

ORPHEUS
URANIUM LTD

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QUARTERLY ACTIVITIES REPORT

DECEMBER 2025



Managing Director's Message to Shareholders

Over the course of 2025, Orpheus made significant progress across our entire portfolio of uranium assets. The December quarter was no exception, with the establishment of several important land-access agreements, the first regulatory approvals for more advanced on-ground exploration activities in South Australia, and the collection of new geological datasets in the Northern Territory.

What many investors are not as aware of is that during 2025, Orpheus also assembled a technically intelligent exploration team – a team full of hands-on uranium experience across several world-class uranium operations.

As we enter 2026, I'm excited about these two elements aligning: a suite of projects primed for exploration and a team that understands all aspects of uranium exploration and production.

Orpheus' mission is to unlock the energy resources we need in the future, and I believe that in 2026, the company is well-positioned to make significant progress toward achieving that goal.

- Managing Director Clinton Dubieniecki

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Quarterly Report

FOR PERIOD ENDING 31 DECEMBER 2025

ASX: ORP



ORPHEUS
URANIUM LTD

QUARTERLY HIGHLIGHTS

Orpheus Uranium Limited (ASX: ORP) (**Orpheus** or **the Company**) is pleased to report on its activities and cash flow for the quarter ending 31 December 2025. Highlights from our portfolio of uranium-focused projects include:

Frome Project, S.A.

- Executed a Native Title Mining Agreement (NTMA) with the Adnyamathanha Traditional Lands Association Aboriginal Corporation (ATLA), which allows Orpheus to obtain regulatory approvals to conduct more advanced exploration activities (see ASX announcement *6th November 2025*).

Radium Hill South, S.A.

- Heritage surveys were completed, and regulatory approval was received, unlocking potential to conduct advanced-stage exploration activities (see ASX announcement, *12th Dec 2025*).

Marree Project, S.A.

- Native Title Mining Agreement (NTMA) executed with The Dieri Aboriginal Corporation (TDAC) Registered Native Title Body Corporate (RNTBC), providing a foundation for Orpheus to commence advanced exploration activities on the northern areas of the Marree Project (see ASX announcement *24th October 2025*).
- Executed a Native Title Mining Agreement (NTMA) with the Adnyamathanha Traditional Lands Association Aboriginal Corporation (ATLA), which allows Orpheus to obtain regulatory approvals to conduct more advanced exploration activities on the southern parts of the Marree Project (see ASX announcement *6th November 2025*).

Mount Douglas Project, N.T.

- Acquisition of high-resolution NTGS co-funded gravity data completed. Data is now being processed and will be used to prioritise drill-ready unconformity-style uranium targets. (see ASX announcement *12th Dec 2025*).

Oobagooma Project, W.A.

- Execution of a binding agreement for the 100% acquisition of the Oobagooma Project from Elevate Uranium Ltd (ASX: EL8) (see ASX announcement *14th October 2025*).

Corporate

- Cash of \$2.48 million at the end of the December 2025 quarter.
- Retain 6.25 million options in Prospect Resources (ASX: PSC) exercisable at 15 cents.
- Maintained 33.3% holding in Coombedown Resources – Minority JV partner to Marmota (ASX: MEU) in developing Greenwood Au prospect.

ORPHEUS URANIUM LIMITED

ASX: ORP

orpheusuranium.com

CAPITAL STRUCTURE

Issued shares: 281.7m
Debt: nil
Unlisted options: 24.2m
Cash on hand: \$2.48m

DIRECTORS & CO SEC

Simon Mitchell - Non-Exec Chairman
Todd Williams - Non-Exec Director
Clinton Dubieniecki - Managing Director
Richard Willson - Company Secretary

URANIUM PROJECTS (SA)

Pirie Basin, 100%
Frome, 100%
Radium Hill South, 100%
Mundaerno, 100%
Marree, 100%
Woolshed, 100%

URANIUM PROJECTS (NT)

Mount Douglas, 100%
Ranger NE, 100%
Conways, 100%
T-Bone, 100%

A STRATEGIC PORTFOLIO OF URANIUM ASSETS

Orpheus is a uranium-focused junior explorer focused on developing a portfolio of diverse uranium assets in Australia's top jurisdictions that allow uranium exploration and mining, South Australia and Northern Territory. Orpheus is also always looking to secure future opportunities for shareholders and recently made a strategic extension into highly prospective parts of Western Australia.

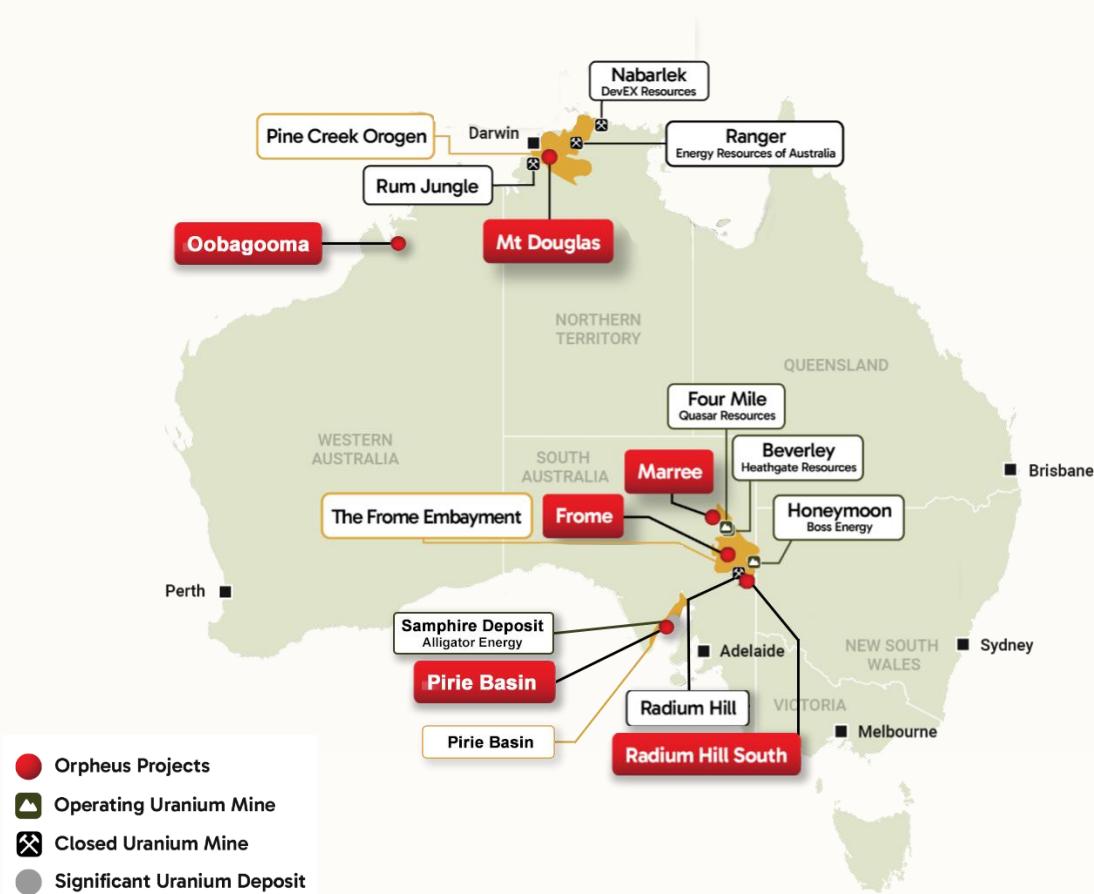


Figure 1: Location map of uranium assets owned by Orpheus located in South Australia, Northern Territory and Western Australia
(not to scale)

The company is led by a Board with decades of experience in the uranium industry, and every Orpheus geologist has current experience across all stages of sedimentary-style uranium exploration and production at world-class uranium operations.



SOUTH AUSTRALIA – SEDIMENTARY-STYLE URANIUM

Orpheus' South Australian tenure includes some of the most prospective regions for uranium exploration in Australia. The company's landholdings span what could be considered the three most promising basins for sedimentary-style uranium mineralisation, underscoring Orpheus's strong competitive position in the sector (see Figure 2).

Orpheus' **Frome Project** is located within the highly prospective Callabonna Sub-Basin, whilst the **Marree Project** is located within the equivalent but more regional Lake Eyre Basin. This region has long been recognised for its potential to host significant uranium deposits. The proximity of **Frome Project** to Boss Energy's Gould's Dam deposit bolsters the potential for exploration success.

Orpheus' **Radium Hill South Project** is situated on the northern margins of the Murray Basin. Radium Hill South is particularly notable for being near what could be considered the source rocks of the historic Radium Hill deposit. This proximity to the potential source rocks increases the likelihood of discovering concentrated uranium mineralisation, making the project a promising target for future exploration.

The Pirie Basin Project is in the underexplored western part of the Pirie Basin. This basin is home to Alligator Energy's Samphire Uranium Project, which hosts significant uranium mineralisation and demonstrates the substantial discovery potential in the area.



Figure 2: Orpheus Uranium's South Australian project locations relative to South Australia's known resources and the associated tenement holders (HGR = Heathgate Resources Pty Ltd; BOE = Boss Energy Ltd; AGE = Alligator Energy Ltd.)

Frome Project

Overview

The Frome Project is an advanced exploration project that has 73,650m of historical drilling, mostly completed by the French nuclear company Areva (now Orano) between 2004 and 2014. It is located 12km west of Boss Energy's (ASX: BOE) Gould's Dam project, which contains a JORC-compliant resource of 25 Mlbs of U_3O_8 indicated and inferred¹. The project has widespread uranium mineralisation defined within the Erudina paleochannel over an area of 12km by 7km, with 56 drill holes intersecting uranium mineralisation with values over 100 ppm EqU in wide 1 km spaced drill traverses (see *ASX announcement, 18 December 2023*).



Photo: Orpheus Uranium's Frome Project

This Quarter

During the quarter, Orpheus was rewarded for all the hard work it has put into building strong relationships with local stakeholders throughout 2025, via the execution of a Native Title Mining Agreement (NTMA) with the Adnyamathanha Traditional Lands Association (Aboriginal Corporation) Registered Native Title Body Corporate (ATLA). This landmark agreement was achieved despite ATLA currently being under special administration, and it is a significant step towards obtaining regulatory approval and commencing advanced exploration activities, including drilling, on the Frome Project.

Upcoming Quarters

Investors can look forward to:

- Progress project to drill ready decision including gaining relevant regulatory approval for advanced-stage activities on the tenure (expected imminently).
- Continued interpretation of available datasets to refine on-ground exploration activities, including future heritage clearances and drilling.

¹: Goulds Dam Uranium Deposit – Resource - Boss Energy Limited ASX: BOE - Combined Indicated and Inferred Resource – Average Grade 523 ppm U_3O_8 with Contained 25 Mlbs. U_3O_8 . Refer to ASX: BOE announcement dated 23 January 2024

Radium Hill South Project

Overview

The Radium Hill South Project is an advanced project in the Murray Basin that covers 797km², just 20km to the south of the historic Radium Hill Uranium Mine. The project has five highly promising prospects, with proven potential for shallow sediment-hosted uranium mineralisation, that are ready for immediate follow-up.



Photo: The Orpheus Uranium exploration team undertaking field activities associated with the Radium Hill South Project.

This Quarter

Following the execution of the Native Title Mining Agreement (NTMA) with the Wilyakali Native Title Aboriginal Corporation (Wilyakali) in July, Orpheus was able to complete a heritage survey at a selection of prospects throughout the tenure and apply for regulatory approval (PEPR) for more advanced exploration activities, like drilling programs. Approvals were received in mid-December. The project is at a decision to drill stage.

Upcoming Quarters

Investors can look forward to:

- Project is at decision to drill stage – Ongoing interpretation of historical data. Plans for further exploration activities are being refined. Assessment of geophysical techniques to further refine drilling targets being undertaken.

Marree Project

Overview

The Marree project comprises of three prospective early-stage exploration licences located to the northwest of the Northern Flinders Ranges Mount Painter Block, which hosts some of the most uraniferous surface outcrops and potential uranium source rocks within Australia, if not globally and known uranium source to the Beverly/Four Mile uranium deposits.

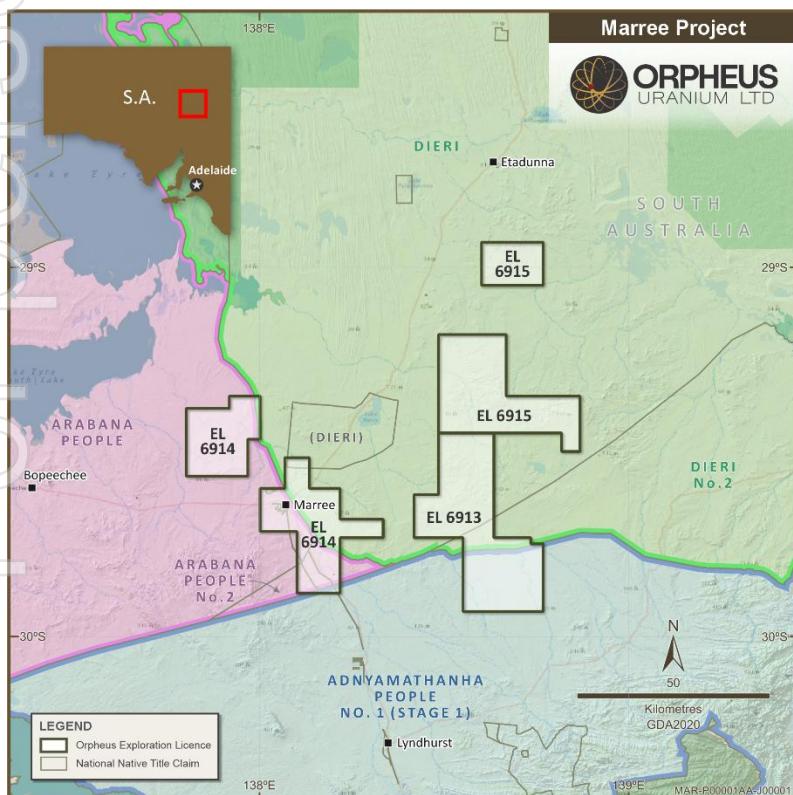
This Quarter

During the Quarter, Orpheus worked closely with the local Native Title holders and other stakeholders to gain access to conduct exploration activities across the project area and lay the foundations for extending exploration programs beyond early-stage activities.

This included:

- Executing an NTMA with The Dieri Aboriginal Corporation (TDAC), the Registered Native Title Body Corporate (RNTBC) for the Dieri Determination Area, which covers the northern areas of the Project.
- Executing an NTMA with the Adnyamathanha Traditional Lands Association (Aboriginal Corporation) Registered Native Title Body Corporate (ATLA), which covers the South-Eastern parts of the Marree Project.

These agreements allow Orpheus to pursue regulatory approvals and advance its mineral exploration programs to more advanced stages, including drilling, whilst respecting Native Title rights and cultural heritage.



Upcoming Quarters

Orpheus plans to:

- Continue interpretation of available datasets to refine on-ground activities.
- Continue Stakeholder engagement.
- Assess geophysical techniques to further refine drill targeting.
- Progress relevant regulatory approval for advanced-stage activities on the tenure.

Figure 3: Orpheus' Marree Project and Native Title Determination Areas

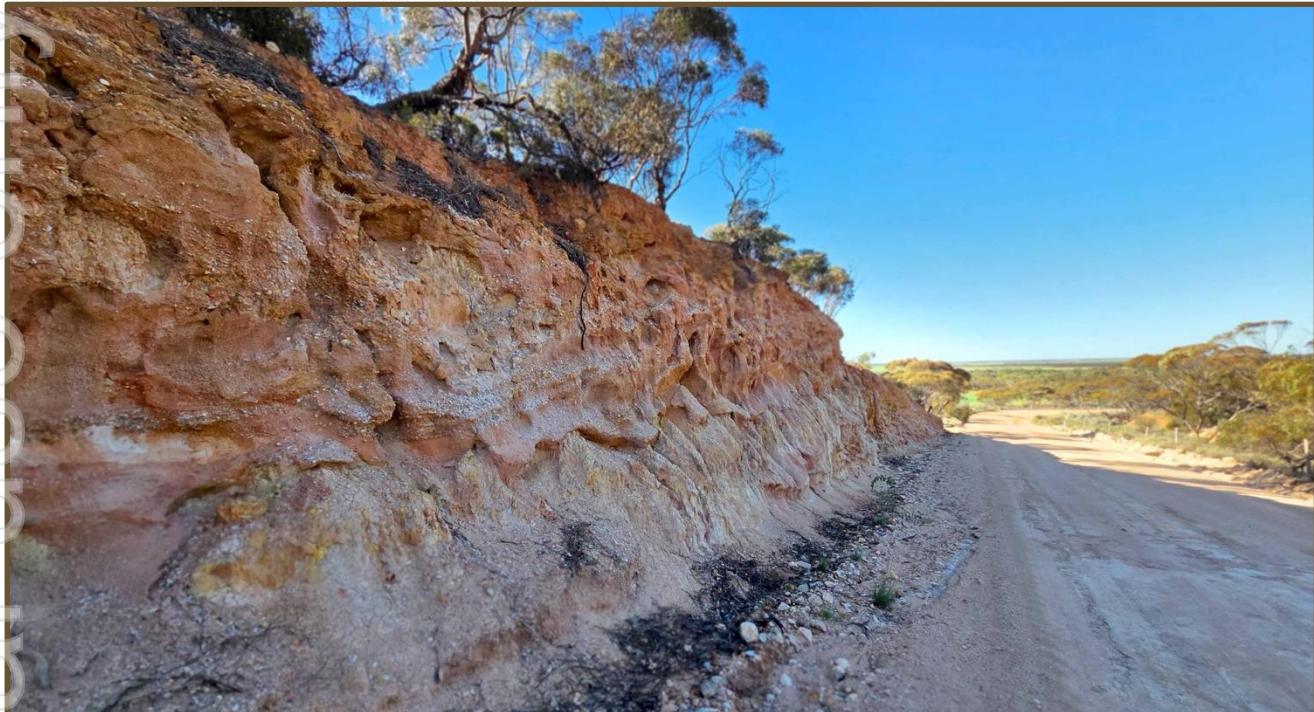


Photo: Orpheus Uranium's Pirie Basin Project in South Australia

Pirie Basin Project

Overview

The Pirie Basin is one of only two basins in South Australia to host sedimentary-style uranium deposits that have active advanced-stage feasibility or producing in-situ recovery uranium projects. The project is adjacent to Alligator Energy's (ASX: AGE) Samphire Uranium Project with an 18Mlbs U_3O_8 Mineral Resource² defined in accordance with the JORC code. Historical drilling has intersected up to ~535 ppm U_3O_8 , validating the source potential of the local Hiltaba Suite Granites and highlighting the potential for discoveries within the project area.

This Quarter

During the Quarter, the Orpheus team continued to analyse all historical datasets received from Fortescue Ltd (ASX: FMG) during the acquisition of the Project and refine geological modelling and potential drill targets.

Upcoming Quarters

Orpheus plans to:

- Continue its stakeholder engagement to secure on-ground access to tenure.
- Obtain required regulatory approvals to progress the project to decision to drill stage.

2: 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 U_3O_8). Refer to ASX: AGE announcement dated 06 May 2025

NORTHERN TERRITORY - UNCONFORMITY-STYLE URANIUM

Orpheus holds strategic ground in the Northern Territory, prospective for unconformity-style uranium similar to the Tier-1 Ranger deposit (Energy Resources of Australia ASX: ERA) and Patronus (ASX: PTN) Resources' high-grade Thunderball Project, which is analogous to the geological setting of Orpheus' Mt Douglas Project.

The Company's current focus is advancing the Mount Douglas project from target definition to advanced-stage activities, including drilling.

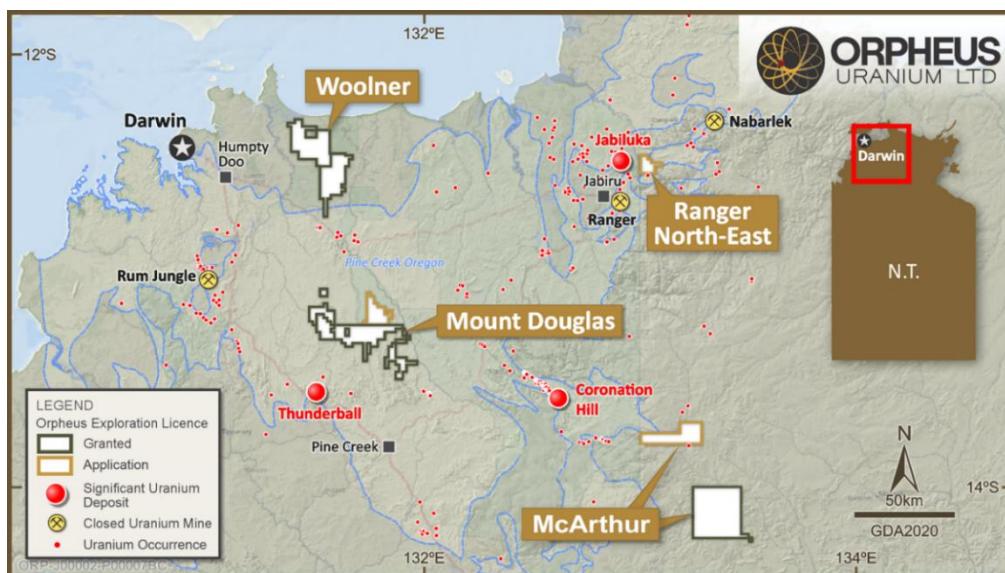


Figure 4: Location map of uranium assets owned by Orpheus located in the Northern Territory

Mount Douglas Project

Overview:

The Mount Douglas Project is located on the eastern flank of the Rum Jungle Mineral Field and comprises two exploration licences and an adjoining application. The Rum Jungle Mineral Field was the first major uranium mining and processing centre in Australia, and is contained within the Pine Creek Orogen, within which the most recent production of unconformity-style uranium mineralisation has occurred.

This Quarter:

During the quarter, Orpheus completed the data collection for the high-resolution gravity survey, which was co-funded by the Northern Territory Geological Survey (NTGS) as part of the Territory Government's Geophysics and Drilling Collaborations. The survey follows up on the gravity data collected in 2024, which highlighted several areas of significant interest.

Upcoming Quarter:

Over the next Quarter, investors can look forward to:

- Modelling of new high-resolution gravity data.
- Continued engagement with stakeholders to prepare for more extensive on-ground activities.

WESTERN AUSTRALIA – SEDIMENTARY-STYLE URANIUM

In 2025, Orpheus made a future-oriented decision to acquire a strategic ground position that is prospective for sedimentary-style uranium in Western Australia.

Oobagooma Project

Overview:

The Oobagooma Project covers 271 km² of the northern margins of the Canning Basin, in the Derby Region, Western Australia. The project adds a new dimension to the Orpheus portfolio because it is a more advanced project with a large amount of historical data. Despite the extensive historical exploration and current regulatory challenges in Western Australia, Orpheus believes the project maintains significant upside, with geological modelling indicating at least four untested prospective roll fronts extending over a 9km strike length.



Figure 5. Location of the Oobagooma Uranium Project

This Quarter:

Orpheus executed the sale agreement for the acquisition of the Oobagooma Uranium Project with Elevate Uranium Ltd (ASX: EL8) in October 2025.

Upcoming Quarter:

Investors can look forward to:

- Completion of the Sale Transaction for the Oobagooma Project.
- Commencement of geological and resource modelling by the Orpheus Team using historical datasets.
- Beginning engagement with stakeholders to lay the foundations for any future on-ground activities.

Key Details of the Acquisition

Orpheus has entered into a binding sale agreement to acquire a 100% interest in one exploration licence from Jackson Cage, a 100% owned subsidiary of Elevate Uranium Ltd, subject to satisfaction of certain conditions (which are considered customary for a transaction of this nature), the following upfront, deferred and conditional considerations:

- \$50,000 exclusivity payment on execution of the sale agreement
- \$175,000 and the issue of 20,000,000 fully paid shares in Orpheus Uranium Ltd. on completion of certain conditions precedent, typical of a transaction of this nature (Upfront Payment)
- 15,000,000 fully paid shares in Orpheus Uranium Ltd., on the completion of gaining access to the tenement within two years from the completion date (First Contingent or Milestone Payment)
- 25,000,000 fully paid shares in Orpheus Uranium Ltd., upon the completion of 2400m of cumulative drilling within the exploration licence within 5 years of from the completion date (Second Contingent or Milestone Payment)

CORPORATE ACTIVITY

Business and Portfolio Development

Orpheus maintains an active watch and engages with companies throughout Australia that hold tenure within desired geological settings conducive to uranium mineralisation and consistent with the business strategy.

- Executed the sale agreement for the acquisition of the Oobagooma Project in Western Australia.

Sale of Shares

During the Quarter, Orpheus completed the divestment of its remaining 3.2 million shares in Prospect Resources Ltd ("Prospect", ASX: PSC) for a total consideration of \$0.626 million (before costs).

The Company retains 6.25 million call options to acquire Prospect ordinary shares at 15 cents per share, expiring 11 April 2027. Orpheus has a right to a \$2.5 million milestone payment from Prospect upon their release of a JORC resource of at least 500kt of contained copper with a cut-off of 0.5% at the Lumwana West Project.

Coombedown Resources Pty. Ltd.

Through Kelaray Resources Pty Ltd, a wholly owned subsidiary, Orpheus retains a 33.3% interest in Coombedown Resources Pty Ltd. Coombedown holds Exploration Licences EL 5998 and EL 6569.

The licences, together with the associated Au rights, form the Half Moon Joint Venture, for which Marmota Limited (ASX: MEU) is the current operator. Marmota holds a 90% interest in all commodities (with the exception of excluded commodities) over the tenements, with Coombedown holding the remaining 10% free carried interest, through to a decision to mine. Coombedown retains 100% interest in excluded commodities which include palygorskite, opal and iron ore.

During the quarter, Marmota undertook exploration activities across the tenure, resulting in elevated gold (Au) values which have been identified and reported by the operator. The Company continues to monitor exploration results and assess its position within the joint venture.

Cash and Investments

- The Company had cash of \$2.48 million as at 31 December 2025.
- The Company holds 6.25m unlisted options to acquire Prospect Resources Limited (ASX: PSC) shares, with an exercise price of \$0.15 and expiry date of 11 April 2027. The close price of Prospect Resources Limited as at 31 December 2025 was \$0.26.

Other

ASX Listing Rule 5.3.1 - Exploration and evaluation expenditure incurred during the quarter was \$0.495 million. Details of exploration activities during the quarter are set out in this report.

Expenditure	A '000
Tenement administration, management and logistics	\$68
Geological activities	\$227
Tenement statutory fees	\$55
Land access	\$247
Salaries and wages	\$87
Total	\$684

ASX Listing Rule 5.3.2 - There was no production or development expenditure incurred during the quarter.

ASX Listing Rule 5.3.5 – Payments to related parties of the Company and their associates during the quarter totalled \$0.114m. Related party payments represented salaries, superannuation and fees paid to directors of the Company.

-END-

This announcement was approved for release by the Board of Orpheus Uranium Limited.

For further information, please contact:

MANAGING DIRECTOR

Clinton Dubieniecki

E. clinton@orpheusuranium.com

COMPANY SECRETARY

Richard Willson

E. richard@orpheusuranium.com

About Orpheus Uranium

Orpheus Uranium Limited is an Australian Securities Exchange listed exploration company exploring for uranium in South Australia and the Northern Territory, both jurisdictions which allow uranium mining and processing, and extending to Western Australia with the recent Oobagooma acquisition, a state that contains known uranium deposits.

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 (AIG), Member of Australasian Institute of Mining and Metallurgy (AusIMM), 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.

Forward Looking Statements

The written presentation may contain forward-looking statement regarding the outlook for the Company's interpretation, work programs, and financial results. These forward-looking statements generally can be identified by phrases such as "anticipates", "potential", "plans", "intends", "believes", "likely", "appears", "expects", "likely", "appears" or other words or phrases of similar impact. There is inherent risk and uncertainty in any forward-looking statements. Variance will occur and some could be materially different from management's opinion. Developments that could impact the Company's expectations include a variety of known and unknown risks, uncertainties and other factors that could cause actual events or results to differ from those expressed or implied, including, without limitation, business integration risks; uncertainty of development plans and cost estimates, commodity price fluctuations; political or economic instability and regulatory changes; currency fluctuations, the state of the capital markets, Orpheus' ability to attract and retain qualified personnel and management, potential labour unrest, unpredictable risks and hazards related to the development and operation of exploration programs that are beyond the Company's control, the availability of capital to fund all of the Company's projects. These forward-looking statements are made as of the date of this presentation and the Company assumes no obligation to update these forward-looking statements, or to update the reasons why actual results differed from those projected in the forward-looking statements, except in accordance with applicable securities laws.

TENEMENT SCHEDULE

Table 1: Summary of mining tenements

SOUTH AUSTRALIAN MINERAL EXPLORATION LICENCES						
Tenement	Granted	Expiry	Area (km ²)	Locality	Licensee	Interest
EL 6569 ²	18/10/2020	17/10/2025	104	Sandstone	Coombedown Resources Pty Ltd	10% ¹
EL 5998	21/05/2017	20/05/2028	33	Campfire Bore	Coombedown Resources Pty Ltd	10% ¹
EL 6199	04/06/2018	3/06/2029	27	Myrtle Springs	Kelaray Pty Ltd	100%
EL 6407	18/08/2024	17/08/2030	295	Lake Torrens	Kelaray Pty Ltd	100%
EL 5937	30/03/2017	29/03/2028	794	West Lake Torrens	Kelaray Pty Ltd	100%
EL 5945	20/04/2017	19/04/2028	221	Murdie	Kelaray Pty Ltd	100%
EL 6320	28/02/2019	27/02/2030	198	Andamooka Station	Kelaray Pty Ltd	100%
EL 6554 ²	07/12/2020	6/12/2025	960	Frome Downs	Trachre Pty Ltd	100%
EL 6555 ²	07/12/2020	6/12/2025	947	Curnamona	Trachre Pty Ltd	100%
EL 6703	3/02/2022	2/02/2028	987	Erudina	Trachre Pty Ltd	100%
EL 6900	19/01/2023	18/01/2029	143	Billeroo	Trachre Pty Ltd	100%
EL 6913	9/06/2023	8/06/2029	998	Mundowdna	Trachre Pty Ltd	100%
EL 6914	9/06/2023	8/06/2029	990	Mulorina	Trachre Pty Ltd	100%
EL 6915	9/06/2023	8/06/2029	978	Clayton	Trachre Pty Ltd	100%
EL 6958 ³	18/12/2023	17/12/2029	294	Mundaerno	Trachre Pty Ltd	100%
EL 6960	18/12/2023	17/12/2029	797	Radium Hill South	Trachre Pty Ltd	100%
EL 6989 ³	10/04/2024	9/04/2030	87	Woolshed	Trachre Pty Ltd	100%
EL 6418 ⁴	23/10/2019	22/10/2030	601	Midgee (Pirie Basin)	Trachre Pty Ltd	100%
EL 6419 ⁴	23/10/2019	22/10/2030	506	Mitchellville (Pirie Basin)	Trachre Pty Ltd	100%

QUEENSLAND MINING LEASE						
Tenement	Granted	Expiry	Area (km ²)	Locality	Licensee	Interest
ML 5631	16/05/1974	31/05/2026	0.32	Kroombit	Kelaray Pty Ltd	100%

QUEENSLAND MINERAL DEVELOPMENT LICENCE						
Tenement	Granted	Expiry	Area (km ²)	Locality	Licensee	Interest
MDL 2002	03/08/2016	31/08/2026	0.64	Kroombit	Kelaray Pty Ltd	100%

NORTHERN TERRITORY MINERAL EXPLORATION LICENCES						
Tenement	Granted	Expiry	Area (km ²)	Locality	Licensee	Interest
EL 31451	8/09/2017	7/09/2027	484.52	Mount Douglas	Trachre Pty Ltd	100%
EL 33075	3/01/2023	2/01/2029	103.63	Mount Douglas (Ban Ban)	Trachre Pty Ltd	100%
EL 33088 ⁵	3/01/2023	2/01/2029	473.23	Woolner	Trachre Pty Ltd	100%
EL 33089 ⁵	3/01/2023	2/01/2029	458.81	Marrakai	Trachre Pty Ltd	100%
ELA 34013	16/05/2025	15/05/2031	643.46	Conways	Trachre Pty Ltd	100%

NORTHERN TERRITORY MINERAL EXPLORATION LICENCE APPLICATIONS

Tenement	Applied	Expiry	Area (km ²)	Locality	Licensee	Interest
ELA 32445	25/06/2020	-	230.24	T-Bone	Trachre Pty Ltd	100%
ELA 32446	25/06/2020	-	63.71	Ranger NE	Trachre Pty Ltd	100%
ELA 32038	22/11/2018	-	127.49	Mount Douglas (Mary River)	Trachre Pty Ltd	100%

There were two tenements with a change of interest in the December 2025 Quarter (confirmed Jan 2026).

1 Kelaray holds a 33% interest in Coombedown Resources Pty. Ltd. Coombedown is a party in the Half Moon JV for which Half Moon Pty Ltd/Marmota Ltd (ASX: MEU) act as operator.

2 Licence renewal submitted during quarter.

3 Partial surrender of tenement submitted, awaiting confirmation from DEM.

4 Completion of sale agreement occurred - awaiting confirmation of tenement transfer.

5 Surrender of exploration licence submitted during quarter, confirmation received in Jan 2026.