

ASX: ORP



Unlocking Tomorrow's Energy Today

**CORPORATE PRESENTATION
OCTOBER 2025**

orpheusuranium.com

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Financial data

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

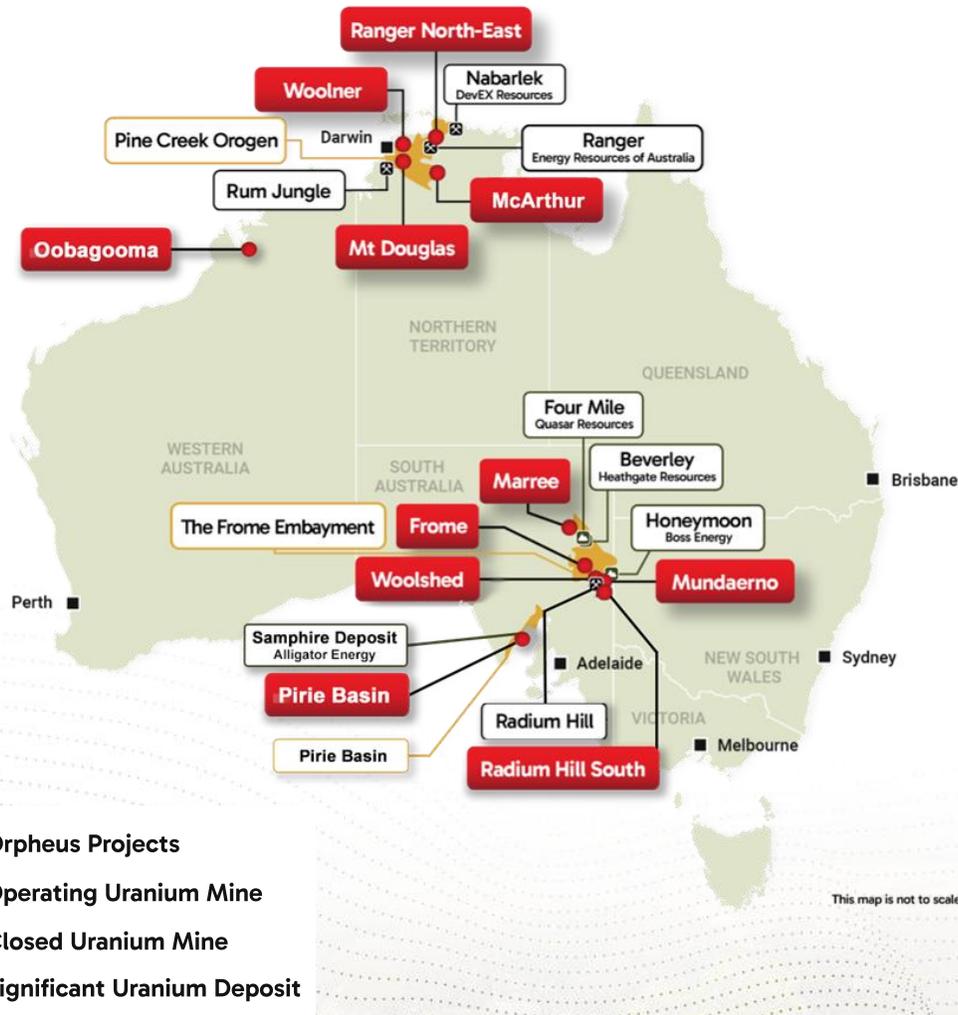
Market and industry data

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 Data, 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.

Major Investment Highlights



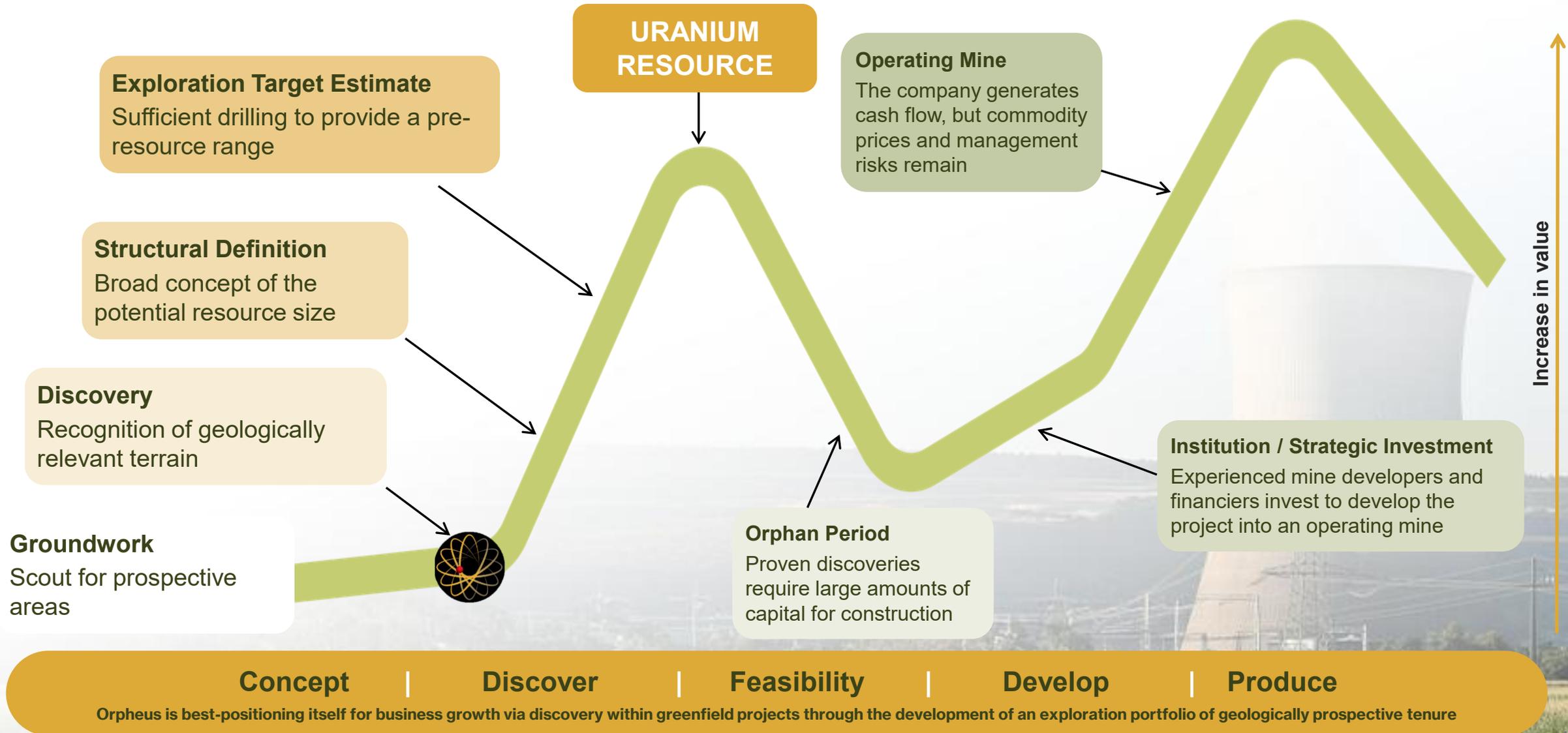
WHY ORPHEUS URANIUM?

- ✓ **Uranium-focused junior explorer** with a **portfolio developed** within the two Australian jurisdictions that allow **uranium exploration** and mining, **South Australia & Northern Territory**
- ✓ **Strategic development** of the project portfolio to contain **geologically relevant** tenure that **promotes long term value** (i.e., recent acquisition of **Oobagooma, Western Australia**)
- ✓ **Technically intelligent team** with **uranium experience** at **world-class uranium operations**
- ✓ Advancing 100% owned, market leading uranium exploration tenure → **Opportunity to invest in ‘true uranium explorer’**

DUAL STRATEGIC APPROACH → LEVERAGING OFF IN-HOUSE URANIUM SPECIFIC EXPETIESE

- ✓ Continued development of core assets to **advanced-staged activities** including drilling
- ✓ Reviewing projects for acquisition/generating exploration targets within established mineralising jurisdictions

From Discovery to Resource



Orpheus Uranium Project Pipeline



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

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

DUAL STRATEGIC APPROACH → LEVERAGING OFF DISTINCT URANIUM-SPECIFIC EXPERIENCE

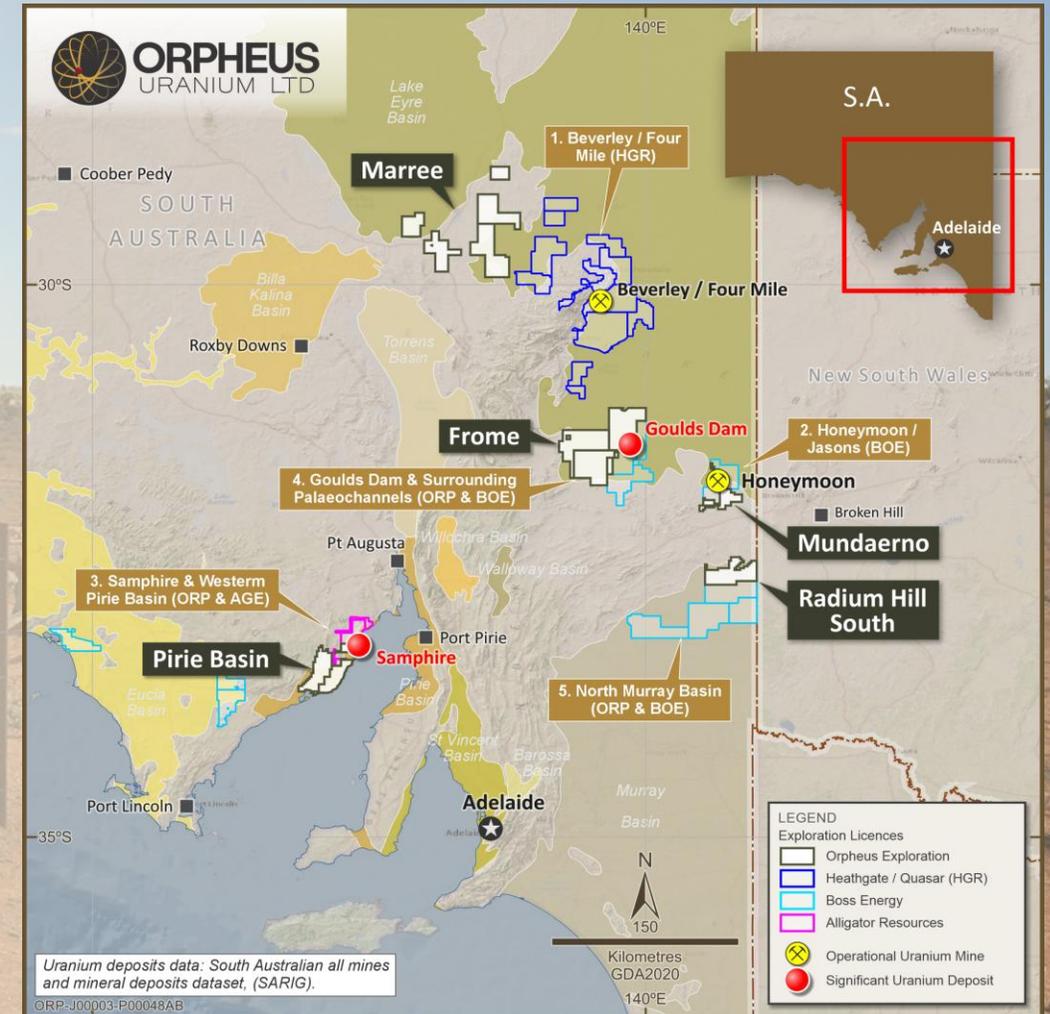
* Sale agreement executed, working to completion of sale

Key South Australian Projects

Sedimentary-Style Mineralisation

- **Frome Uranium Project**
Located in a globally significant Callabonna Sub-Basin ~12km west of Boss Energy's 25 Mlb. Gould's Dam Uranium Deposit²
- **Pirie Basin Uranium Project**
Over 40km strike of highly prospective Pirie Basin - adjacent to Alligator Energy's 18 Mlb. Samphire Uranium Project¹
- **Radium Hill South Uranium Project**
~20 km south of Radium Hill Uranium Field and hosts five uranium known occurrences
- **Leveraging results of previous explorers' activities who halted due to changing market conditions**
- **Proximal to Existing and Developing Operations**
Proximal to operations or developing **assets** that have **gained 'relatively recent' approval** for uranium mining **in a jurisdiction that allows uranium mining**

1: Samphire Uranium Project – 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



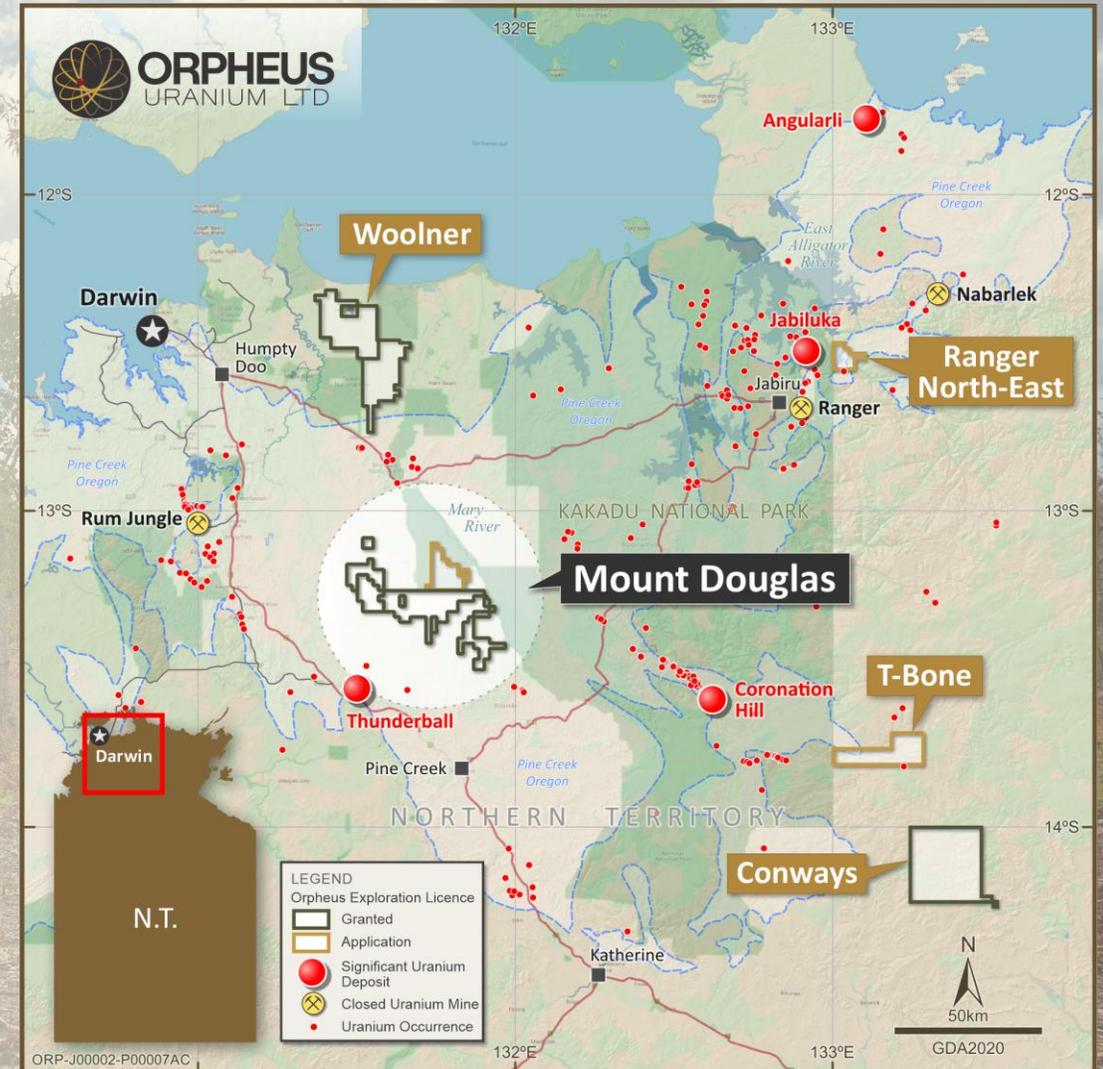
2: Goulds Dam Uranium Deposit – Resource - Boss Energy Limited ASX: BOE - Combined Indicated and Inferred Resource – Average Grade 523 ppm U3O8 with Contained 25 Mlbs. U3O8. Refer to ASX: BOE announcement dated 23 January 2024

Key Northern Territory Project



Unconformity and Vein style Mineralisation

- **Targeting the Pine Creek Orogen**
“Australia’s economic Unconformity-Style mineral systems” - Significant region of historical production where Australia's large, high-grade deposits are discovered
- **Mount Douglas**
Exposure of Kombolgie Sandstone and geological synergy with Thunderball Uranium Deposit
- **Active Exploration programs**
Undertaking on-ground exploration activities (refined gravity survey) and working towards advanced-stage activities (i.e., trenching and drilling)

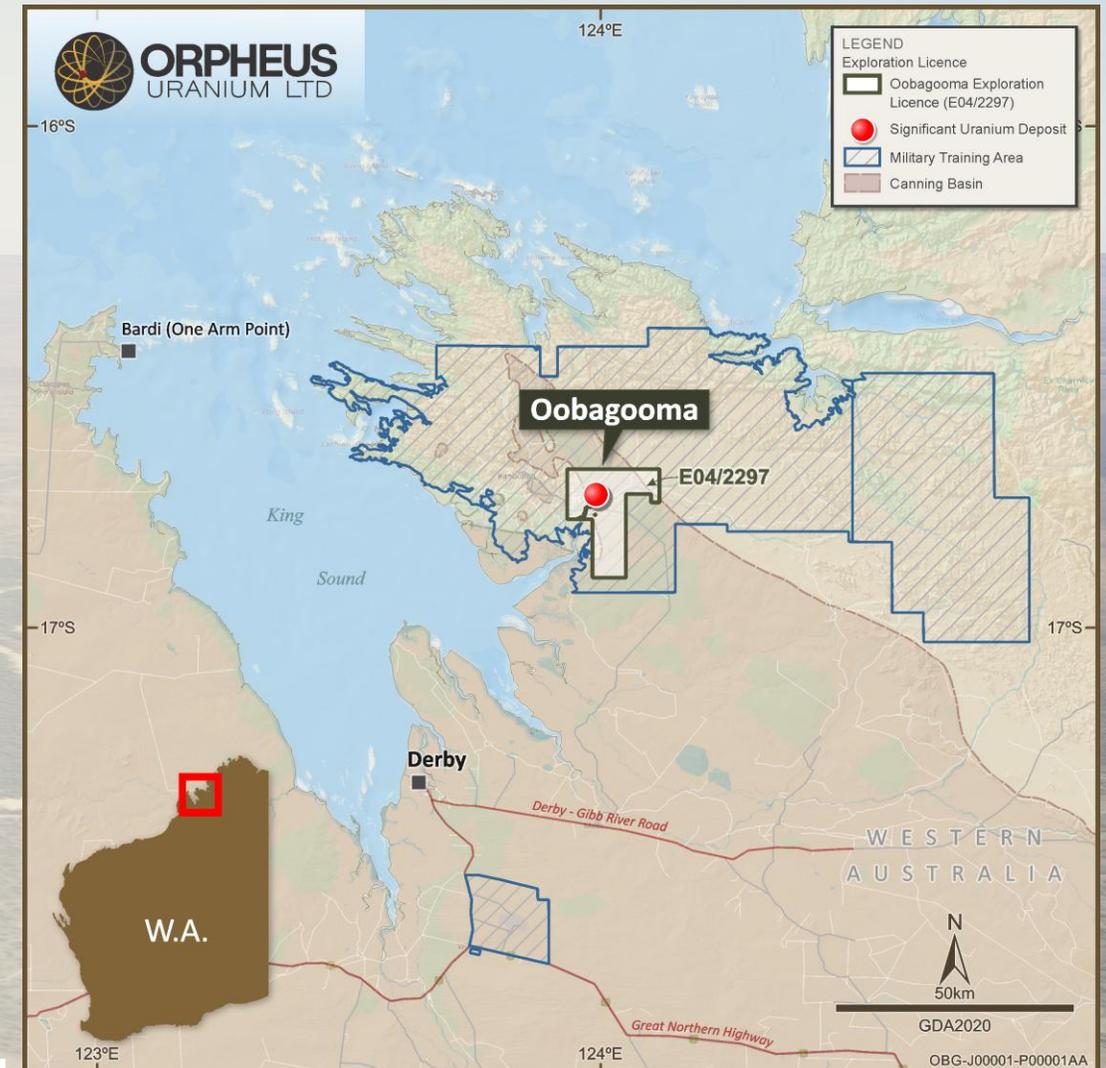


Key West Australia Project

Oobagooma Uranium Project³

- **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 uranium grades within multiple holes with GT > 1,000 (m x ppm)**
Known uranium mineralisation extends over approximately 4 km of strike and 1.5 km width

GT = Grade Thickness -calculated as uranium grade (eU3O8) x Thickness (m)



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

Key Announcements – Previous 2-Months



Pirie Basin (SA)
Sedimentary-Style

Proximal to known mineralisation / sharing geological synergy with known deposits

***Sale agreement progressed to completion -
Allows ORP to gain regulatory approval for drilling***



Frome (SA)
Sedimentary-Style

Proximal to known mineralisation / sharing geological synergy with known deposits

***NTMA access agreement established -
Enables regulatory approval for drilling***



Oobagooma (WA)
Sedimentary-Style

Known uranium mineralisation within sedimentary mineralising system

Sale agreement executed working to completion

Corporate Summary



CAPITALISATION DATA

Shares on issue

281.7M

Share Price (20 October 2025)

\$0.055

Market Capitalisation

\$15.5M

Cash (30 June 2025)

\$4.16M

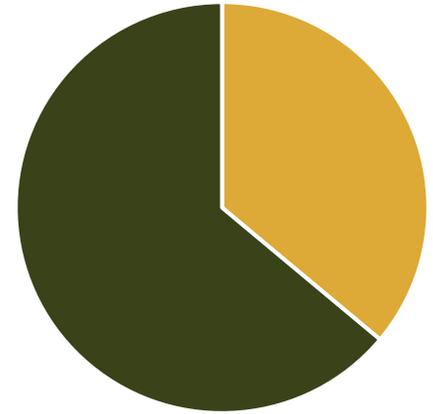
Liquid Assets (30 June 2025) *

\$0.74M

*Valuation of 4.33M shares in ASX:PSC (\$0.17) as last reported 30th June 2025

+ ORP holds 6.25M call options to acquire ordinary PSC shares at \$0.15 per share, expiring 11 April 2027

ASX: ORP Shareholder Spread



63.9%
Top 20 Shareholders

36.1%
Outside Top 20 Shareholders

BOARD & MANAGEMENT

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

12 Month Share Price



5 Year Uranium Spot Price (USD/Lbs)





Uranium

The right commodity at the right time with very strong uranium price signal, robust demand growth, constrained supply response. Current uranium mine supply structural deficit a long time in the making.



Technical team providing unique insights

Ongoing development of technical team and support, with proven track record in uranium discovery, development and production.



Tenure situated within tier-1 (world-class) locations

Orpheus has developed a tenure portfolio within three of the best global uranium jurisdictions in Australia. Callabonna sub-basin and Pirie Basin in South Australia, and the Pine Creek Orogen in the Northern Territory.



Prospectivity

Significant recent investor interest in companies which have demonstrated success in this prime location, with Orpheus following up on known mineralisation established by previous explorers.



Developing a Project Pipeline

A company that is actively and strategically developing a project pipeline to best position the business for continued exploration success.

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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 ₃ O ₈)	Contained Metal (Mlbs, U ₃ O ₈)	Source
Goulds Dam Uranium Deposit	Resource	Frome Embayment (Callabonna Sub-basin) South Australia	Boss Energy Limited ASX: BOE	Combined Indicated and Inferred Resource	523	25	Refer to ASX: BOE announcement dated 23 January 2024
Samphire Uranium project (Black bush)	Resource	Pirie Basin	Alligator Energy Limited ASX: AGE	Combined Indicated and Inferred Resource	676	18	Refer to ASX: AGE announcement dated 06 May 2025