ORPHEUS URANIUM LTD

CORPORATE PRESENTATION:

UNLOCKING TOMORROW'S ENERGY TODAY

Orpheus Uranium (ASX: ORP)



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Past performance

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Financial data

All references to dollars ($) and cents are to Australian currency, unless otherwise stated.

Market and industry data

This Presentation contains third party data relating to the industries, segments and markets in which the Company operates or aims to operate (Industry Data). This information has been prepared using publicly available data. The Industry Data includes third party market data, estimates and projections. There is no assurance regarding the accuracy of the Industry Date, and the Industry Data has not been independently verified by the Company.

Competent Person Statement

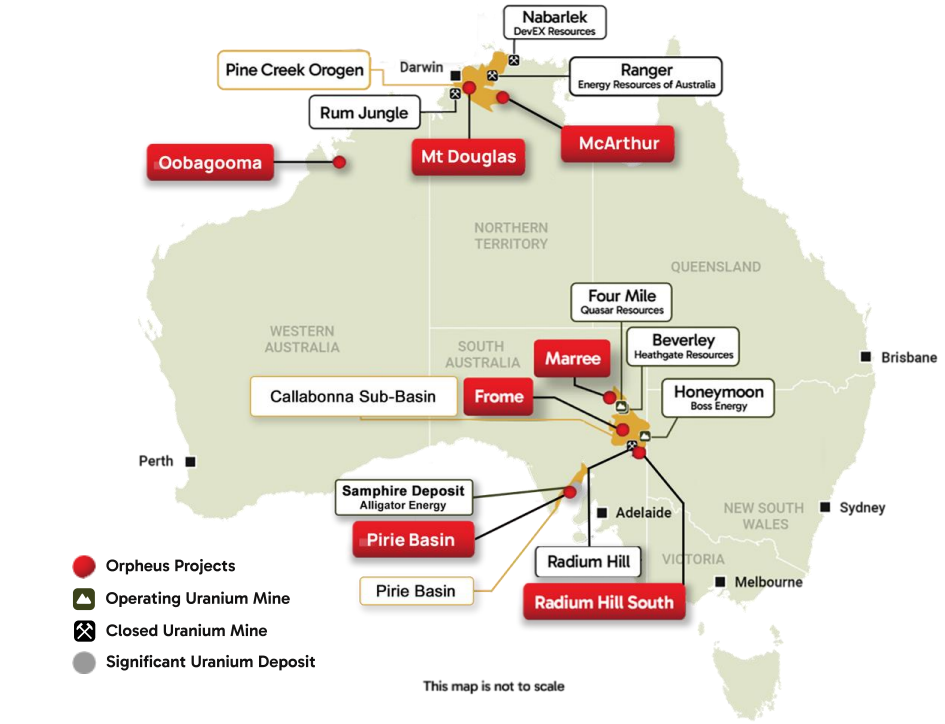
Sections of information contained in this report that relate to Exploration Results were compiled or reviewed by Mr Clinton Dubieniecki BSc (Hons), who is a Member of the Australian Institute of Geoscientists, Member of Australian Institute of Mining and Metallurgy, and is a full-time employee of Orpheus Uranium Limited. Mr Dubieniecki has sufficient experience which is relevant to the style of mineral deposits under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 edition of the "Australasian Code for Reporting of Mineral Resources and Ore Reserves". Mr Dubieniecki consents to the inclusion in this report of the matters based on this information in the form and context in which it appears.

Notes on Shares on Issue, Price and Cash & Liquid Investments

* Cash balance $6.66M with Liquid Investments $0.79M (ORP holds 3.75M shares in Prospect Resources (ASX: PSC)) as last reported in the 2026-Q3 Activities report

^ 2.5M shares to be issued upon completion (2.5M) of Marree Sale Agreement with Adavale Resources (ASX: ADD)

Overview / Investment Highlights





A Focus on Portfolio Development & Discovery

- **Pure-play uranium investment opportunity** with 100% ownership, offering strong leverage to uranium market fundamentals
- **Exposure to tier-one uranium jurisdictions** with supportive regulatory frameworks (SA, NT) recently extending into Western Australia (WA)
- **High-impact and developing uranium exploration portfolio**- targeting underexplored Australian assets with district-scale discovery potential (e.g., Marree and Oobagooma)
- **Strategically positioned portfolio adjacent to established JORC resources (>60Mlbs)**, leveraging proven geological systems to reduce risk and enhance upside (e.g., Frome and Pirie Basin)
- **Led by an experienced, technically proven team** with a track record in world-class uranium operations

Shares on issue^ (30 Oct 2026)	Share Price (30 Oct 2026)	Market Cap (30 Oct 2026)	Cash & Liquid Investments* (30 Sept 2026)
421.8M	$0.087	$36.7M	$7.45M

** & ^ See notes on disclaimer page*

Overview / Project Pipeline

AS AN INDUSTRY, WHEN WE EXPLORE FOR URANIUM, WE DISCOVER URANIUM!

Business Development (incoming Assets) →

- **Mt Douglas** (NT)
- **Mundaerno** (SA)
- **McArthur** (NT)
- **Pirie Basin** (SA)
- **Marree +** (SA)
- **Frome** (SA)
- **Radium Hill South** (SA)
- **Oobagooma** (WA)

Producing Assets →



01. Greenfields Exploration → 02. Advanced Exploration → 03. Exploration Target → 04. JORC Resource



DUAL STRATEGIC APPROACH: LEVERAGING DISTINCT URANIUM-SPECIFIC EXPERIENCE

Project rationalisation routinely occurring to minimise unnecessary outgoings, and maximise portfolio value

+ Sale agreement executed, working to completion of sale

Overview / Near Term Milestones



2026: Advancing the Portfolio

- **Progress prospective South Australian projects** through regulatory approvals as to **enable 'decision to drill', *targeting sedimentary-style mineralisation*** (e.g., Pirie Basin and Marree)
- Continued interpretation of **inaugural Frome drill program** to build **pathway toward future resource-scale evaluation**
- Development of **West Australia's Oobagooma project to publish exploration target**, alongside establishing framework for land access agreements and stakeholder engagement
- **Test mineral systems associated with 1.6 to 4.1% U_3O_8** near surface samples **within the Northern Territory tenure and progress approvals to 'decision to drill'**
- **Refinement of portfolio** including assessment of **geologically relevant tenure and projects** – development & rationalisation
- **Position the Company for success through drill discovery and/or growth in the Uranium market with a high-quality advancing portfolio**

Key Projects / South Australia

Sedimentary-Style Mineralisation

Frome Uranium Project

Located in a globally significant Callabonna Sub-Basin ~12km west of Boss Energy's 33.1 Mlb. Gould's Dam Uranium Deposit[1]

Pirie Basin Uranium Project

Over 40km strike of highly prospective Pirie Basin - adjacent to Alligator Energy's 18 Mlb. Samphire[2] and 12 Mlb. Plumbush[3] Uranium Deposits

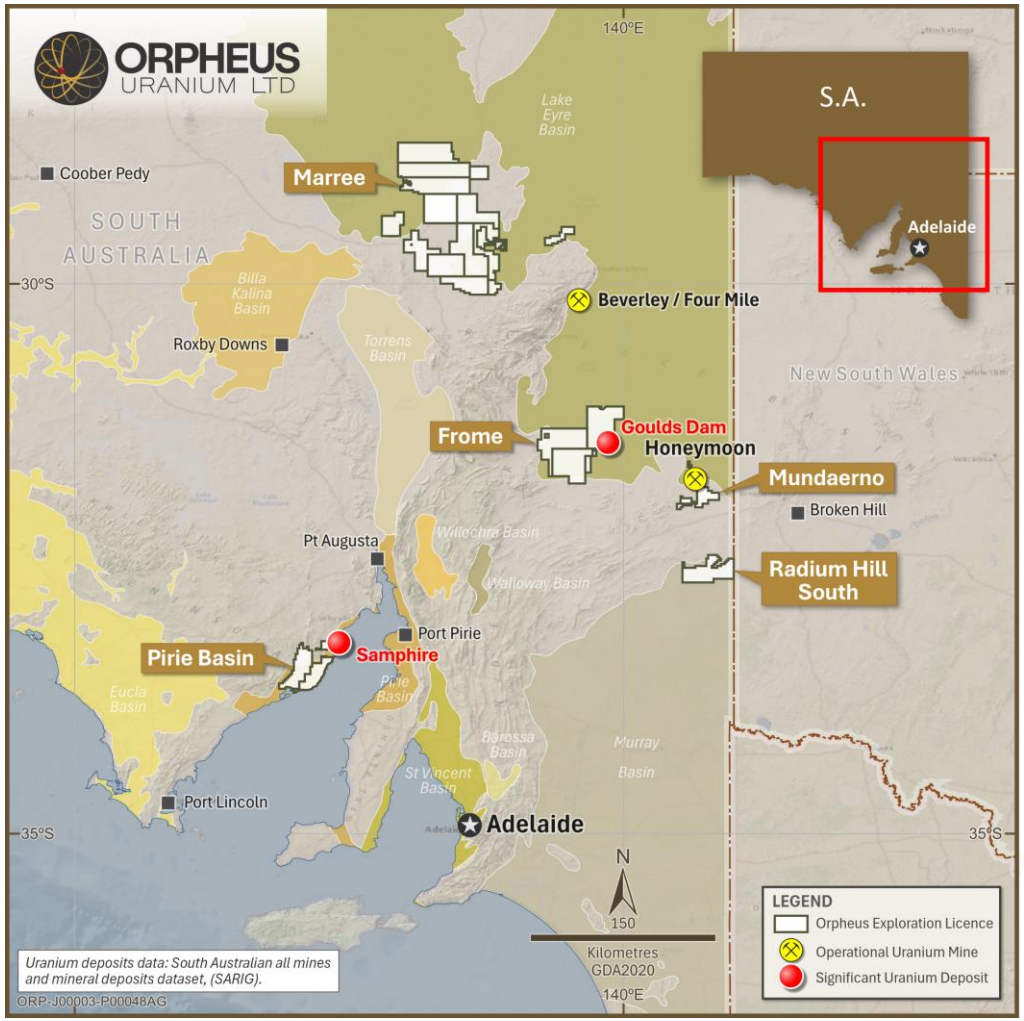
Marree Uranium Project

Progressing acquisition-led tenure consolidation near globally significant Flinders Ranges source region, expanding a district-scale sedimentary-style U opportunity

Leveraging results of previous explorers' activities who halted due to changing market conditions not lack of prospectivity

Proximal to Existing and Developing Operations

Proximal to operations and developing **assets recently approved** for uranium mining or development activities **in a jurisdiction that allows uranium mining**



1. Goulds Dam Uranium Deposit – Resource - Boss Energy Limited ASX: BOE - Combined Indicated (23%) and Inferred Resource (77%) – Average Grade 388 ppm U3O8 with Contained 33.1 Mlbs. U3O8. Refer to ASX: BOE announcement dated 19 March 2026.

2. Samphire Uranium Deposit – Alligator Energy Limited ASX: AGE - Increased Mineral Resource Estimate and Upgrade of Indicated Resource for the Blackbush Deposit, Samphire U Project. (18.0 Mlbs. at an average grade of 676ppm U3O8). Refer to ASX: AGE announcement dated 06 May 2025

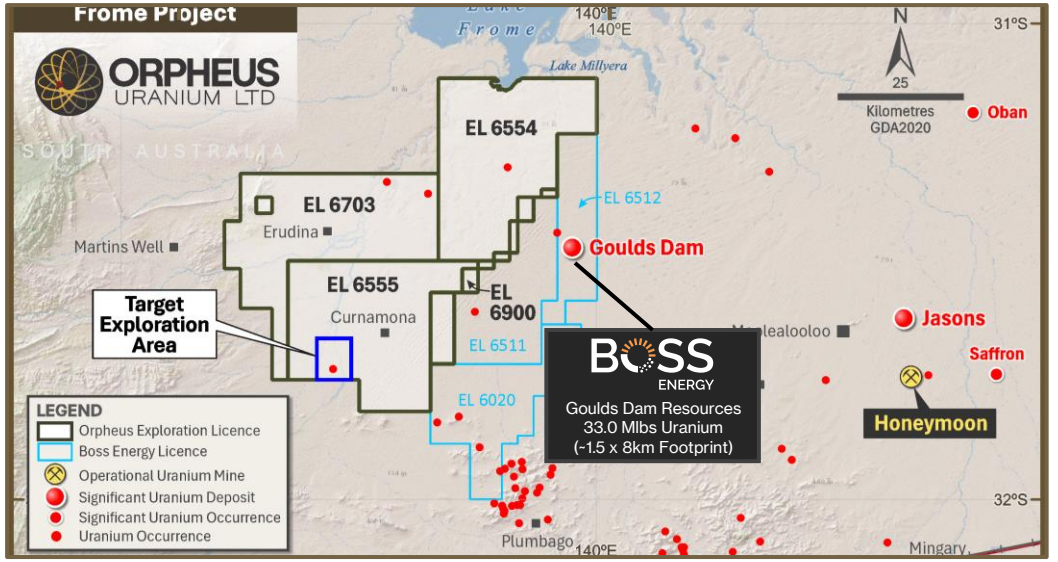
3. Plumbush Uranium Deposit – Alligator Energy Limited ASX: AGE – Samphire Mineral Resource Grows 67% to 30 Mlbs U3O8 Following Addition of Plumbush Inferred Mineral Resource (12.0 Mlbs. at an average grade of 370ppm U3O8). Refer to ASX: AGE announcement dated 19 June 2026

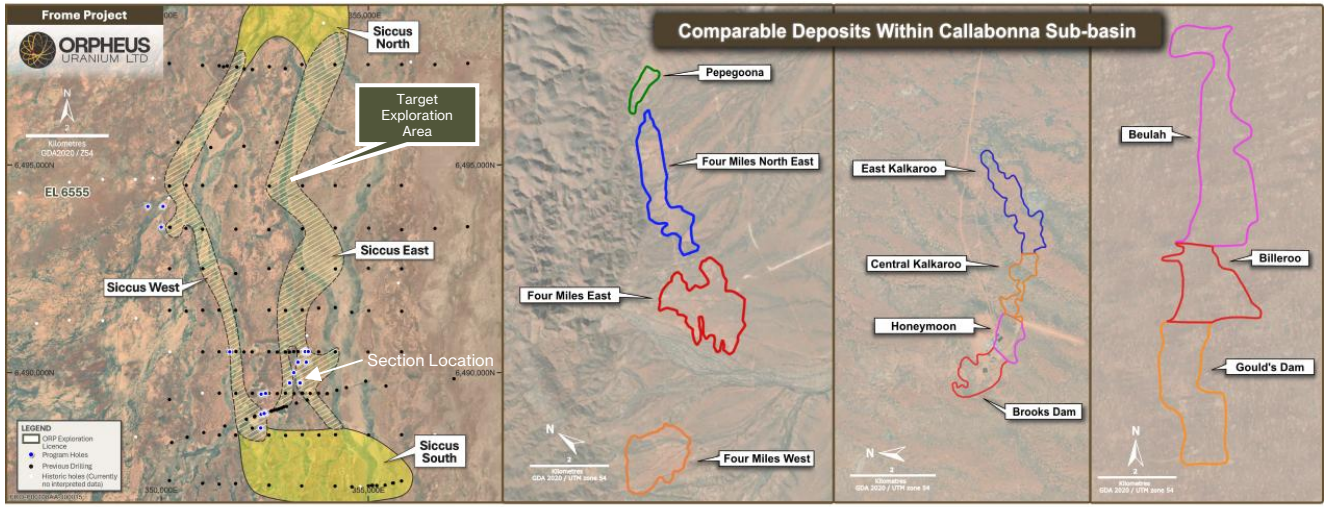
Frome Project

Advanced Exploration

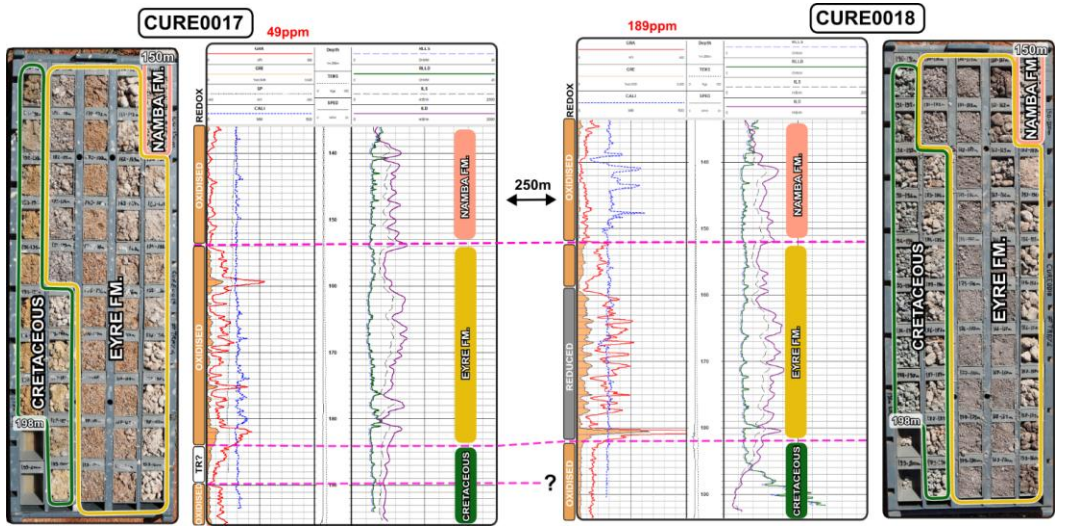
Underexplored uranium project with four refined prospect areas [4]

- Positioned within the **Callabonna Sub-basin** (Lake Eyre Basin), which **hosts** the **producing Four Mile** and **Honeymoon Uranium Mines**
- **Adjacent to** and **sharing geological synergy** with developing **33.1Mlb. Goulds Dam uranium deposit**
- Mechanisms for (**source, transport & trap**), and evidence of Uranium mineralising system **(historic intersects >1,000ppm eU3O8)**
- Inaugural drill program **identified oxidised/reduced corridor (control on mineralisation) → pathway toward future refined drill program at same scale**





Ore outlines, domains and mineralising envelopes are for illustrative purposes only, to highlight the relative sizes of known, producing or developing deposits that occur within the same geological setting as that being targeted at the Frome Project.



Pirie Basin Project

Advanced Exploration

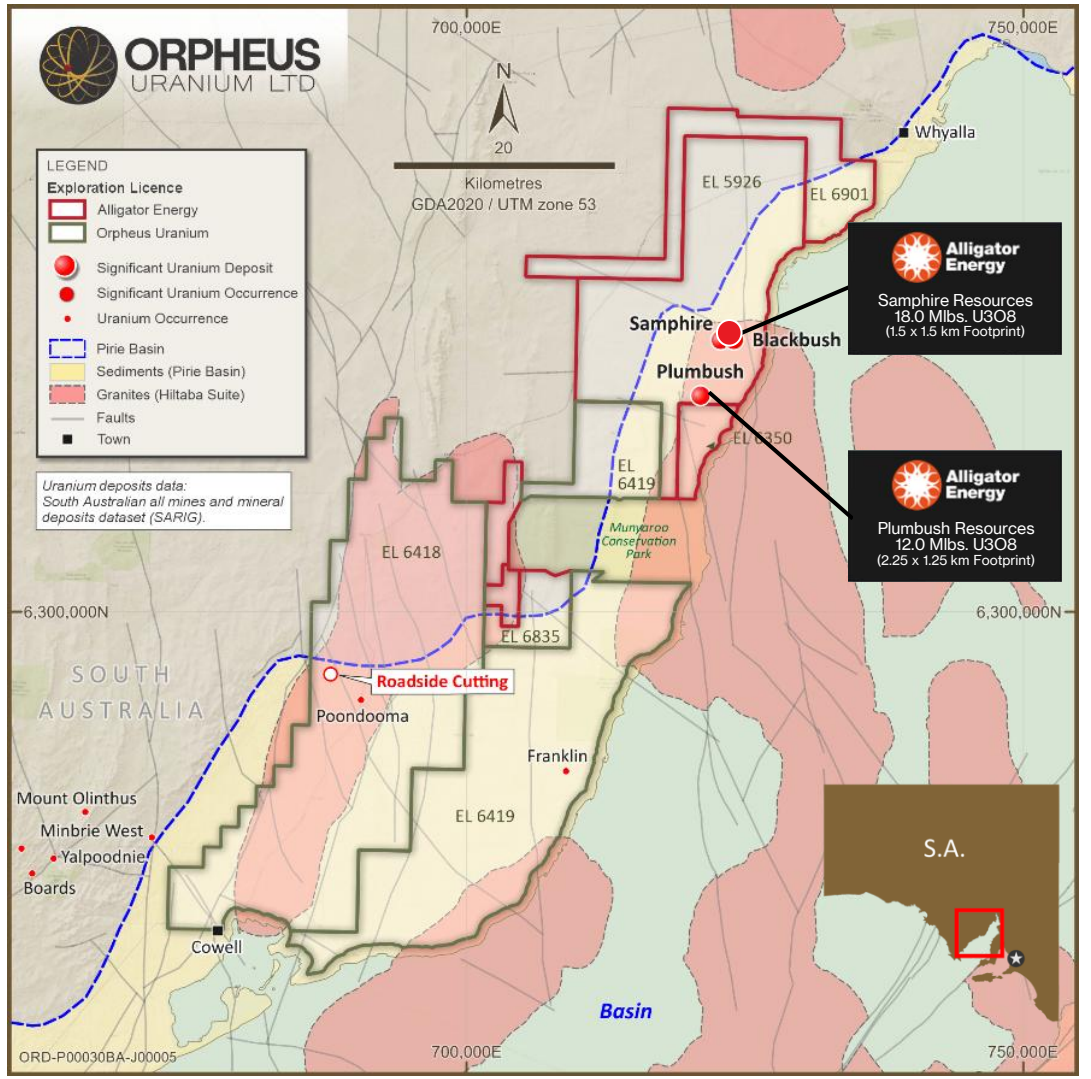
First time exposure to uranium focused junior explorer

- Over **40km strike** of **highly prospective Pirie Basin sediments** which are **host** to the **30 Mlb. (U) Samphire/Plumbush deposits** and **underlain** by **fertile granites**
- **Pirie Basin one of only two basins** in South Australia to host sedimentary-style uranium deposits that have **active advanced staged feasibility or producing in-situ recovery uranium projects**
- **Proximal, along strike** and **geological synergy** with **known and developing uranium deposit** → target area **underexplored** due to market conditions not geological setting
- **Progressing regulatory approvals** → positive preliminary engagement with key stakeholders







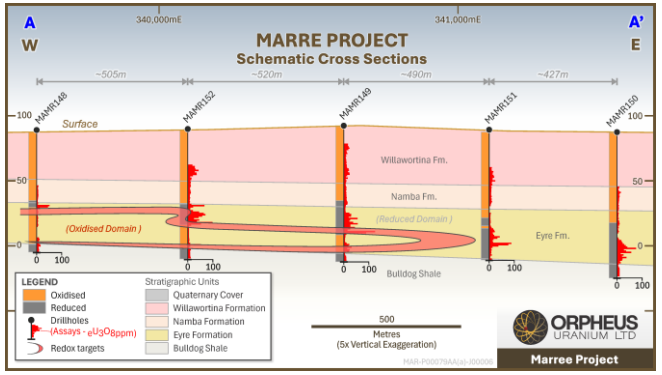


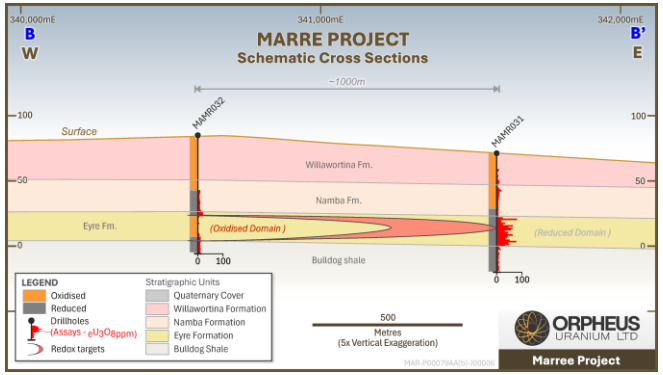
Marree Project

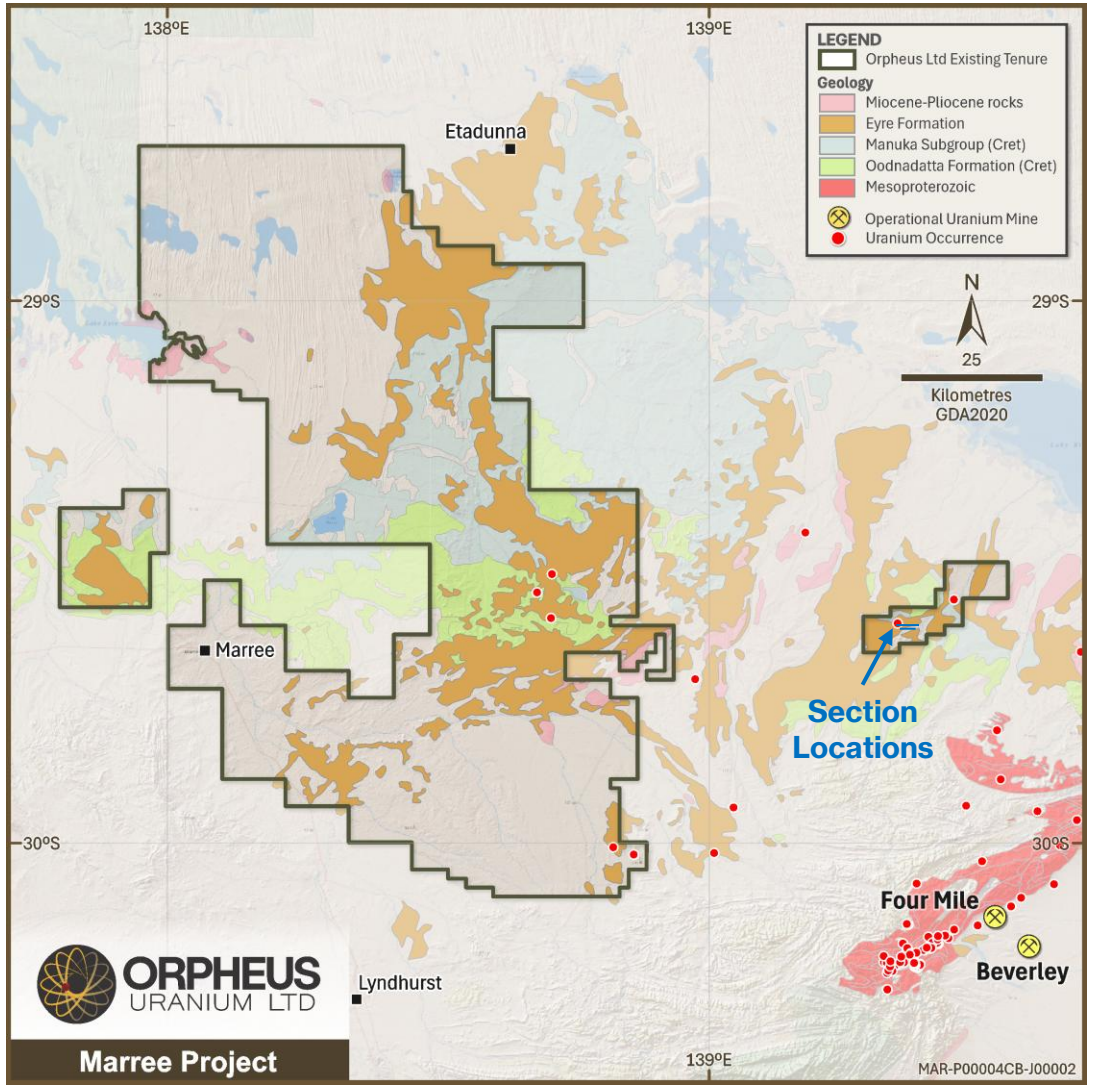
Advanced Exploration

Strategically developing district-scale tenure

- **District-scale uranium position** in the Lake Eyre Basin, **host to known** and **prospective for** sediment-hosted **palaeochannel uranium mineralisation**
- Execution of sale agreement to **acquire surrounding tenure** strengthens Orpheus' footprint and **include intersects up to 450ppm eU3O8**
- **Strategic exposure** within **district occupied by private global uranium explorers & producers** (only ASX-listed company with district scale tenure)
- Incoming datasets being interrogated by Orpheus' in-house geological team to refine drilling targets & validate pathway toward potential Exploration Target
- Progressing towards gaining required approvals to advance project to **'decision to drill'**







Key Project / Western Australia

Oobagooma Uranium Project [5]

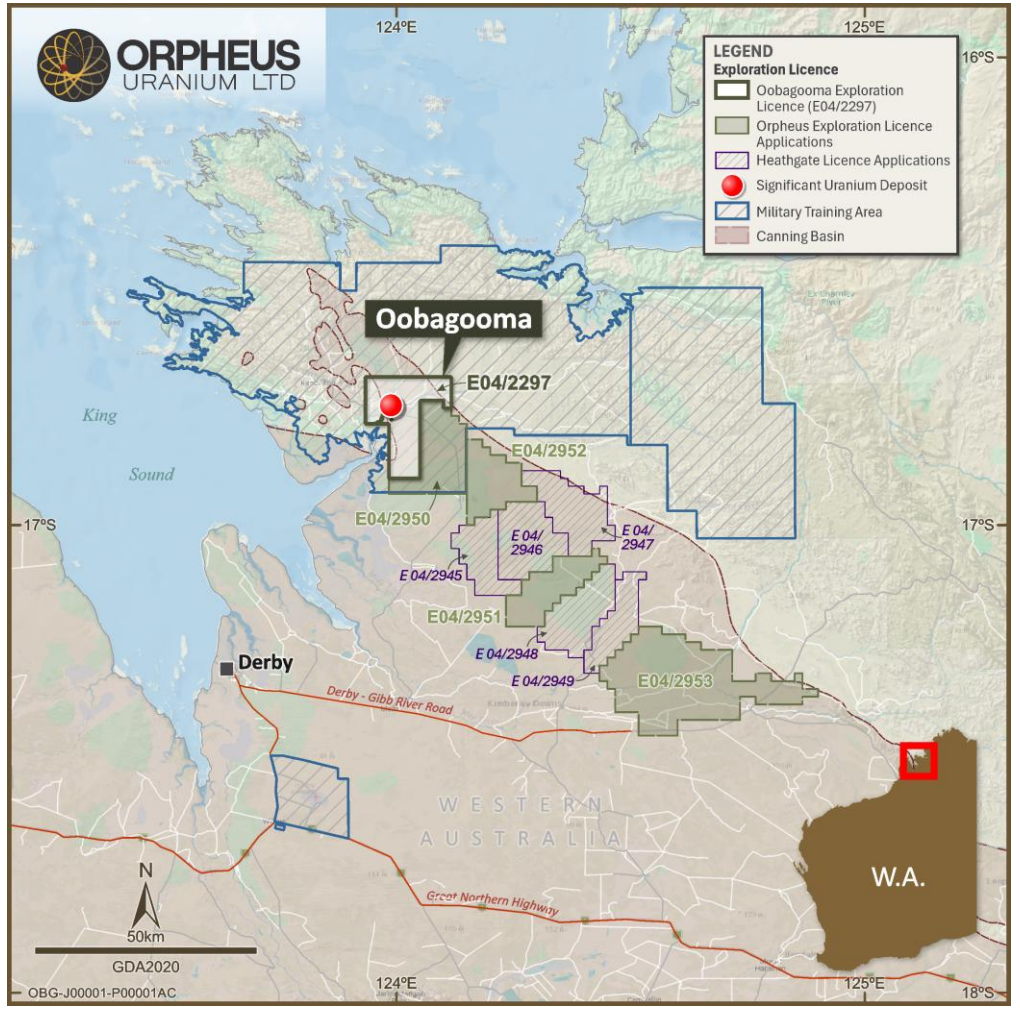
- **Targeting "Sedimentary" redox-style mineralisation**
  Hosted within Yampi Sandstone of the Carboniferous Canning Basin

- **Limited Contemporary On-ground Exploration**
  Discovered in 1981 by Australian French Mining & Exploration Company (Afmeco), most recent drilling in 1983

- **Geological setting conducive to uranium mineralisation**
  Evidence of mineralising source rocks, transport mechanism and geochemical trap sites

- **Elevated U grades – Forty-Eight (48) holes with GT* > 1,000 (m x ppm)**
  Known U mineralisation over approximately 4 km of strike and 1.5 km width, includes:
  - 2.2 m at 3,581 ppm eU3O8 from 47.5 m (CAN-S-237)
  - 2.45 m at 1,870 ppm eU3O8 from 68.2 m (YAM-S-110)
  - 1.65 m at 3,775 ppm eU3O8 from 53.15 m (YAM-S-140)

- **Sale agreement completed, progressing towards establishing Exploration Target by Dec 2026**



5: Oobagooma Uranium Project – Orpheus Uranium Limited ASX: ORP - Acquisition of Oobagooma Uranium Project. Refer to ASX: ORP announcement dated 14 October 2025

*GT = Grade Thickness - calculated as uranium grade (ppm eU_3O_8) x Thickness (m)

Key Projects / Northern Territory

McArthur [6] & Mt Douglas

Targeting the Pine Creek Orogen

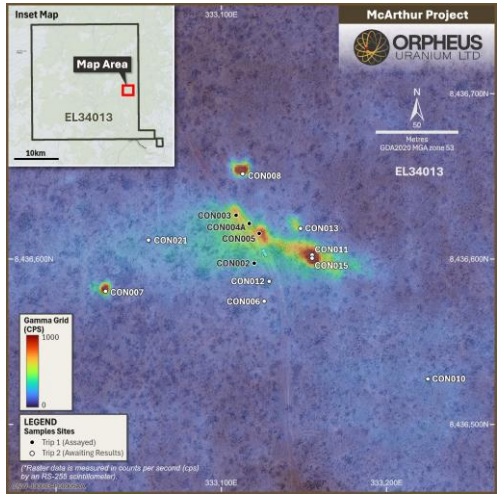
Exposure within the proven Rum Jungle / Pine Creek uranium province demonstrate broader province-scale potential

High-Grade Unconformity & Vein-Style Mineralisation

McArthur Project has identified **area of interest** within inaugural reconnaissance program **(near surface samples containing up to 4.1% U_3O_8)**

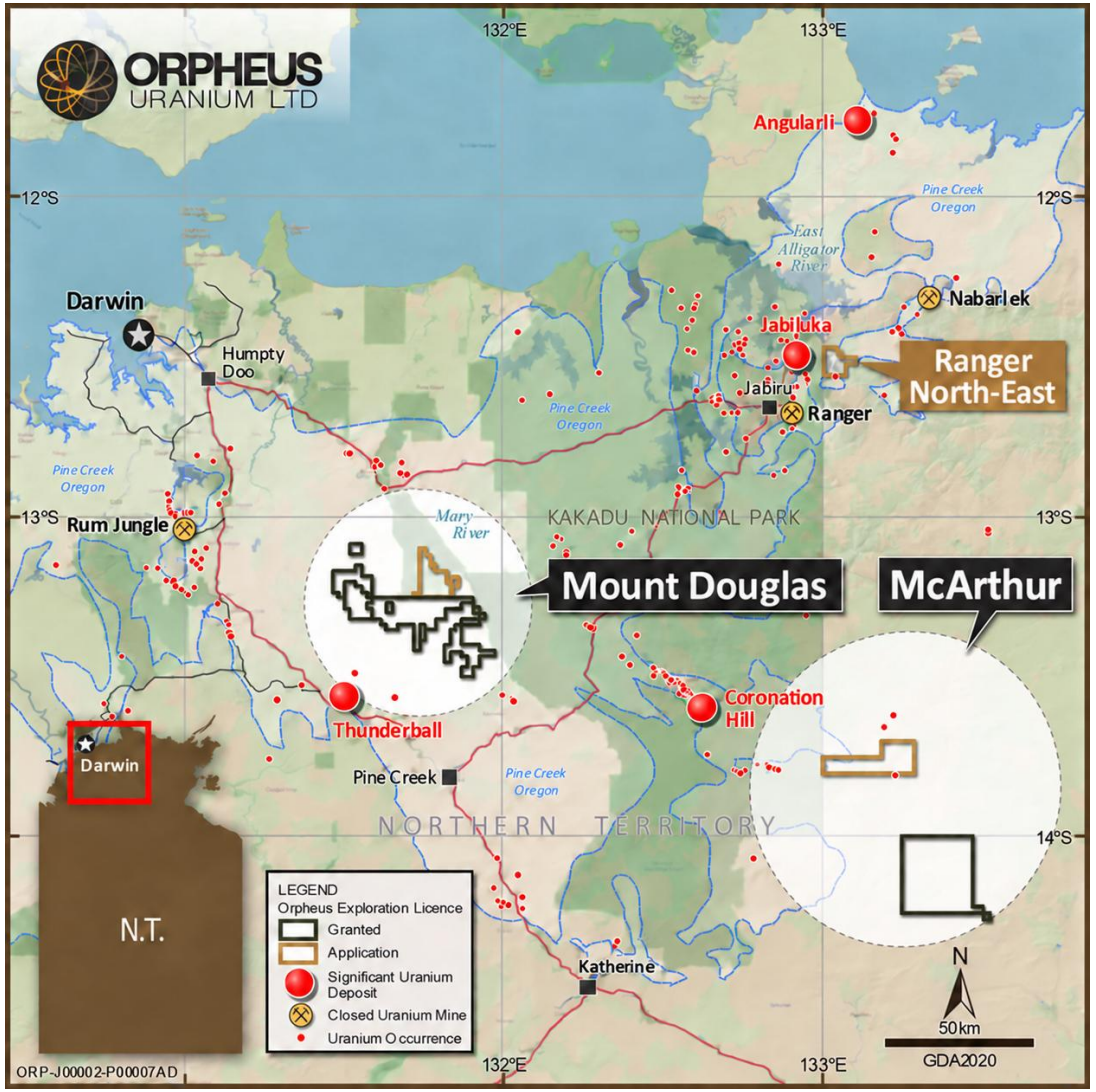
Expedited Work Program

Initial target area expanded upon follow-up reconnaissance, continued activities to refine and extend targets and gain regulatory approvals for drilling









6: McArthur Uranium Project – Orpheus Uranium Limited ASX: ORP - Up to 4.1% U3O8 Rock Chip Samples at McArthur Project NT. Refer to ASX: ORP announcement dated 21 October 2026

Summary / Why Orpheus Uranium?

Scalable Development of Uranium Portfolio with Knowledgeable Dynamic Exploration Approach

- **Core exposure** to **South Australia** and the **Northern Territory**, Australia's **premier uranium jurisdictions** with potential upside **to Western Australian** sector
- **Multiple projects** with **multiple prospects** positioned near operating, developing and historically mined uranium systems
- Applying **proven sediment-hosted uranium workflows** to **data-rich projects** in **districts with known uranium systems**, regulatory precedent
- Lead by **specialist uranium team** with **contemporary sediment-hosted exploration and production experience**
- **Disciplined execution model**: compile, reinterpret, rank, a permit, drill and refine
- **Multiple potential catalysts across various stages of the exploration and development cycle**



Summary / Corporate

CAPITALISATION DATA

Shares on issue^ (30 Oct 2026)

421.8M

Share Price (30 Oct 2026)

$0.087

Market Cap (30 Oct 2026)

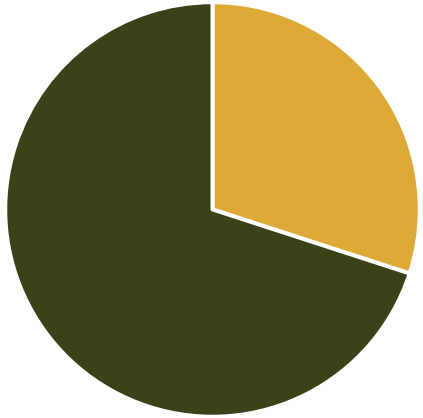
$36.7M

Cash& Liquid Investments (30 Sept 2026)*

$7.45M

^ & * → *See Disclaimer page for more details*

ASX: ORP Shareholder Spread



70.0% Top 20 Shareholders

30.0% Outside Top 20 Shareholders

12 Month Share Price



5 Year Uranium Spot Price (USD/Lb.)



BOARD & MANAGEMENT

Clint Dubieniecki – Managing Director & CEO
Simon Mitchell – Non-Exec Chairman
Todd Williams – Non-Exec Director
Richard Willson – Company Secretary

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Clinton Dubieniecki
Managing Director

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Comparable Projects

Orpheus reports Mineral Resources of uranium mines, deposits or past production that it considers comparable to the style and location of uranium mineralisation in which it explores, as presented within this presentation, and listed in the table herein.

Project	Development Phase	Location	Company / Operator	Resource Classification	Average Grade (ppm U_3O_8)	Contained Metal (Mlbs, U_3O_8)	Source
Honeymoon Uranium Mine	Mine	Lake Eyre Basin/Callabonna Sub-basin South Australia	Boss Energy Limited ASX: BOE	Mineral Resource	660	36	*Refer to ASX: BOE announcement dated 23 January 2024* *Note: 2021 Enhanced feasibility study (EFS) withdrawn in 2025 - Refer to ASX: BOE announcement dated 18 December 2025*
Jasons Uranium Deposit	Resource			Combined Indicated and Inferred Resource	410	12	Refer to ASX: BOE announcement dated 19 March 2026
Goulds Dam Uranium Deposit	Resource			Combined Indicated and Inferred Resource	388	33.1	Refer to ASX: BOE announcement dated 19 March 2026
Saffron Deposit	Resource		Marmota Limited ASX: MEU	Inferred Resource	557	5.4	Refer to ASX: MEU announcement 26 October 2023
Radium Hill Historic Mine	Historic Mine	Curnamona Province South Australia	Areas reserved from the Mining Act, 1971 and Opal Act, 1995	Past production	1,310	2.6	Refer to https://minerals.sarig.sa.gov.au/MineralDepositDetails.aspx?DEPOSIT_NO=962
Samphire Uranium Deposit (Blackbush)	Resource	Pirie Basin (Eyre Peninsula)	Alligator Energy Limited ASX: AGE	Combined Indicated and Inferred Resource	676	18	Refer to ASX: AGE announcement dated 06 May 2025
Plumbush Uranium Deposit (broader Samphire Project)	Resources		Alligator Energy Limited ASX: AGE	Inferred Resource	370	12	Refer to ASX: AGE announcement dated 19 June 2026

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Clinton Dubieniecki
Managing Director

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Board and Management

Orpheus is led by a Board with decades of experience and current connections with all aspects of today's uranium industry.



Clinton Dubieniecki
Managing Director

Clinton is a trained geologist with over 18 years of experience and extensive exposure to the uranium sector. He has worked across the full value chain of uranium projects – from exploration through to resource development and production – with multinational companies including Orano, Uranium One, and most recently Heathgate Resources, where he spent nearly a decade contributing to the operation of the Beverly and Four Mile projects. Clinton joined Orpheus in May 2024.



Simon Mitchell
Chairman

Simon is a trained geologist with more than 35 years of experience spanning technical, financial, and corporate roles, including significant exposure to exploration and mine development. He spent over six years with uranium development company Toro Energy, and more recently has provided consulting services to several Canadian uranium companies, including NexGen Energy Ltd, developer of the world-class Rook I uranium project in the Athabasca Basin, Canada. Simon joined Orpheus in October 2023.



Todd Williams
Non-Executive Director

Todd is a trained geologist with more than a decade of experience across all aspects of mineral exploration. He is currently the Managing Director of Unico Silver and brings extensive uranium sector experience through his time with Power Minerals (formerly PepinNini). Notably, he was instrumental in vending the 'Big Lake' uranium project – recently recognised as Discovery of the Year – into Alligator Energy. Todd joined Orpheus in December 2023.

Exploration Team

The Orpheus exploration team has extensive uranium-specific expertise. Each geologist has experience across all stages of sedimentary-style uranium exploration, development and production.



Isaac Lord
Senior Geologist

Isaac is a geologist with five years of experience at Heathgate Resources, Australia's premier sedimentary-style (ISR) uranium producer. He has gained exposure across the full uranium value chain, from exploration through to production, with the past two years spent in the company's Resource Development department focusing on the Four-Mile deposits. Isaac joined Orpheus in October 2025.



Jack Maughan
Lead Geodata Scientist

Jack is a geologist with 10 years of international experience across multiple sectors of the mining and exploration industry. He began his career with Heathgate Resources, contributing to successful exploration programs and production activities. Jack later gained experience in North America, including as a data scientist with BHP, before returning to Australia to consult to Heathgate and subsequently joining Data Rock as a data scientist. Jack joined Orpheus in May 2025.



Adam Huddleston
Exploration Manager

Adam is a geologist with twenty years' experience in the uranium industry. He worked as a geologist within Heathgate Resources' Beverley and Four-Mile mining operations, where he also helped establish the company's internal drilling department. He subsequently served as Principal Geologist at Alligator Energy, contributing to the development of the Samphire Uranium Project, including the Blackbush deposit. Adam joined Orpheus as a consultant in August 2026.

Exploration Team

The Orpheus exploration team has extensive uranium-specific expertise. Each geologist has experience across all stages of sedimentary-style uranium exploration, development and production.



Hugo Madezo
Project Geologist

Hugo has uranium exploration experience with French multinational Orano Mining, where he focused on project generation, including within South Australia's sedimentary uranium systems. His experience spans geological interpretation, basin analysis and the integration of drilling and geophysical data to identify exploration targets, alongside field management of exploration activities and drilling programs.. Hugo joined Orpheus in April 2026.



Geoff Eupene
Consultant Geologist (NT)

Geoff is a geologist with over 50 years' experience across the exploration industry. His distinguished career in Australia's Northern Territory began with work at Ranger shortly after its discovery. He has remained actively involved in the Territory's uranium industry, including roles as CEO and founding director of ASX-listed companies. Geoff has supported Orpheus as a Darwin-based consultant since the inception of its Northern Territory portfolio.