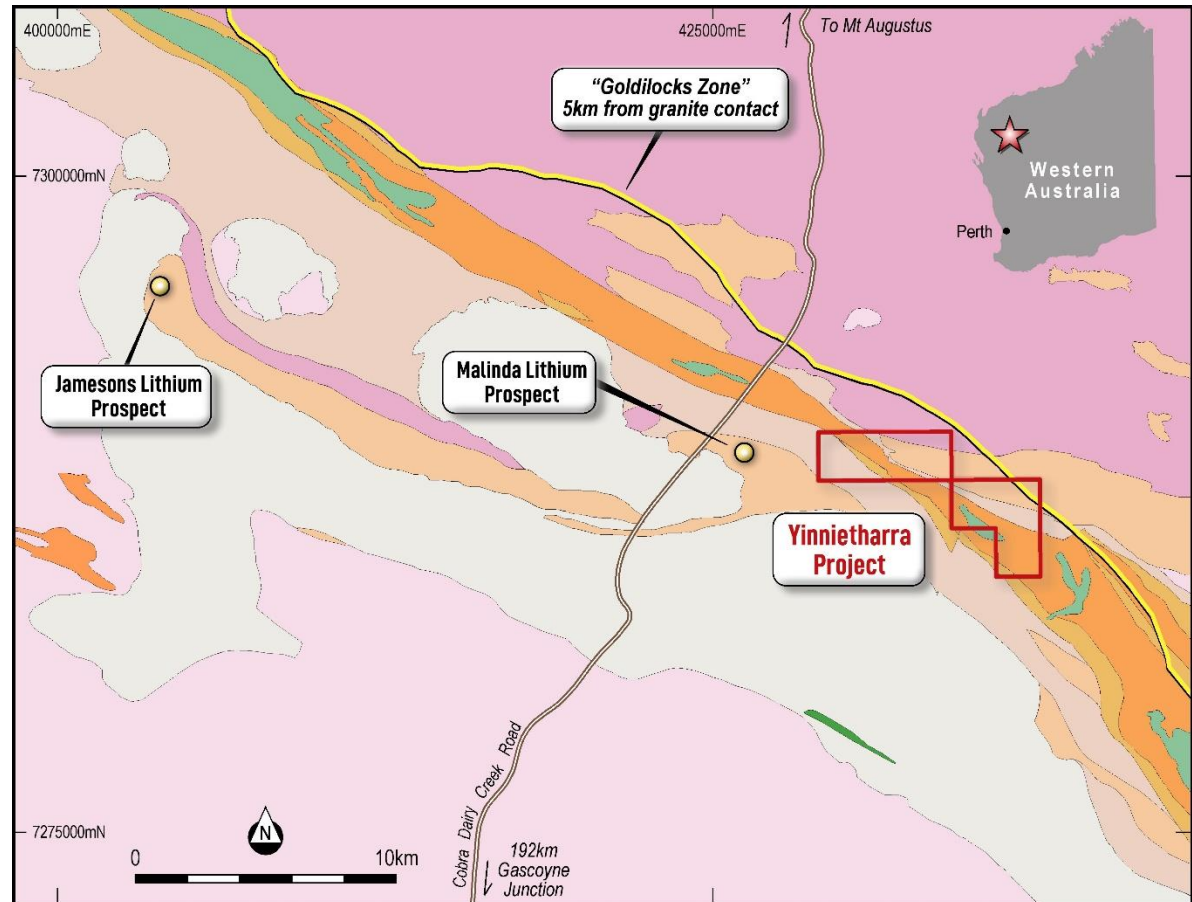


<sup>1</sup> Refer ASX DLI announcements dated 27/02/23 and 8/05/23

# Yinnietharra Lithium Project - Geology

**The project sits within the “goldilocks” zone, 2-5km from the Thirty Three Supersuite Granite source.**

- Spatially, the project is located within 2-3 kms from the Thirty Three Supersuite source granite, in potential “goldilocks” zone.
- Thirty Three Supersuite is series of granitic bodies, **believed to be the source of lithium mineralisation in the Yinnietharra area.**
- Project is underlain by metasedimentary rock packages, including the Leake Spring metamorphics.
- Importantly, **within the Leake Spring Metamorphics is where spodumene bearing pegmatite dykes have been proven to occur in Peltic schists.**



<sup>1</sup> Refer ASX DLI announcements dated 27/02/23 and 8/05/23

# Yinnietharra Lithium Project – Initial steps and transaction summary



## ***Active on ground exploration gearing up to commence within weeks***

- Only cursory field reconnaissance has previously been undertaken, with no prior lithium focused exploration completed.
- **Immediate plan to mobilise boots on the ground exploration team to undertake surface mapping of potential outcropping pegmatites and systematic soil sampling, to define targets for drill testing.**
- Engage with appointed representatives of the Wajarri Yamati, the Aboriginal traditional owners of the area underlying the Yinnietharra Project, to obtain relevant approval required for drilling.
- Activities to run parallel and complementary to projects in the Northern Territory.
- **Bubalus remains well funded** to execute active exploration campaigns.

## ***Transaction summary – scrip dominant***

- Strategic and complementary acquisition of Hardy Resources Pty Ltd, which expands on the company's strategy to make significant critical minerals discoveries.
- Attractive, scrip dominant consideration.
- Bubalus remains well capitalised to spend funds in the ground.

### **Transaction Summary:**

**Cash consideration: \$75,000**

**Vendor Shares 2,350,000**

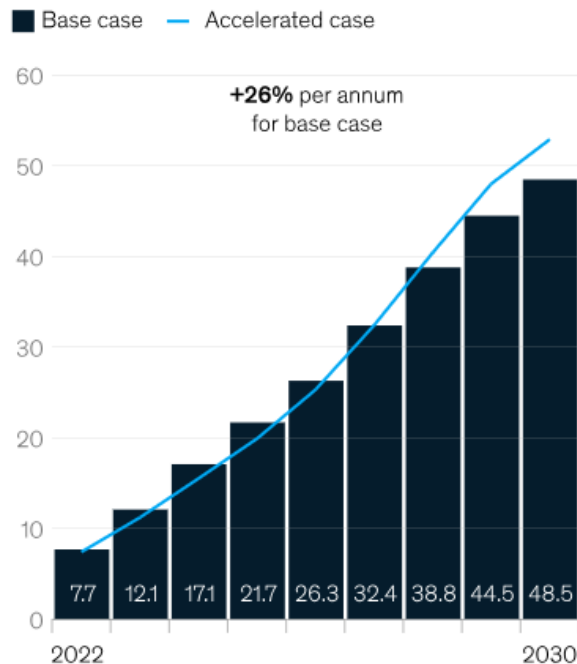
**Consideration shares 352,500**

# Lithium Market Dynamics

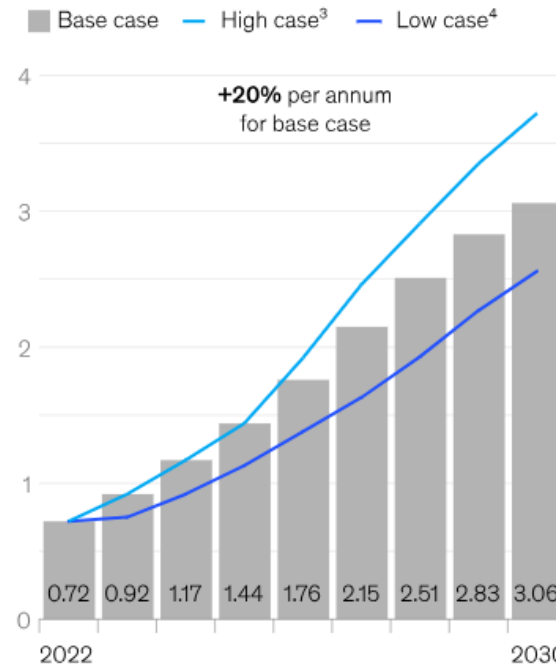
*Lithium market dynamics well publicized, with demand set outpace supply until 2030*

Electric-vehicle production is growing 26 percent annually, resulting in lithium demand growth of 20 percent per annum.

Projected battery-electric-vehicle (BEV) production by scenario,<sup>1</sup> million units



Projected refined lithium demand by scenario,<sup>2</sup> million tons of lithium carbonate equivalent (LCE)

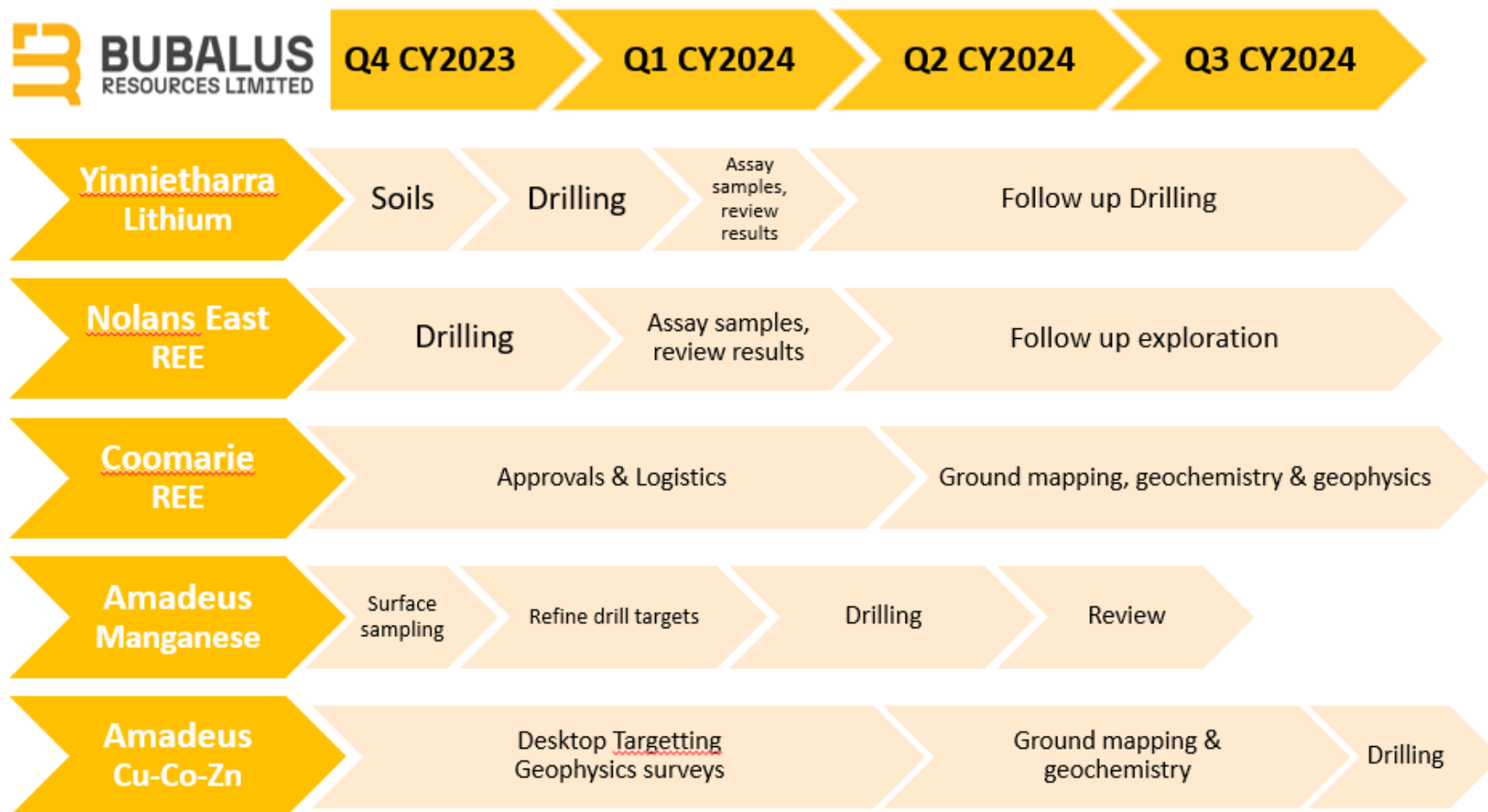


Source: <https://www.mckinsey.com/industries/metals-and-mining/our-insights/australias-potential-in-the-lithium-market>

# Upcoming Newsflow - Field exploration & drilling timelines



*Active high impact exploration and drilling planned across project portfolio in 2023/2024*



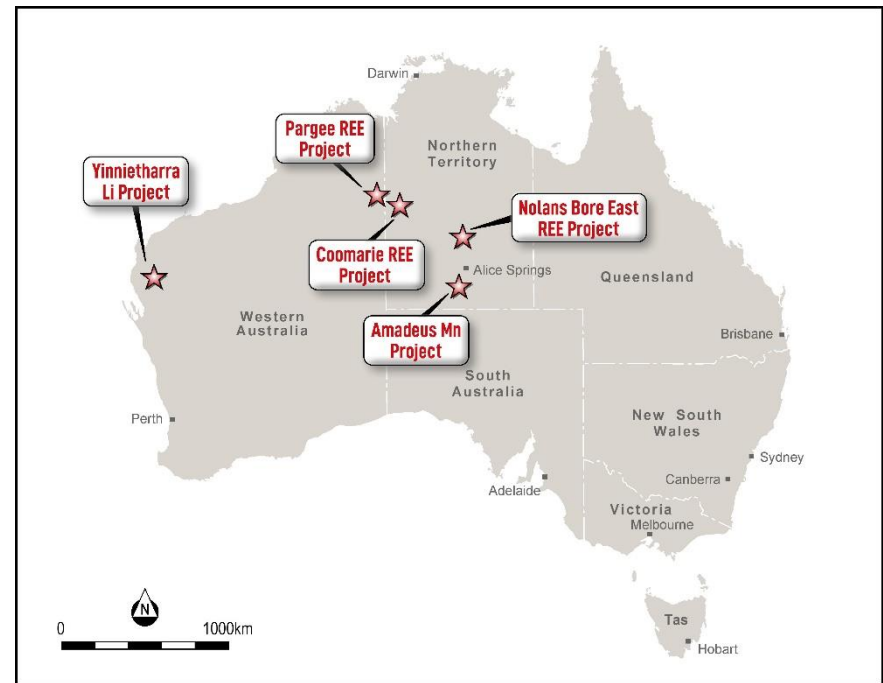


# Broader Project Portfolio



**Significant portfolio of rare earths and battery metals projects across highly prospective, underexplored mining regions across Australia.**

- Significant landholding of 1,528km<sup>2</sup> in the Northern Territory, underexplored for its rare earth and lithium potential covering two major projects at the **Nolans East Project** (Light REE's) and **Coomarie Project** (Heavy REE's).
- First mover advantage identifying large areas of prospective geology analogous to major rare earth deposits Brown's Range (ASX.NTU ~AUD \$320m market capitalisation) and Nolan's Bore (ASX.ARU ~ AUD \$1.26b market capitalisation)
- Pargee Project** (Heavy REEs) located 30kms from PWV Resources' (ASX:PVW) Watts Rise heavy rare earths discovery.
- 5,435km<sup>2</sup> prospective for manganese at the **Amadeus Project** (Mn) 125km south of Alice Springs
- Underexplored provinces, with opportunity to apply modern and systematic exploration techniques to deliver new discoveries.



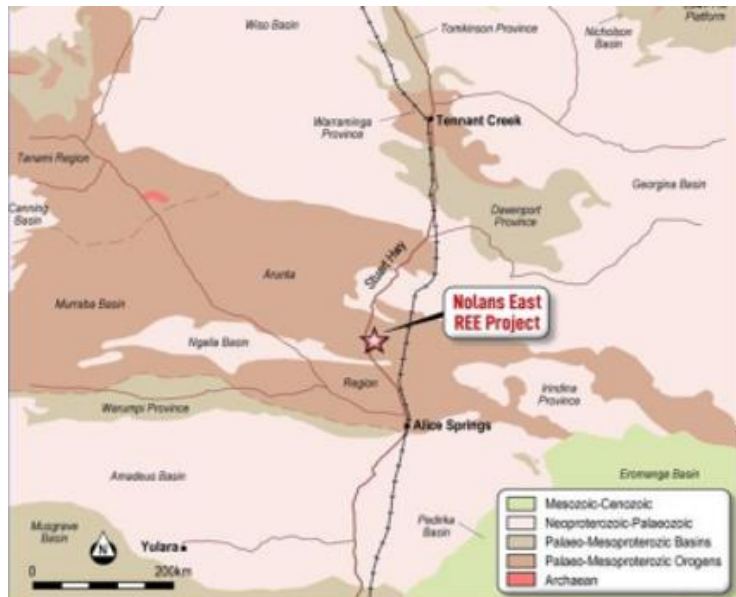
# Nolan's East Project – Rare Earths



**The Nolans East Project is prospective for light rare earths and is located only 15kms east of \$1.26b market capitalised Arafura's (ASX.ARU) 56Mt 2.6% TREO Light Rare Earth deposit**

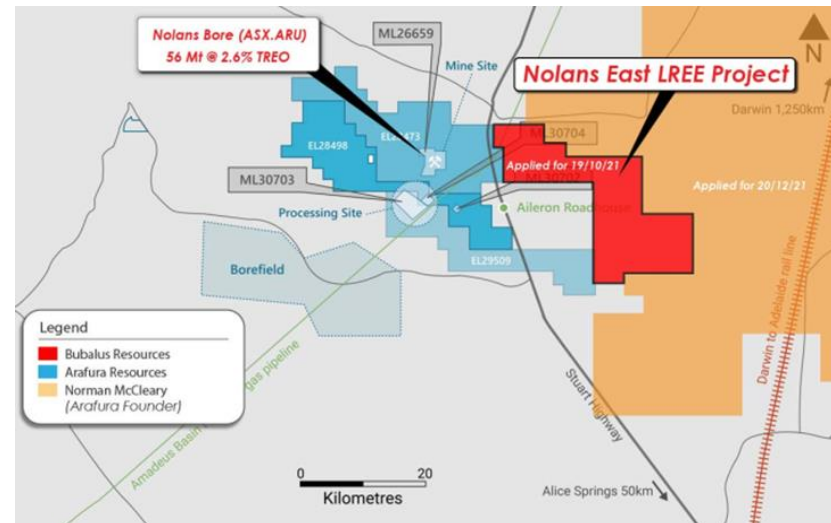
## Bubalus' first mover advantage adjacent to Nolans Bore

- Project covers 380km<sup>2</sup> of the Arunta Province, analogous to Nolan's Bore LREE deposit.
- Excellent project access along the Stuart Highway in the Northern Territory.



## Region heating up, underpinned by Hancock Prospecting's \$60m support of Arafura's development ambitions

- Arafura Resources progressing towards construction and development of the Nolans Bore Mine supported via recent \$60m cornerstone investment by Hancock Prospecting<sup>1</sup>.
- Pegging rush by explorers, including Arafura's founding director Norman McCleary.



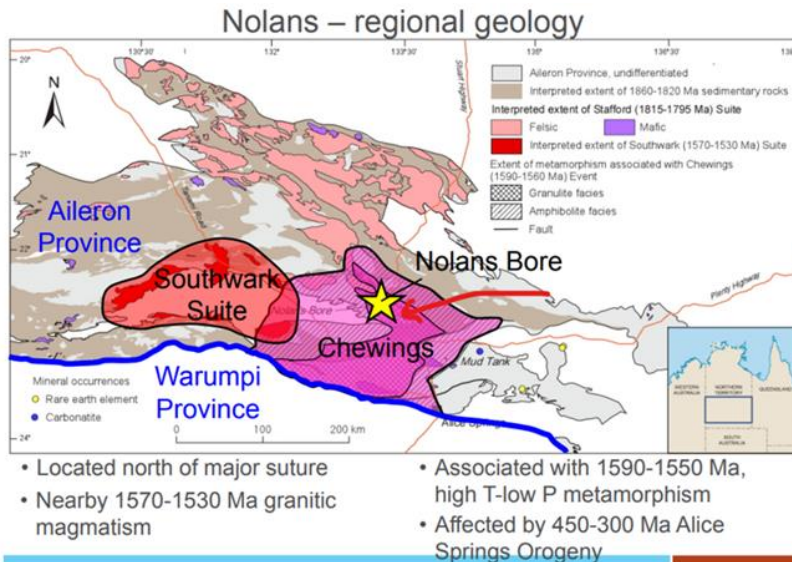
<sup>1</sup> Refer ARU ASX announcement dated 5/12/22

# Nolan's East Project – Rare Earths

## Right structural and geological “plumbing” provides key conduit to the formation of large scale REE deposits

### Fertile geochronology and stratigraphic settings

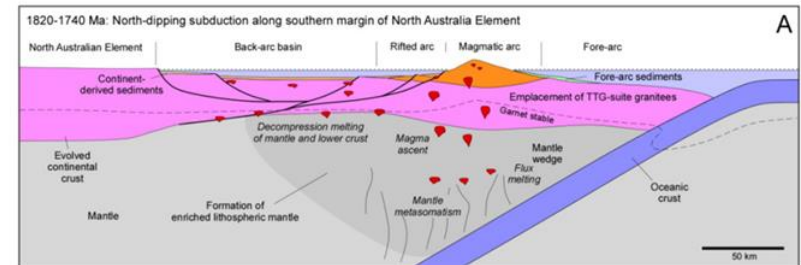
- On a regional scale, within a 250km radius, the Nolans Bore deposit and other REE occurrences are spatially and structurally associated with a series of tin and tantalum pegmatites, and REE-bearing carbonatite/alkaline complexes.



### Structural faults into the unconformity are prime hosts of mineralisation

- Geological processes leading to formation of Nolans Bore began with north-dipping subduction along the south margin of the Aileron Province resulting in alkaline low-degree partial melts.

### Nolans mineral system – formation of metal source and architecture



- Nolans Bore located ~150 km north of southern margin of Aileron Province
- This margin interpreted as site of north dipping subduction from 1820 to 1740 Ma (CAT granite suite (Zhao and McCulloch, 1995); VHMS deposits)
- Convergence and associated subduction enriched mantle and produced back-arc basin → metal source and architecture used during ~1550-1520 Ma Nolans event (and later Teapot (1130 Ma) and Mud Tank (730 Ma) alkaline events)
- Cratonised during Strangway (1740-1690 Ma) and Leibig (1640-1635 Ma) Orogenies

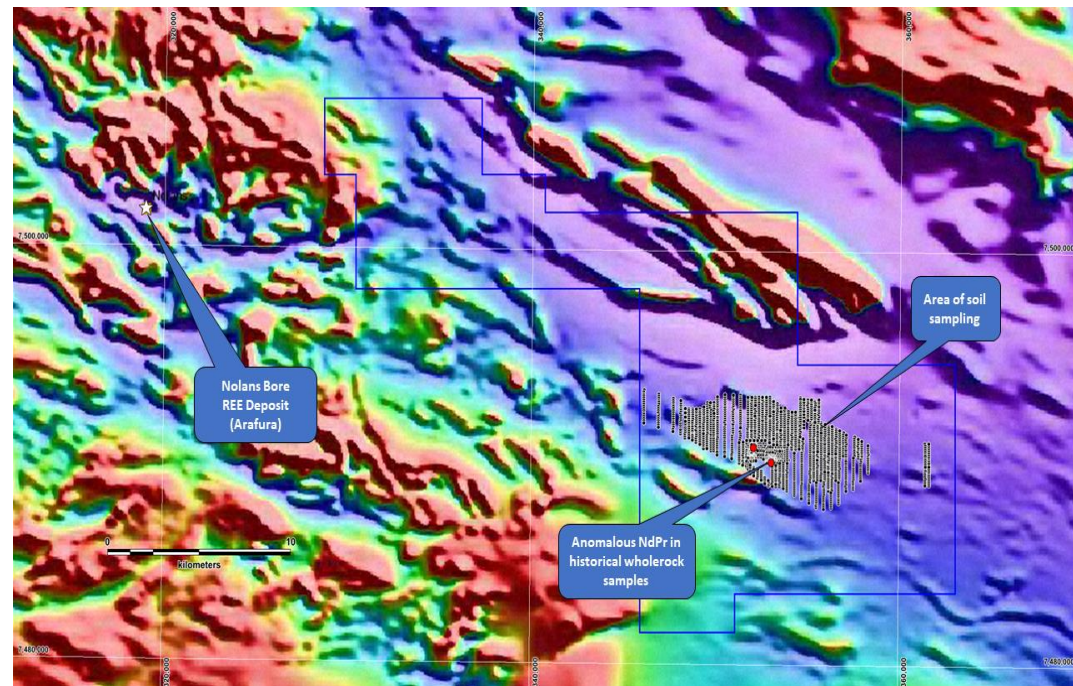
Source: Huston, D.L. et al (2017). The Nolans REE Deposit: a mineral systems perspective. NTGS Annual Geoscience Exploration Seminar 2017.

## ***Encouraging geochemical and geophysical results with correlations to Nolans Bore REE deposit deliver potential drilling targets***

Prospective geological architecture acts as prime host to unconformity REE deposits

Surface soil sampling results over TMI Magnetics anomalies displays strong correlation to Nolans Bore

- The project area is **underexplored** for its **hydrothermal stockwork vein-style Light Rare Earths (LREEs) potential**, in particular minerals neodymium, and praseodymium associated with these types of rare earths-phosphate-uranium-thorium (REE-P-U-Th) deposits such as Nolans Bore.
- Initial low impact soil sampling program **has successfully identified anomalous rare earth element (REE) content at surface<sup>1</sup>**
- Surface samples contain similar NdPr content comparable to Nolans Bore deposit.



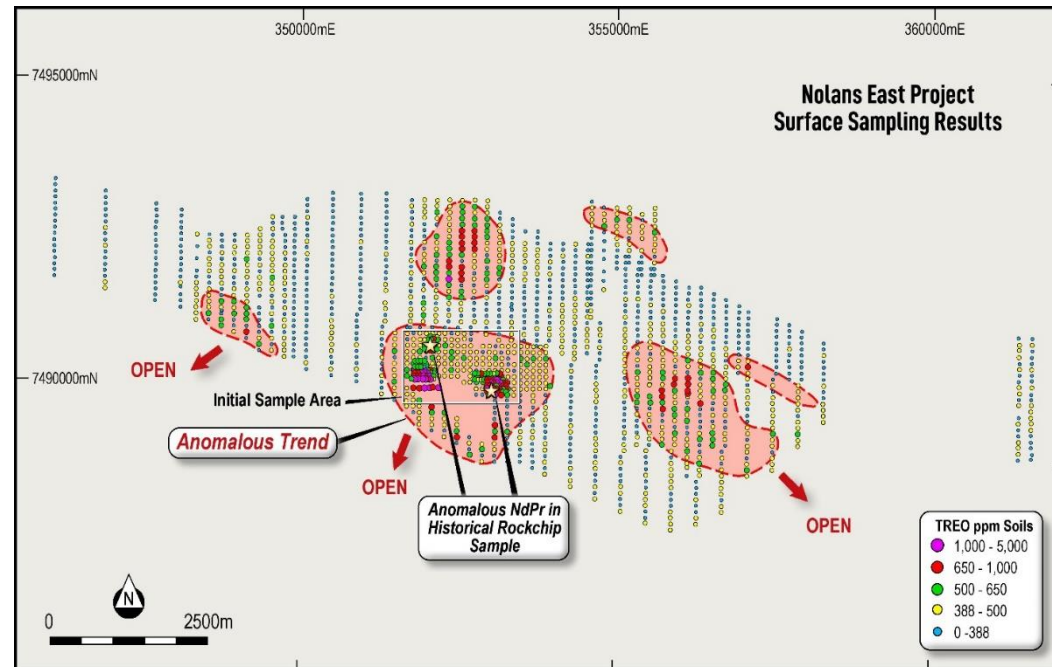
***Soil Sampling at the Nolans East Project over magnetics (TMI – NTGS data)<sup>1</sup>.***

<sup>1</sup> Refer ASX BUS announcements dated 24<sup>th</sup> January 2023 and July 23<sup>rd</sup> 2023.

# Nolans East – Encouraging early soil sampling results, elevating project ranking

## Soil sampling program successfully identifies anomalous rare earth element content, comparable with adjacent Arafura Resources

- Nolans East Project area is over 90% covered with shallow sand cover and limited outcrop<sup>1</sup>.
- The project area is **underexplored** for its **hydrothermal stockwork vein-style Light Rare Earths (LREEs)** potential, in particular minerals neodymium, and praseodymium associated with these types of rare earths-phosphate-uranium-thorium (REE-P-U-Th) deposits such as Nolans Bore.
- **Soil sampling has defined anomalous trends** that warrant drilling.
- **Visual field mapping indicates in situ anomalism**, possibly from proximal source.
- Additional soil sampling data being reviewed by highly regarded consultant Steve Sudgen for **refinement of potential drilling targets for Q4 CY2023**.



Results from surface sampling at Nolans East Project.<sup>1</sup>

<sup>1</sup>Refer Independent Geologists Report, ASX Announcement 11 October 2022 and July 23<sup>rd</sup> 2023

# Coomarie Project – Rare Earths

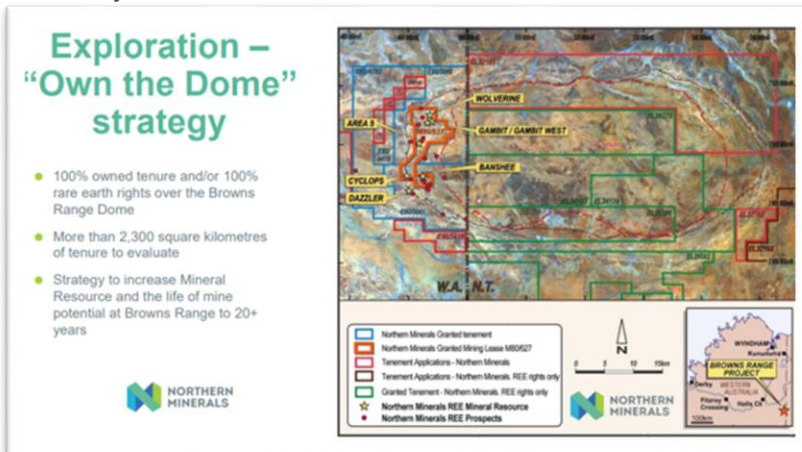
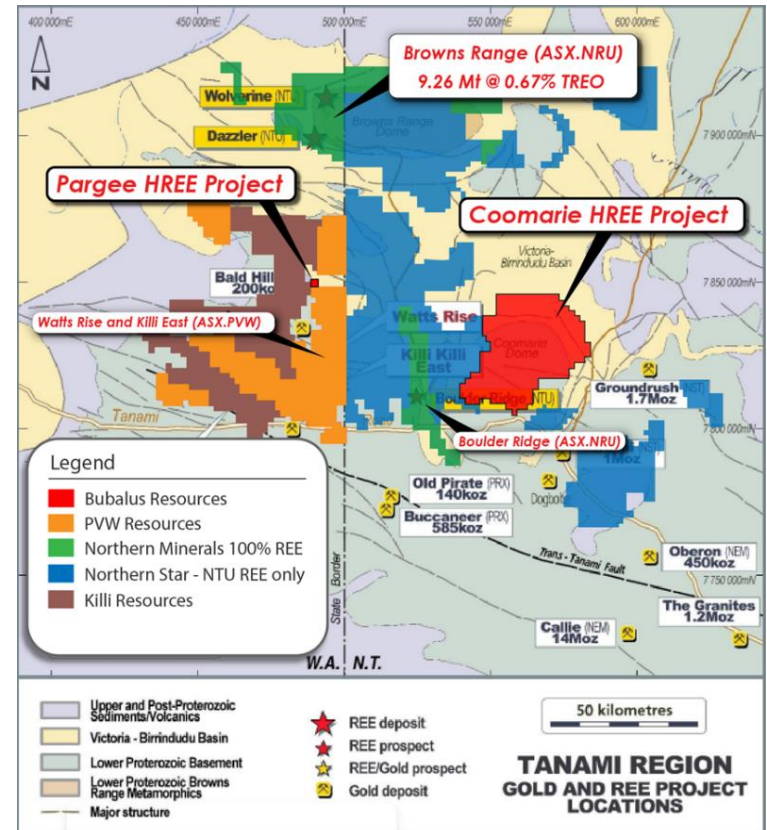


## Exploring for another Browns Range – “Own the Dome” Strategy

### Coomarie analogous to NTU Browns Range

- The Coomarie Dome project presents as a geological analogue to Browns Dome, host to NTU’s Browns Range REE deposit.
- Footprint expanded, with new applications made over contiguous tenure
- The Pargee project is prospective for heavy rare earths and located adjacent to PWV Resources, 30kms from their Watts Rise HREE discovery.

### Coomarie & Pargee Project Location



Source: Northern Minerals ASX investor presentation 9/06/22

ASX: BUS

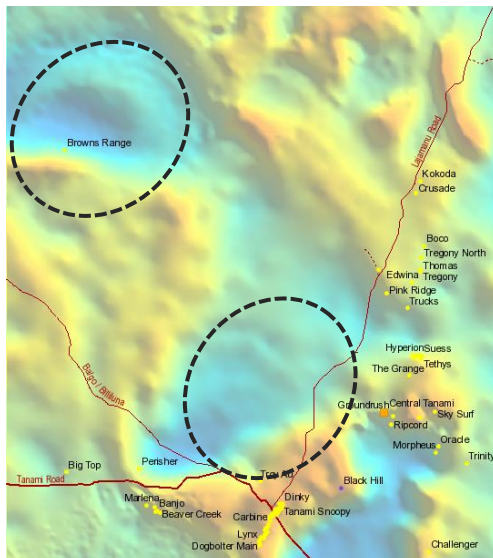
W: [www.bubalusresources.com.au](http://www.bubalusresources.com.au)

# Coomarie Project – Rare Earths

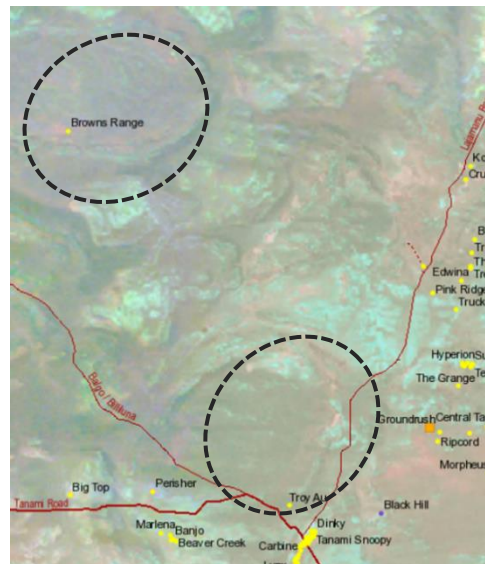
**Large granitoid intrusive known as Coomarie Dome presents an opportunity to pursue the same “own the dome” strategy as Northern Minerals – Browns Range Project.**

- Northern Minerals (NTU) Browns Range mineralisation hosted on margins of granite dome intrusive where the unconformity between Gardiner Sandstone and Browns Range Metamorphics exist.
- Whole rock grab samples highlight anomalous NdPr Values on periphery of Coomarie Dome intrusive complex, without any follow up exploration having been undertaken.

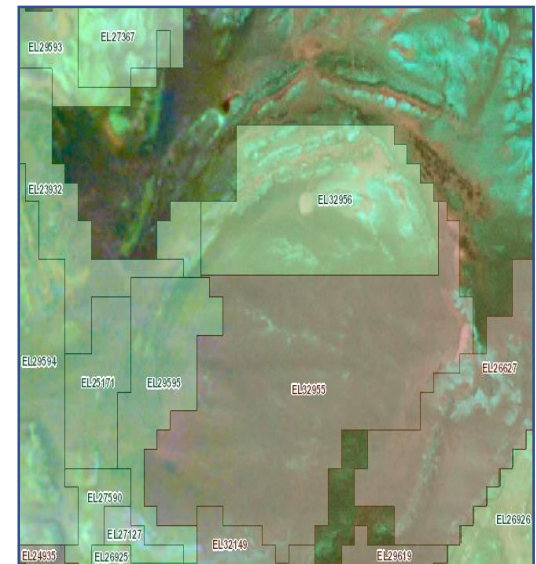
## Similar structural dome setting



## Radiometric signature similarities



## EL32956 straddling domal margin of interest



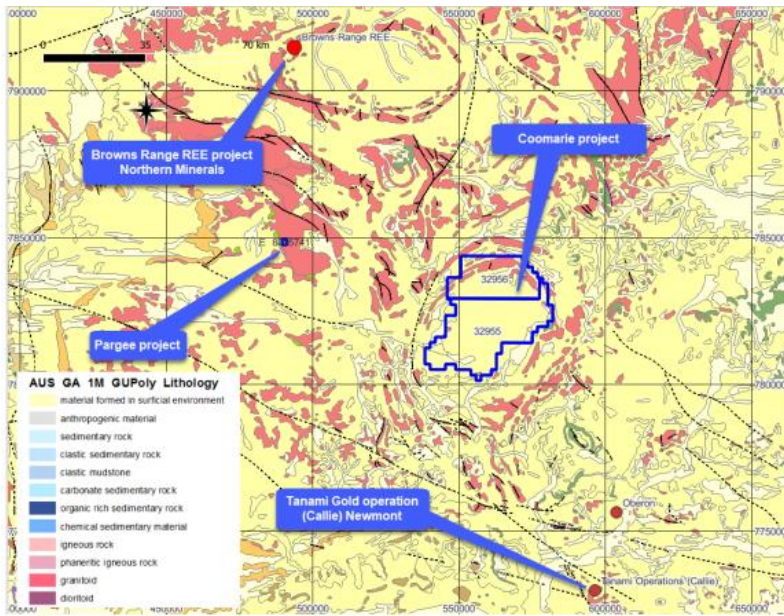
Source: Independent Geologists Report, ASX Announcement 11 October 2022

# Coomarie Project – Rare Earths



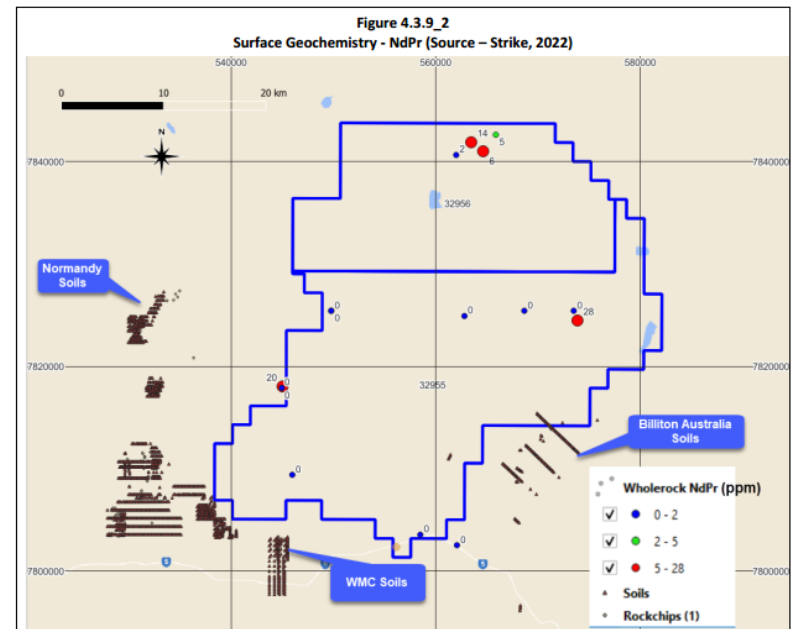
- Desktop targeting by **Southern Geoscience Consultants** has identified a number of structures which cross cut the domal contact and **present priority target areas** for initial on the ground exploration activities.
- Exploration upside abundant, with limited systematic or modern exploration techniques previously applied. Sporadic geochemical soil sampling was constrained to the southern flank of the Coomarie Dome, with four anomalous NdPr grab samples on the north-eastern flank never followed up.
- Land access and approvals processes underway.

## Pargee and Coomarie projects proximal to major resources in region



Source: Independent Geologists Report, ASX Announcement 11 October 2022

## Surface grab samples and geochemistry highlighting anomalous NdPr samples never drill tested





# Pargee Project – Rare Earths

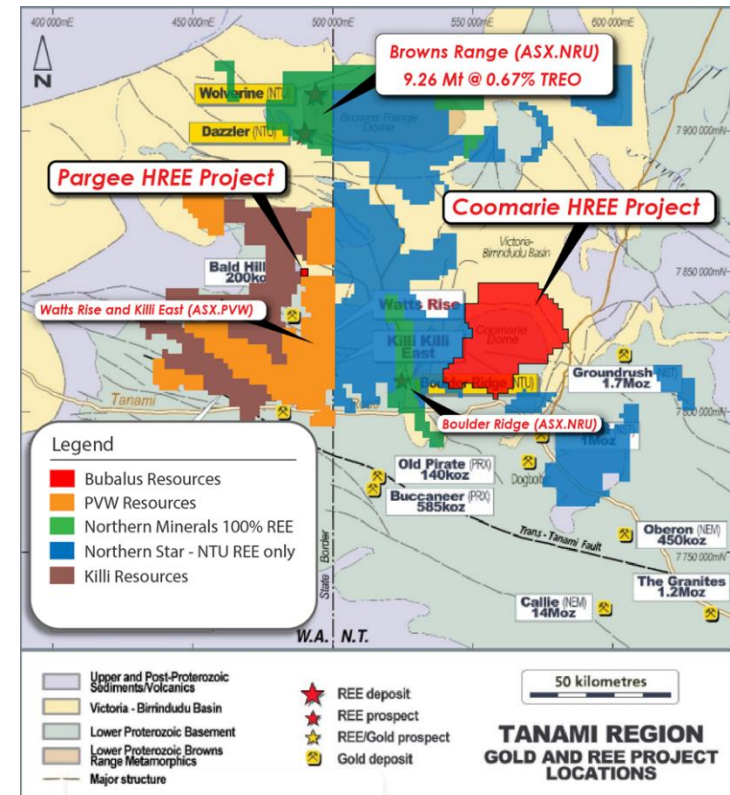


**1.8kms of Killi Killi unconformity striking through Pargee Project, host of ASX: PVW's recent REE discovery.**

**Highly prospective geological setting to host unconformity-related REE deposits**

- The contact between the Pargee Sandstone and the Killi Killi Formation is a **regional-scale unconformity considered prospective for hydrothermal unconformity-related REE mineralisation**
- This important geological unconformity has been mapped by the GSWA to extend for **1.8km through the Pargee project.**
- Exploration programs will target faults and structures that transect this regional unconformity that may have potentially acted as conduits for mineralised fluids.

## Major discoveries proximal to Pargee Project



# Rare Earths Supply Chain Dynamics

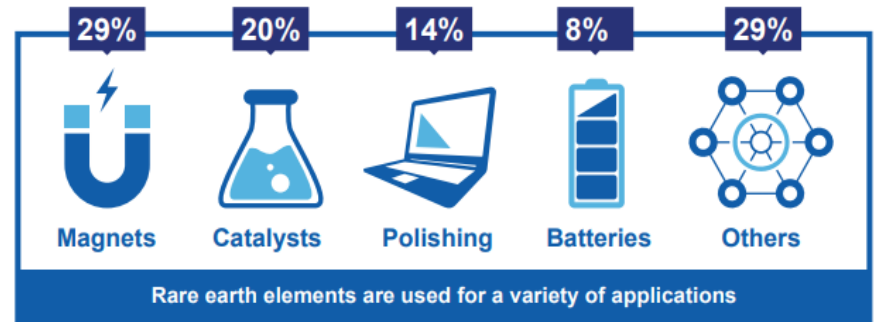
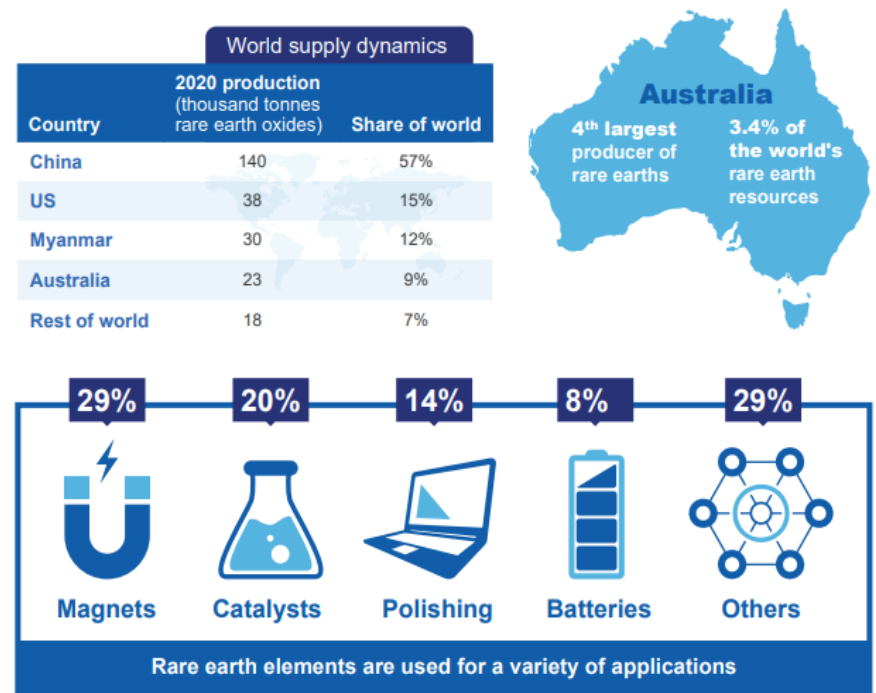


## Geopolitical tensions have highlighted the critical need to secure supply ex China

### Heightened demand and tailwinds for REE's

- Concerted global push to create a rare earths supply chain outside of China, with strong committed investment globally
- Inflation Reduction Act – over US \$500b in funding and incentives to boost clean energy<sup>1</sup>.
- US Energy and Climate bill recently passed, set to underpin demand.
- Former President Donald Trump's EO singled out the US's undue reliance on China for multiple critical minerals.
- The US currently imports 80 per cent of its rare earth elements directly from China.
- Importantly, the EO supports Policy to build resilient critical mineral supply chains in the US and with strong allies.

### Rare Earths Supply and Uses



Source<sup>1</sup>: <https://www.mckinsey.com/industries/public-sector/our-insights/the-inflation-reduction-act-heres-whats-in-it>

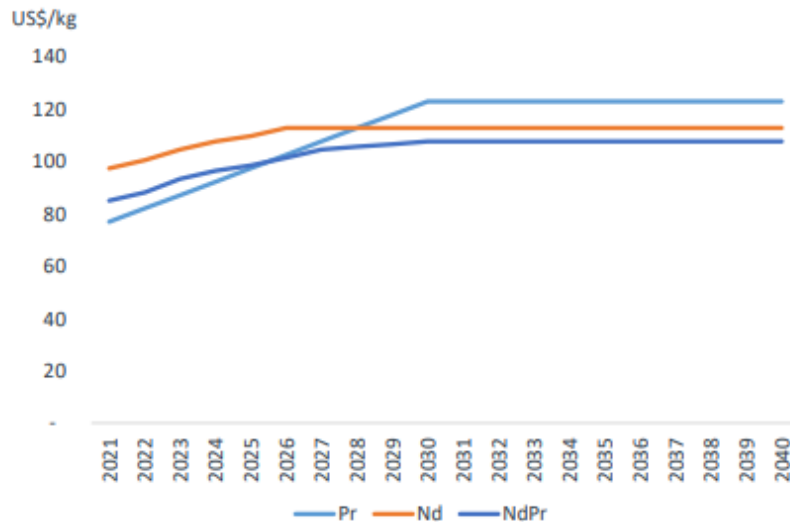
Source: [https://www.industry.gov.au/sites/default/files/2021-06/outlook\\_for\\_selected\\_critical\\_minerals\\_in\\_australia\\_2021\\_report.pdf](https://www.industry.gov.au/sites/default/files/2021-06/outlook_for_selected_critical_minerals_in_australia_2021_report.pdf)

# Light and Heavy REE Pricing Forecasts

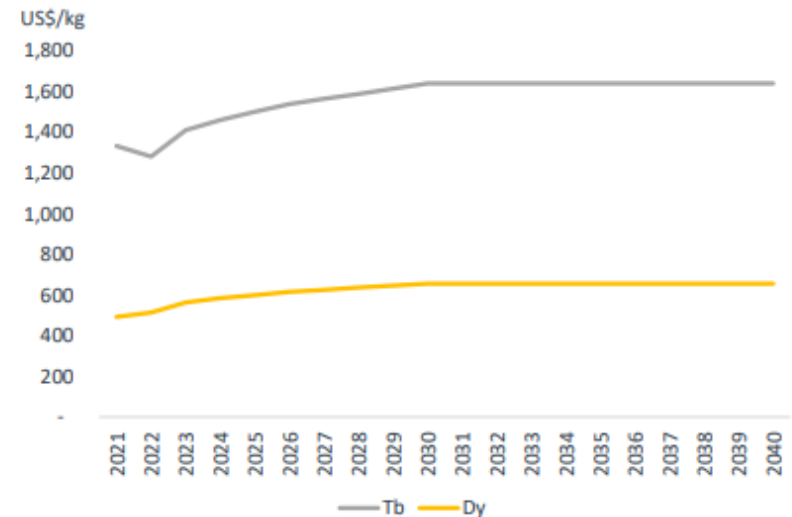


*Demand placing upward pressure on sustained pricing forecasts, with global push for carbon neutrality underpinning demand*

## Light Rare Earths Forecast Pricing



## Heavy Rare Earths Forecast Pricing



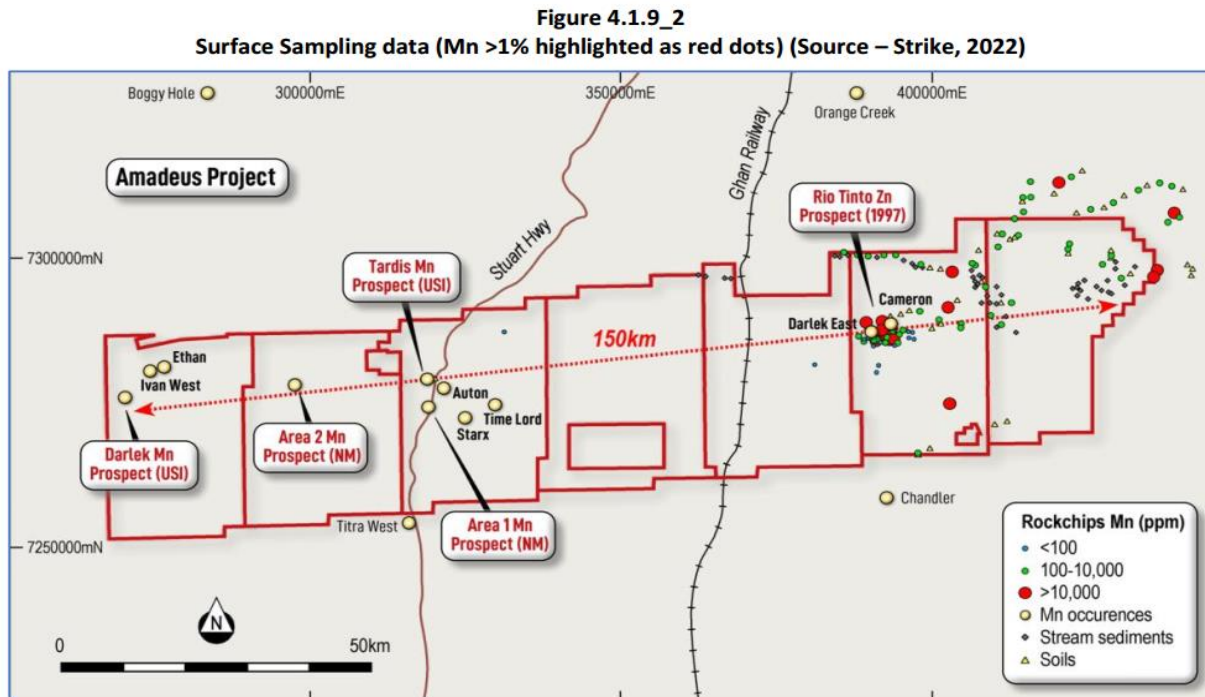
Notes: Prices shown are US\$/kg real 2021 incl VAT

Source: Adams Intelligence September 2021

# Amadeus Project - Manganese

**Commanding land package with 150kms of strike containing outcropping high grade manganese occurrences**

**Historic work identified 11 manganese occurrences, along with cobalt and Ni-Zn-Cu also identified**



Source: Independent Geologists Report, ASX Announcement 11 October 2022

- Substantial land package 125km south of Alice Springs along the Stuart Highway.
- Multiple access roads across tenements as well as airstrips and rail.
- Focus on manganese and, in particular, high purity manganese for the battery metals industry.

# Amadeus Project - Manganese



***Walk-up drill targets provides initial focus with reprocessing of historical data anticipated to yield further targets***

## **Initial ground and geophysical work identifies new targets for drill testing**

- Numerous occurrence of outcropping manganese mineralization exists and extensively mapped, although only Tardis project has been tested by drilling.
- Review of historical exploration has identified surface mineralization may not be coincident with peak gravity anomalies in the area.
- Reprocessing of gravity data has generated new targets for drilling, unassociated with manganese outcrop.
- Field reconnaissance program across Amadeus Project in late 2022 confirmed good access to the project areas and regional infrastructure to support drilling.
- Planning **underway to commence drilling during Q4 CY2023**, provided all relevant stakeholder's consent is received.
- **Walk up targets include Dalek, Ethan, Ivan West along with new targets.**

## **43.3% Mn outcrop at Cameron Prospect**



## **Abundance of outcropping Mn at Dalek Prospect**

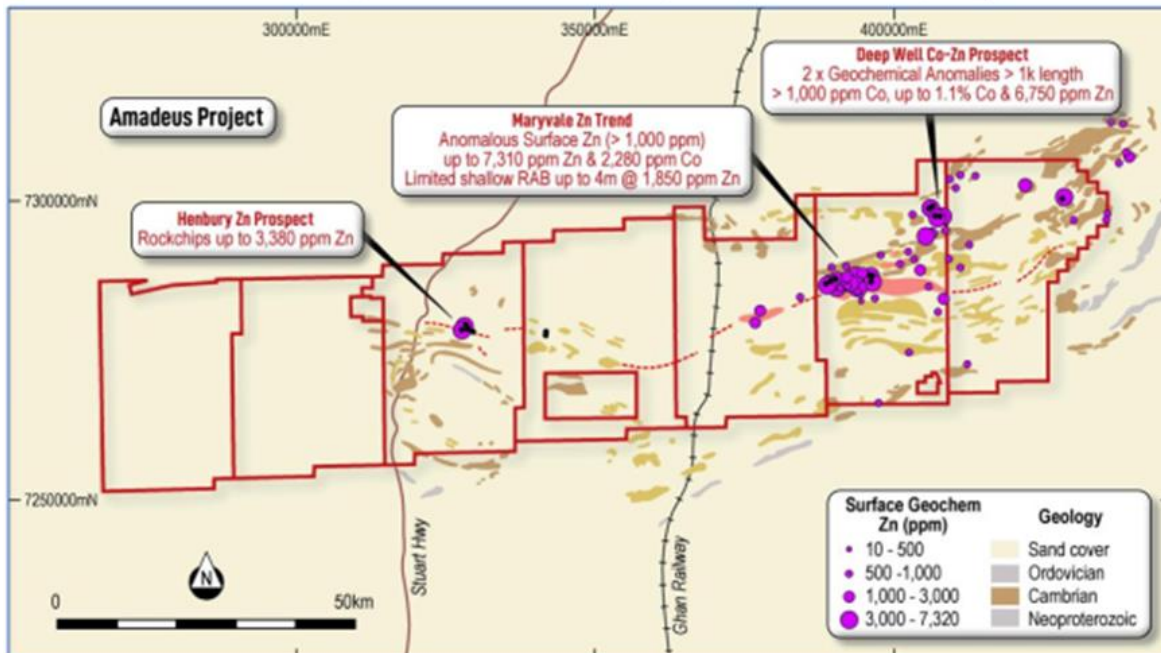


Source: Independent Geologists Report

# Amadeus Project – Zinc, Nickel & Cobalt

## *Kalahari Copper Belt in the Northern Territory?*

### Rio Tinto Geochemistry sampling and RAB Drilling (1997)



Source: Independent Geologists Report, ASX Announcement 11 October 2022

### Chance to apply modern geophysics

- Rio Tinto last explored the eastern portion in 1997, returning Cobalt grades up to 1.1% and 1,850ppm Zn in RAB Drilling.
- Competing allocation of major's exploration capital presents an opportunity?
- Limited follow up work conducted since 1997, with no modern geophysics applied.
- **Modern Airborne Geophysics planned for Q4 CY2023 to assess base metals prospectivity and guide future drilling programs.**

***With the addition of the Yinnietharra Lithium Project, Bubalus is poised to capitalise on the growing global demand for critical minerals sourced from Tier 1 jurisdictions.***

- Assembled a **highly prospective portfolio** of **Lithium, Rare Earths and base metals** projects located in **Tier 1 jurisdictions** – NT and WA
- NT host to some of **Australia's most significant Rare Earth Elements** resources, Arafura Resources ~ 1.26b market capitalisation (Nolans Bore) and Northern Minerals (Browns Range)
- Bubalus Resources' **first mover advantage**, securing analogous and favourable geological settings
- Actively undertaking **systematic exploration**, applying **modern geophysical** and **geochemical techniques** to make .
- **Tight capital structure** and **low \$1.25m enterprise value (pre transaction)** presenting **compelling leverage** to **exploration success**
- **Active 2023 field and exploration drilling programs planned**



# Contact us

## EMAIL ADDRESS

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## WEBSITE

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