ORPHEUS URANIUM LTD

ASX RELEASE I 23 JUNE 2026

ASX: ORP

Orpheus Inaugural Drilling Program to Commence at Erudina Prospect, Frome Project



For personal use only

Highlights

- **Drilling at the Erudina Uranium Prospect, within Orpheus' broader Frome Project in South Australia, is scheduled to commence in early Q3 2026.**
- **Results from the program will be used to refine the Company's geological model, guide future exploration at Erudina and the wider Frome Project, and support staged evaluation toward a potential Exploration Target and potential JORC-compliant Mineral Resource Estimate, should ongoing results warrant.**
- **The initial program comprises up to 35 rotary mud drill holes for approximately 5,750 metres, targeting selected areas within a 10 km-long interpreted uranium-bearing palaeochannel system, with potential to refine or extend the program as results are received.**
- **Drilling will test Orpheus' updated geological interpretation and assess the continuity of historical uranium mineralisation and anomalism within prospective Eyre Formation sediments.**
- **Historical drilling at Erudina has identified widespread uranium anomalism (> 100ppm eU3O8) within 64 drill holes across a broad exploration 'target area' - to be further tested by this planned drilling program.**
- **Recent reinterpretation of historical drilling, stratigraphy and palaeochannel architecture has identified multiple laterally and vertically developed redox boundaries, interpreted as potential stacked redox-controlled uranium mineralising positions.**
- **Erudina shares geological characteristics with nearby sediment-hosted uranium systems, including Boss Energy's 33.1 Mlbs. Gould's Dam deposit, supporting the prospectivity of the Callabonna Sub-Basin and associated Eyre Formation palaeochannels.**
- **Program commencement follows completion of technical reviews, stakeholder engagement, access arrangements, a heritage survey undertaken with Adnyamathanha representatives in May 2026, establishment of the Native Title Mining Agreement, and receipt of required regulatory approvals.**

Managing Director Mr Clinton Dubieniecki commented:

"The planned commencement of drilling at Erudina is an important milestone for Orpheus and the culmination of many factors, from thorough technical reviews and stakeholder engagement to heritage work, approvals, and exploration planning. I want to acknowledge the effort of our team in bringing this project to drill-ready status.

Erudina is a compelling uranium target, with historical drilling identifying widespread anomalism across a large palaeochannel system and our reinterpretation highlighting multiple redox positions. This program will test that model, refine our understanding of scale and continuity, and provide a technical foundation for future work across Frome. Importantly, it also demonstrates all the capabilities required to add value across our broader uranium portfolio."

For personal use only

Summary

Orpheus Uranium Limited (ASX: ORP) ("Orpheus" or "the Company") is pleased to announce the planned commencement of drilling at the Erudina Uranium Prospect, located within the Company's broader Frome Project in South Australia (Figure 1).

The program represents an important milestone for Orpheus and follows a period of technical review, historical data reinterpretation, land access engagement, heritage clearance activities and exploration planning. Drilling is scheduled to commence in early Q3 2026 and will be the Company's first drill program at Erudina under its updated geological interpretation of the palaeochannel system.

Erudina is one of several uranium prospects identified within Orpheus' Frome Project tenure package, which is located in the highly prospective Callabonna Sub-Basin. The area is recognised as the premier basin for sandstone-hosted uranium mineralisation and contains the several significant uranium deposits, including Four Mile, Honeymoon and Goulds Dam uranium deposits all hosted within the Eyre Formation.

Historical drilling at Erudina identified widespread uranium anomalism and favourable palaeochannel host geology across a broad area. Orpheus' recent technical review indicates that uranium mineralisation may be associated with multiple redox interfaces developed within the sedimentary sequence, providing a broader and more coherent target framework than previously recognised.

The initial drilling program is designed to confirm and refine historical uranium results, improve the Company's understanding of the palaeochannel architecture, and test the continuity of interpreted mineralised trends and redox boundaries. Results will be incorporated into an evolving geological model and used to guide future exploration across Erudina and the broader Frome Project.

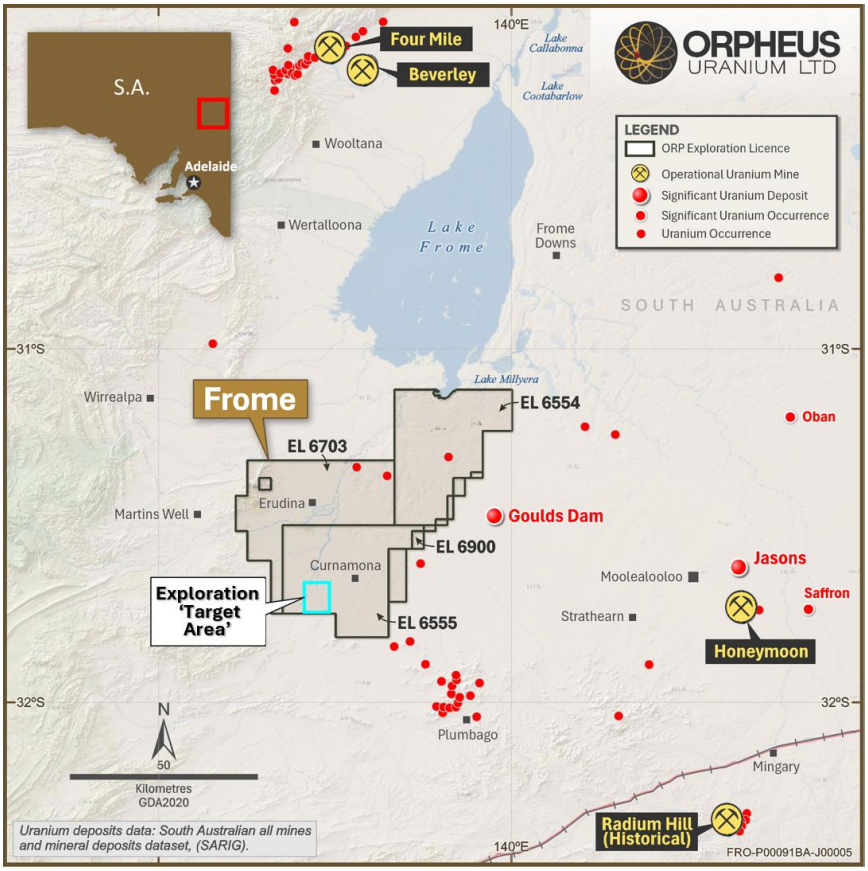


***Figure 1**: Location of the Frome Project and Erudina Prospect (Exploration 'Target Area')*

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.

orpheusuranium.com
info@orpheusuranium.com
+61 8 8231 0381

For personal use only

Project Background & Geological Setting

The Frome Project is located in the Callabonna Sub-Basin of South Australia, a region recognised for its prospectivity for sandstone-hosted uranium mineralisation. The project area contains a series of interpreted palaeochannel systems developed within Tertiary sediments, including the Eocene Eyre Formation and Miocene Namba Formation, both of which are important regional uranium host units.

Regionally, sandstone-hosted uranium mineralisation in the Frome district is associated with the movement of uranium-bearing oxidised groundwaters through permeable sedimentary sequences. Uranium deposition typically occurs where these fluids interact with reducing environments, including carbonaceous sediments, reduced sands and redox boundaries developed within palaeochannel systems.

At Erudina, historical drilling has outlined uranium anomalism across a broad palaeochannel trend extending approximately 10 km north-south by 7 km east-west (Figure 2). Previous drilling intersected uranium mineralisation across the trend, including radiometric intervals exceeding 1,000 ppm eU_3O_8 within porous Eyre Formation sands and reduced carbonaceous horizons associated with redox alteration (Appendix 1). Additional anomalism has also been recorded in the Namba Formation.

Recent reinterpretation of historical drilling, geological datasets and palaeochannel architecture has identified multiple redox boundaries interpreted to occur both laterally and vertically within the sedimentary sequence. These redox interfaces are considered important controls on uranium deposition and may represent multiple stacked mineralising positions capable of concentrating uranium-bearing fluids through time (Figure 3 - 5)

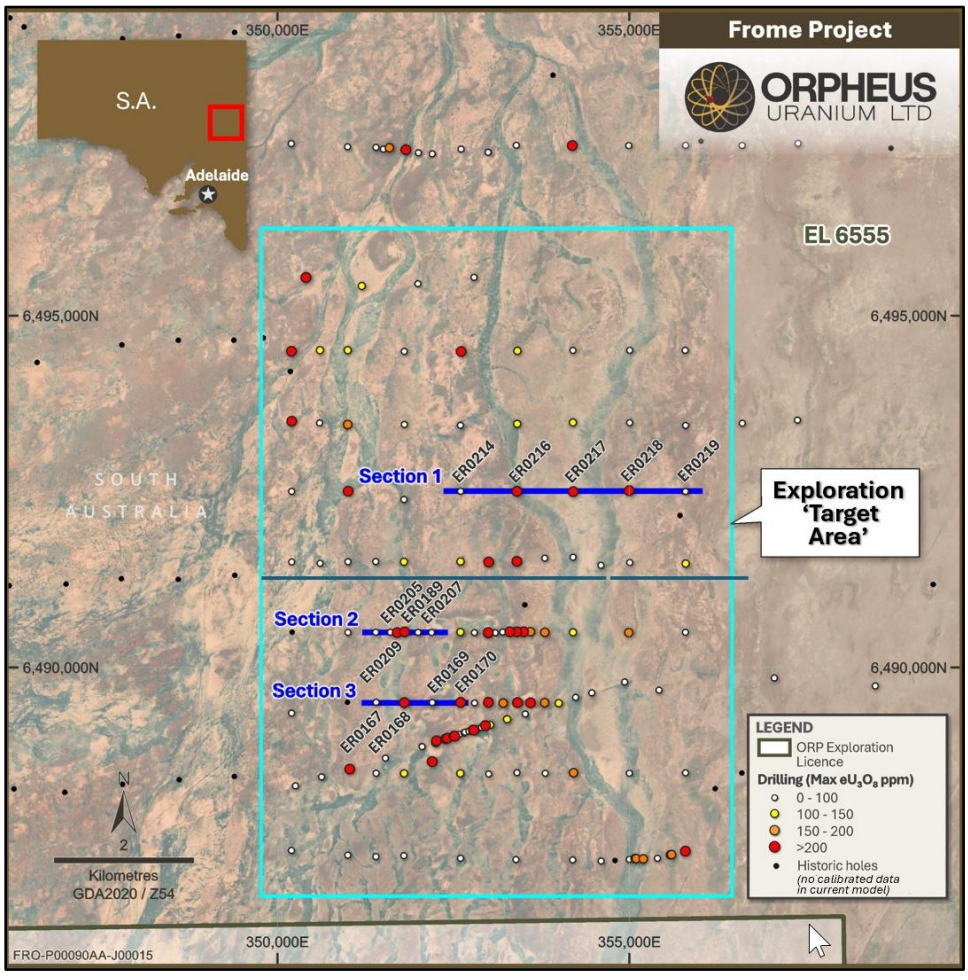


***Figure 2**: Shows the distribution of historical drilling and uranium anomalism across the Erudina Prospect, highlighting the refined exploration 'target area' (work area prioritised for initial drill testing).*

orpheusuranium.com
info@orpheusuranium.com
+61 8 8231 0381

For personal use only

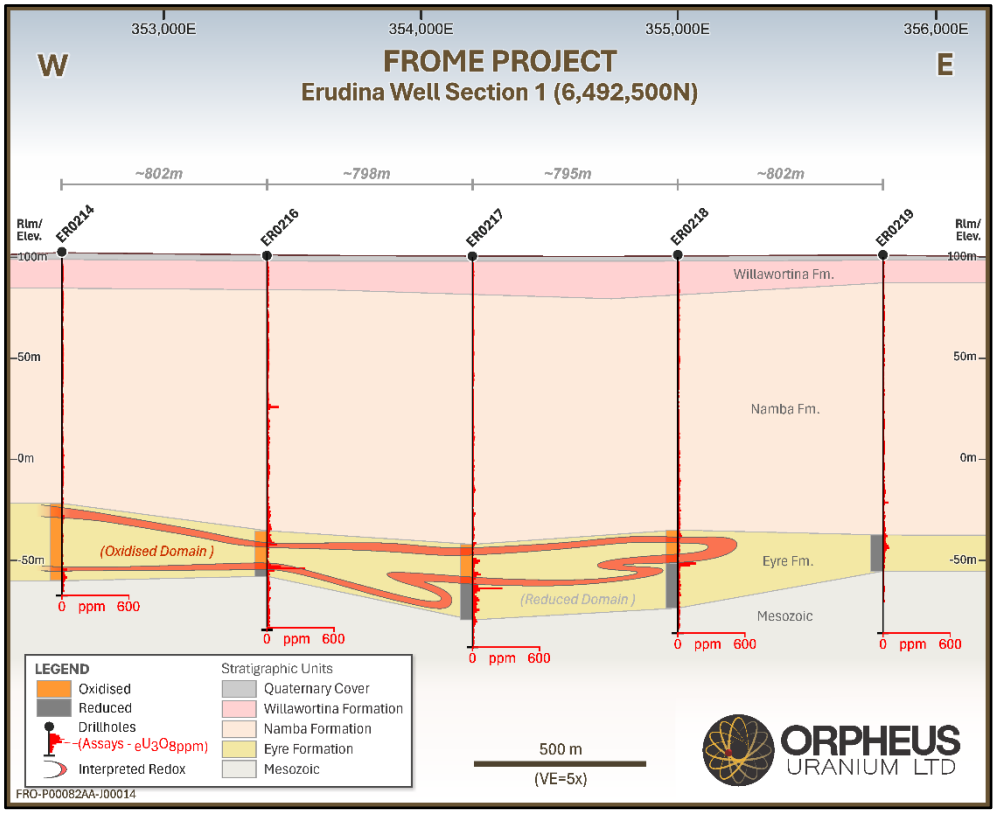


Figure 3: *Representative geological cross section (1) through the Erudina area, illustrating Orpheus' updated interpretation of palaeochannel geometry, stratigraphic sequence and multiple interpreted redox fronts (see Figure 2 for location).*

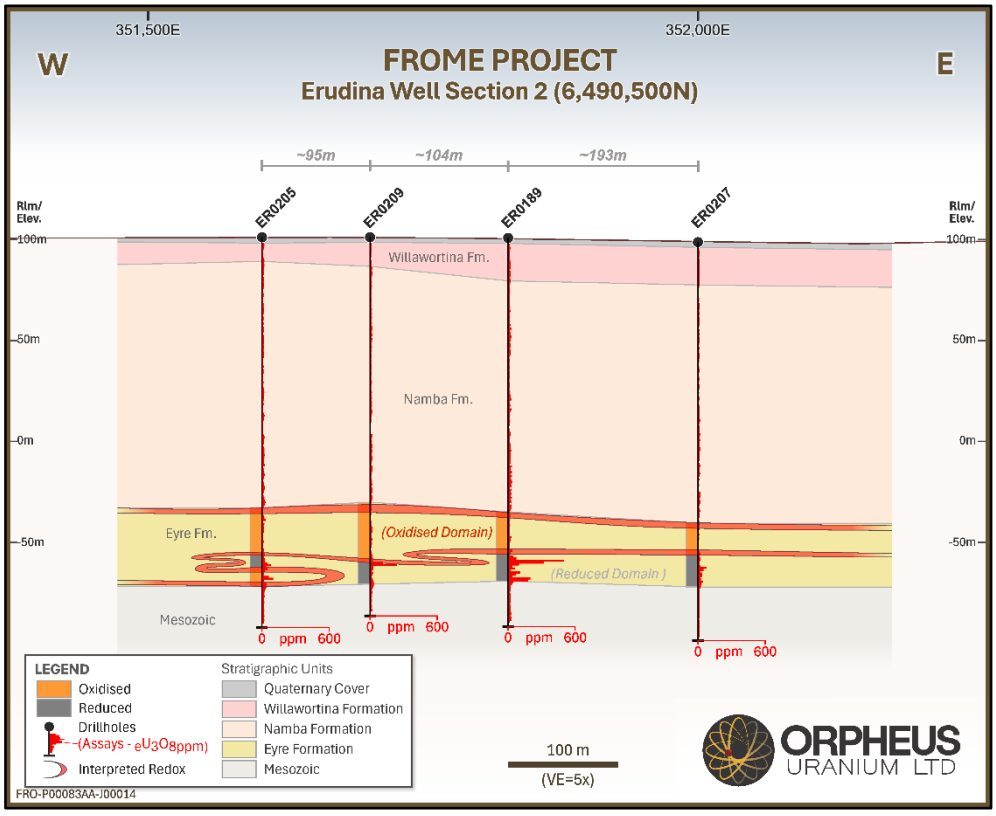


Figure 4: *Representative geological cross section (2) through the Erudina area, illustrating Orpheus' updated interpretation of palaeochannel geometry, stratigraphic sequence and multiple interpreted redox fronts (see Figure 2 for location)*

orpheusuranium.com
info@orpheusuranium.com
+61 8 8231 0381

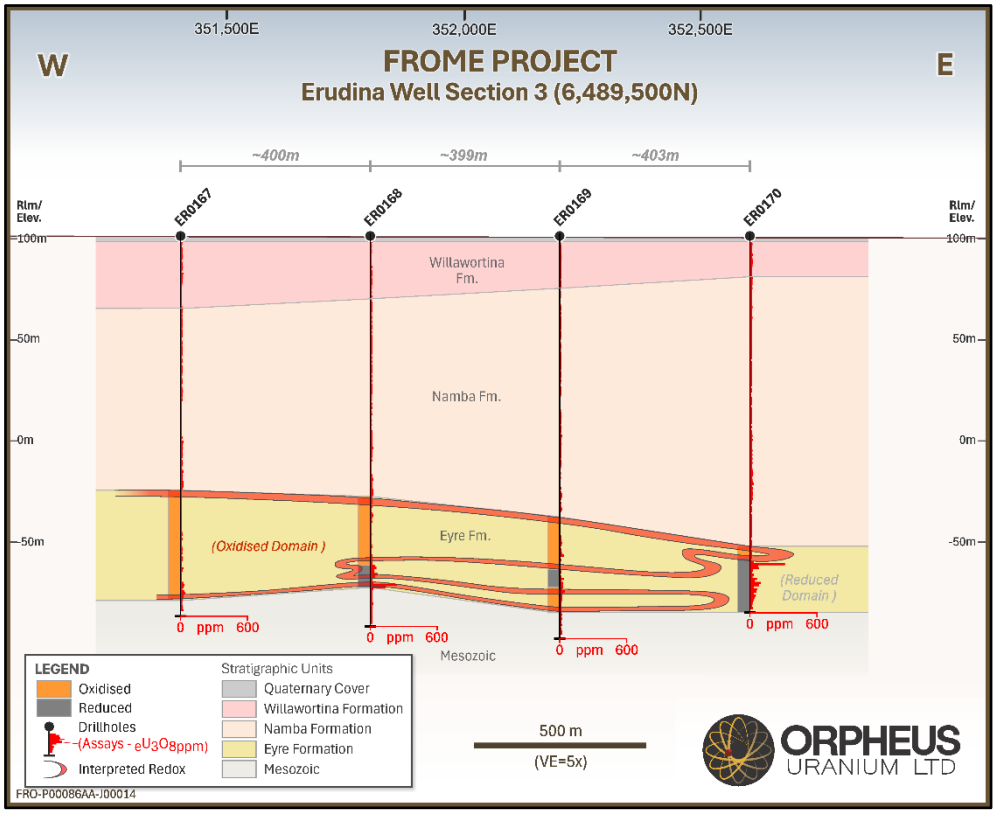


Figure 5: *Representative geological cross section (3) through the Erudina area, illustrating Orpheus' updated interpretation of palaeochannel geometry, stratigraphic sequence and multiple interpreted redox fronts (see Figure 2 for location)*

The geological setting at Erudina shares several characteristics with nearby sediment-hosted uranium systems, including Boss Energy's 33.1Mlbs. Gould's Dam deposit[1]. These similarities include extensive palaeochannel development, favourable Eyre Formation host sediments, uranium-bearing groundwater pathways and interpreted redox-controlled mineralisation. While this comparison provides useful geological context, Erudina remains at an earlier stage of exploration and further drilling is required to determine the scale, continuity and grade characteristics of the system.

Exploration Strategy

The planned drilling program has been designed to test Orpheus' updated geological model and provide a modern dataset from which the Company can better comprehend the architecture and uranium potential of the Erudina palaeochannel system.

The initial hole selection is focused on areas of historical uranium anomalism, interpreted redox boundaries and prospective Eyre Formation host sediments. The program is designed with the intention of intersecting targeted uranium mineralisation, while also generating geological information that can be used to refine the broader exploration model.

As drilling progresses, results will be assessed and incorporated into the Company's geological interpretation. This will allow Orpheus to recalibrate its understanding of palaeochannel geometry, sedimentary facies, redox architecture and mineralisation controls as new information becomes available.

The Company recognises that palaeochannel-hosted uranium systems commonly require multiple phases of drilling, interpretation and refinement to define the extent, continuity and geometry of mineralised footprints. Accordingly, the current program is intended to provide a foundation for future exploration, rather than represent the final test of the broader Erudina system.

For personal use only

orpheusuranium.com
info@orpheusuranium.com
+61 8 8231 0381

Results from the program will be used to guide future drilling, refine exploration vectors and support the development of a broader mineralisation model across the Erudina Prospect and wider Frome Project.

Orpheus Tenement Portfolio & Next Steps

The current drilling program forms part of Orpheus' broader strategy to advance a portfolio of uranium exploration assets through staged technical evaluation, target refinement and exploration drilling (see Figure 6).

At Frome, the Company's immediate focus is to validate and refine the updated Erudina geological model, confirm the significance of historical uranium results and assess the continuity of interpreted redox-controlled mineralisation. Subject to results, future work may include additional drilling, further refinement of mineralisation controls, development of a formal Exploration Target and, ultimately, consideration of a JORC-compliant Mineral Resource Estimate, should ongoing exploration results warrant.

The successful progression of Erudina toward a defined Exploration Target and potential Mineral Resource would represent a significant technical and strategic milestone for Orpheus. The Company believes that demonstrating a credible pathway toward resource definition provides the clearest basis for potential value recognition and a re-rating of the Company as exploration advances.

Importantly, the geological knowledge generated through the Erudina program is expected to support exploration across the broader Frome Project and may assist in evaluating other sediment-hosted uranium opportunities within the Company's wider tenement portfolio. Insights relating to palaeochannel architecture, redox controls, host stratigraphy and uranium distribution are expected to inform future target generation, drill planning and project prioritisation.

In parallel with activities at Frome, Orpheus continues to advance exploration across its broader uranium portfolio. This includes ongoing data compilation, geological interpretation, stakeholder engagement, access planning, heritage clearance processes, target generation and preparation for future on-ground exploration (see Figure 7).

Through sustained exploration activities, the Company aims to progress multiple projects through its exploration pipeline, with the objective of building a portfolio of uranium assets at varying stages of advancement. This approach is intended to provide Orpheus with multiple opportunities for discovery, resource growth and long-term value creation.

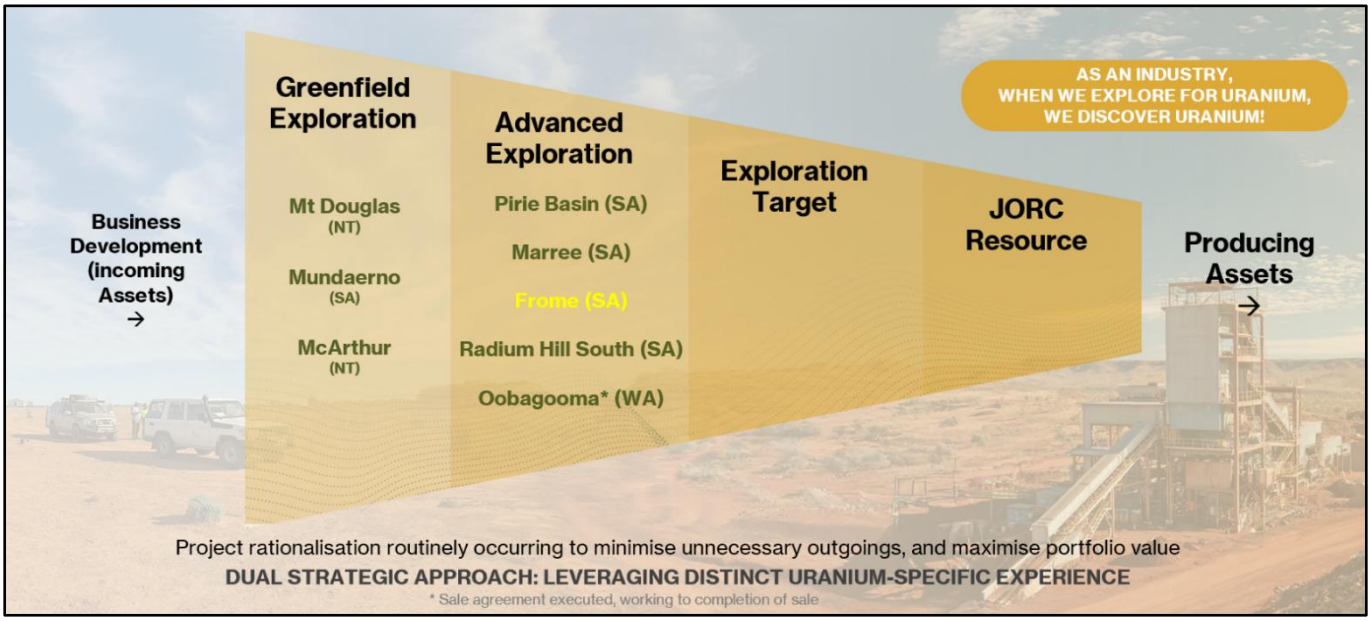
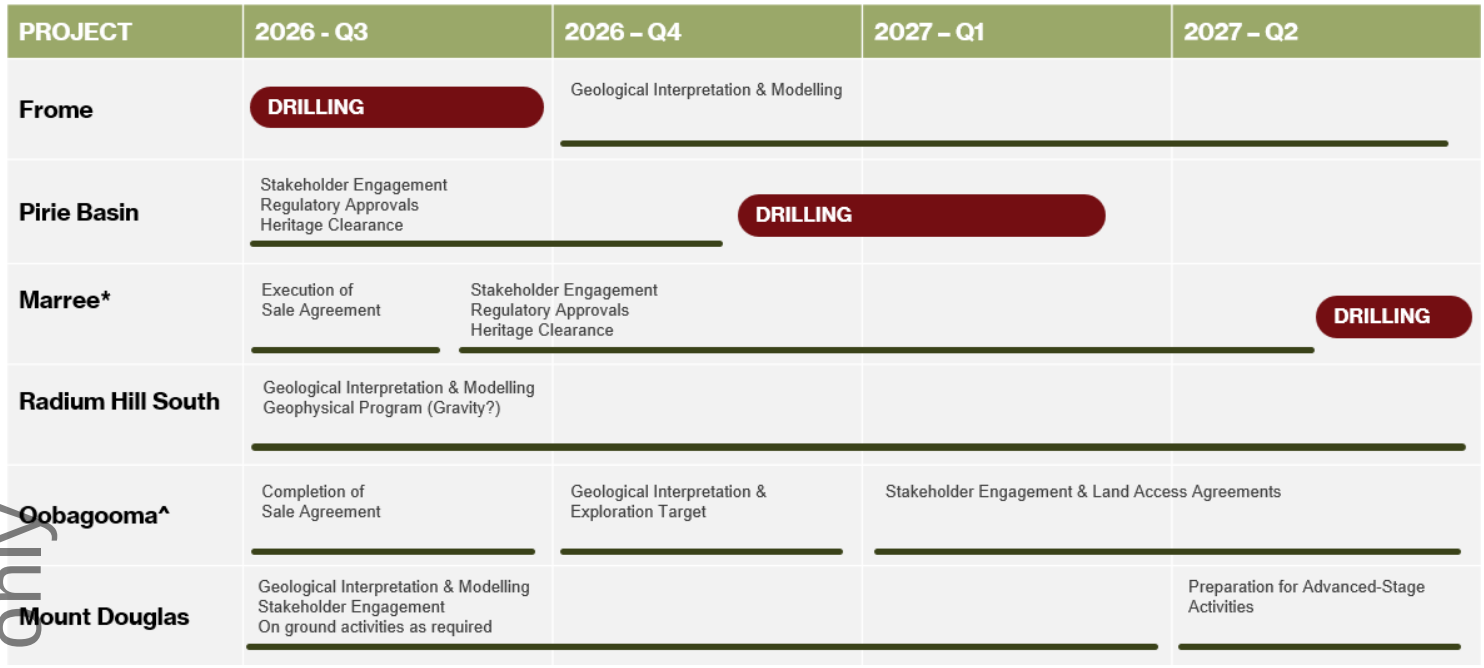


Figure 6: *Orpheus Uranium's Project Pipeline*

For personal use only

orpheusuranium.com
info@orpheusuranium.com
+61 8 8231 0381



All work programs are indicative and planned at time of announcement and work programs may be subject to change.
* Work subject to execution of sale agreements ^ Work subject to completion of sale agreement

Figure 7: *Orpheus Uranium's Planned Work Programs*

Explicitly the strategic objectives for the company over the next 12 months include;

- Maiden Frome drill program (Q3 2026)
- Completion of the Oobagooma transaction (expected Q3 2026)
- Publish maiden Oobagooma 'Exploration Target' (Q4 2026)
- Gain regulatory approval and advance Pirie Basin to 'Decision to Drill (Q3/Q4 2026)
- Advancement of Marree to 'advanced exploration' (complete Q4 2026 - subject to sale agreement)
- Gain regulatory approval and advance Marree to 'Decision to Drill' (Q2 2027)

Other Notes

Orpheus has continued the development of the project through completion of a heritage survey with Adnyamathanha representatives over priority areas within the Frome Project (see Figure 8). The survey, undertaken in May 2026, represents the first heritage survey completed by the Company following establishment of the Native Title Mining Agreement for exploration activities across the Company's Frome and Marree uranium projects.

The formally endorsed heritage survey report remains pending. Subject to receipt of the final report and any conditions arising from it, the field component of the survey is expected to support planned exploration across a broad region of the exploration 'target area', including areas both within and beyond previous heritage survey coverage and historical exploration corridors.

The Company considers completion of the survey an important step in progressing on-ground exploration at Frome. In addition to supporting access for the planned drilling program, the survey process has provided an opportunity to continue building a constructive working relationship with the Adnyamathanha Traditional Owners and other key stakeholders.

For personal use only

orpheusuranium.com
info@orpheusuranium.com
+61 8 8231 0381

The survey also supports the Company's ability to maintain a responsive exploration approach across a large target area. This is particularly important given Orpheus' intention to incorporate drilling results into an evolving geological model and refine future exploration priorities as new information becomes available.

Orpheus acknowledges the ongoing engagement of the Adnyamathanha people and remains committed to undertaking exploration activities in a respectful manner that recognises Native Title, cultural heritage and the importance of continued stakeholder engagement.

For personal use only



Figure 8: *Selection of photos from the recent Heritage Survey over the Erudina Prospect*

-END-

orpheusuranium.com
info@orpheusuranium.com
+61 8 8231 0381

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

For further information, please contact:

Managing Director & Chief Executive Officer

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 (ASX) listed exploration company exploring for uranium in South Australia and the Northern Territory, both jurisdictions which allow uranium exploration, mining and processing. More recently, Orpheus has extended tenure into Western Australia through the execution of the sale agreement for the acquisition of the Oobagooma Uranium Project (progressing to completion), a state that contains multiple 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, 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.

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.

Cautionary Statement

The interpretations contained in this announcement are based on historical exploration data and geological information currently available to the Company. Historical drilling data may be subject to limitations, including incomplete records, variable data quality and differences in historical sampling, logging, survey and analytical methods compared with modern exploration standards (review Section 1 and Section 2 JORC Tables for further details). The Company's interpretation of redox boundaries, stratigraphy and other geological features is preliminary and will require further validation through planned contemporary exploration activities. Although redox boundaries can be associated with uranium mineralisation in certain geological settings, the presence of a redox front does not, of itself, confirm the presence of uranium mineralisation. Investors are cautioned that the geological interpretation presented in this announcement remains conceptual and is subject to change as additional data is collected. Future exploration results will be used to test, refine and update the Company's geological model.

For personal use only

Appendix 1 – Significant Uranium Intersects within the Erudina Prospect

(as presented in Figure 2)

Holes with a maximum Intersects of 100ppm eU3O8 or greater are considered as significant

Drilling Type RM = Rotary Mud, RMDC = Rotary Mud Pre-Collar with Diamond sedimentary Core Tail

Hole ID	Depth (m)	Max Grade eU_3O_8 (ppm)	Drilling Type	Drilling Program
ER0028	180	247	RM	AREA 2008
ER0045	165	125	RM	AREA 2008
ER0047	182	258	RM	AREA 2008
ER0048	181	1764	RM	AREA 2008
ER0064	179	658	RM	AREA 2008
ER0068	168	107	RM	AREA 2008
ER0090	161	648	RM	AREA 2009
ER0091	152	198	RM	AREA 2009
ER0094	152	114	RM	AREA 2009
ER0095	143	127	RM	AREA 2009
ER0130	150	201	RM	AREA 2009
ER0133	157	691	RM	AREA 2009
ER0136	99	123	RM	AREA 2009
ER0137	214	160	RM	AREA 2009
ER0139	179	180	RM	AREA 2009
ER0140	214	155	RM	AREA 2009
ER0141	149	151	RM	AREA 2009
ER0142	150	181	RM	AREA 2009
ER0144	188	423	RM	AREA 2009
ER0146	183	581	RM	AREA 2009
ER0147	168	427	RM	AREA 2009
ER0151	162	216	RM	AREA 2009
ER0152	159	139	RM	AREA 2009
ER0161	166	115	RM	AREA 2009
ER0162	159	149	RM	AREA 2009
ER0168	171	254	RM	AREA 2009
ER0170	161	350	RM	AREA 2009
ER0171	173	405	RM	AREA 2009
ER0172	171	685	RM	AREA 2009
ER0174	176	127	RM	AREA 2009
ER0175	183	150	RM	AREA 2009
ER0178	187	526	RM	AREA 2009
ER0180	151	170	RM	AREA 2009
ER0185	163	191	RM	AREA 2009
ER0186	162	485	RM	AREA 2009
ER0189	159	609	RM	AREA 2009
ER0190	167	145	RM	AREA 2009
ER0191	164	1782	RM	AREA 2009

For personal use only

orpheusuranium.com
info@orpheusuranium.com
+61 8 8231 0381

Hole ID	Depth (m)	Max Grade eU_3O_8 (ppm)	Drilling Type	Drilling Program
ER0192	156	131	RM	AREA 2009
ER0193	149	151	RM	AREA 2009
ER0195	158	190	RM	AREA 2009
ER0196	164	1400	RM	AREA 2009
ER0199	164	171	RM	AREA 2009
ER0201	165	538	RM	AREA 2009
ER0202_C	177	189	RMDC	AREA 2009
ER0203	178	234	RM	AREA 2009
ER0206_C	160	120	RMDC	AREA 2009
ER0209	161	313	RM	AREA 2009
ER0211_C	187	333	RMDC	AREA 2009
ER0212	168	291	RM	AREA 2009
ER0215_C	189	293	RMDC	AREA 2009
ER0216	153	423	RM	AREA 2009
ER0217	160	311	RM	AREA 2009
ER0218	151	214	RM	AREA 2009
ER0220_C	146	120	RMDC	AREA 2009
ER0221	157	272	RM	AREA 2009
ER0222_C	166	1150	RMDC	AREA 2009
ER0227	158	191	RM	AREA 2009
ER0228	88	136	RM	AREA 2009
ER0229	169	573	RM	AREA 2009
ER0230	159	132	RM	AREA 2009
ER0231	163	106	RM	AREA 2009
ER0233	170	335	RM	AREA 2009
ER0234	101	127	RM	AREA 2009
Outside of Exploration ‘Target Area’				
ER0104	159	437	RM	AREA 2009
ER0107	153	289	RM	AREA 2009
ER0112	164	183	RM	AREA 2009

For personal use only

orpheusuranium.com
info@orpheusuranium.com
+61 8 8231 0381

Appendix 2 – Key Holes within the Erudina Prospect (as presented in Figure 2)

Collar coordinates are given with respect to GDA94 Zone 54 grid (-90 dip represents a vertical hole)

Hole ID	Easting	Northing	Elevation (m)	Depth (m)	Dip	Azim
ER0028	351026	6488555	103.8	246	0	90
ER0030	354007	6489497	98	216	0	90
ER0031	358498	6489737	100.2	186	0	90
ER0032	357064	6489850	102.8	182	0	90
ER0042	351534	6488712	103.4	190	0	90
ER0043	352056	6488875	102.3	213	0	90
ER0044	352537	6489029	102.3	216	0	90
ER0045	353023	6489183	102.8	192	0	90
ER0046	354468	6489639	100.9	198	0	90
ER0047	352789	6489109	101.8	242	0	90
ER0048	352519	6489023	102.4	200	0	90
ER0049	353522	6489339	101.2	215	0	90
ER0064	352392	6488985	102.8	220	0	90
ER0065	352651	6489072	101.9	192	0	90
ER0066	352665	6489081	101.8	214	0	90
ER0067	352901	6489146	101.5	195	0	90
ER0068	353264	6489264	101.2	201	0	90
ER0069	352658	6489068	101.8	192	0	90
ER0070	354238	6489575	97.6	180	0	90
ER0071	354935	6489793	96.8	178	0	90
ER0072	355424	6489677	101.4	180	0	90
ER0078	350255	6488317	103.7	183	0	-90
ER0079	350626	6488444	103	210	0	-90
ER0090	350202	6493498	96	186	0	-90
ER0091	350998	6493451	94.5	198	0	-90
ER0092	351803	6493452	97	212	0	-90
ER0093	352600	6493440	94	206	0	-90
ER0094	353407	6493461	94.9	204	0	-90
ER0095	354200	6493480	95.2	192	0	-90
ER0096	355006	6493477	96.4	168	0	-90
ER0097	355802	6493438	92.6	144	0	-90
ER0098	356607	6493470	97.1	168	0	-90
ER0099	357392	6493514	95.1	174	0	-90
ER0100	357400	6497447	91.9	168	0	-90
ER0101	356605	6497416	90.6	180	0	-90
ER0102	350195	6497443	89	192	0	-90
ER0103	350997	6497398	88	204	0	-90
ER0104	351825	6497356	88.2	192	0	-90
ER0105	352609	6497365	88.6	210	0	-90
ER0106	353394	6497419	84.6	180	0	-90
ER0107	354191	6497415	88.5	180	0	-90
ER0108	354994	6497415	89.1	162	0	-90
ER0109	355802	6497418	89.3	174	0	-90
ER0110	351400	6497389	88.8	192	0	-90
ER0111	352200	6497297	87.1	204	0	-90
ER0112	351590	6497384	88.4	202	0	-90
ER0113	351504	6497364	88.3	198	0	-90

For personal use only

orpheusuranium.com
info@orpheusuranium.com
+61 8 8231 0381

Hole ID	Easting	Northing	Elevation (m)	Depth (m)	Dip	Azim
ER0114	352003	6497313	85.9	198	0	-90
ER0115	352994	6497319	87.2	192	0	-90
ER0122	350198	6487400	105.3	180	0	-90
ER0123	350999	6487332	106.8	182	0	-90
ER0124	351795	6487326	105.8	190	0	-90
ER0125	352602	6487289	105.3	186	0	-90
ER0126	353390	6487270	105.1	198	0	-90
ER0127	354196	6487265	103.9	198	0	-90
ER0128	355001	6487273	104.8	276	0	-90
ER0129	351398	6487312	105.7	208	0	-90
ER0130	355799	6487389	103.8	234	0	-90
ER0131	354601	6487249	105.8	202	0	-90
ER0132	355402	6487288	101.8	216	0	-90
ER0133	353403	6491507	97	192	0	-90
ER0134	354201	6491565	96.5	203	0	-90
ER0135	355008	6491491	96.7	190	0	-90
ER0136	355803	6491476	99.7	184	0	-90
ER0137	355200	6487280	102.6	254	0	-90
ER0139	355100	6487283	103.8	306	0	-90
ER0140	355602	6487341	106	192	0	-90
ER0141	355586	6487338	105.9	188	0	-90
ER0142	352250	6488935	102.7	204	0	-90
ER0143	352585	6489050	102.2	200	0	-90
ER0144	352260	6488956	102.8	194	0	-90
ER0145	352720	6489093	101.4	204	0	-90
ER0146	352782	6489111	101.7	210	0	-90
ER0147	352957	6489173	101.7	192	0	-90
ER0148	353800	6491553	99.3	172	0	-90
ER0149	354598	6491451	96.6	189	0	-90
ER0150	350598	6493474	92.6	202	0	-90
ER0151	350404	6495541	91	208	0	-90
ER0152	351197	6495420	90.5	200	0	-90
ER0153	351996	6495452	91.1	197	0	-90
ER0154	352794	6495542	91.6	198	0	-90
ER0158	352845	6489130	102	198	0	-90
ER0159	350202	6491498	95.4	198	0	-90
ER0160	351001	6491502	100.2	196	0	-90
ER0161	351798	6491501	96.6	198	0	-90
ER0162	352602	6491505	99.5	186	0	-90
ER0163	350605	6491479	97.3	194	0	-90
ER0164	351396	6491504	99.7	210	0	-90
ER0165	350200	6489350	102.9	204	0	-90
ER0167	351402	6489504	100.4	198	0	-90
ER0168	351802	6489500	101.3	194	0	-90
ER0169	352200	6489501	102.5	200	0	-90
ER0170	352603	6489503	101.6	186	0	-90
ER0171	352998	6489504	102.8	188	0	-90
ER0172	353412	6489501	103.2	194	0	-90
ER0173	351402	6488496	104.7	210	0	-90
ER0174	351799	6488495	102.3	252	0	-90
ER0175	352599	6488495	104.9	218	0	-90

For personal use only

orpheusuranium.com
info@orpheusuranium.com
+61 8 8231 0381

Hole ID	Easting	Northing	Elevation (m)	Depth (m)	Dip	Azim
ER0176	353002	6488486	104.3	216	0	-90
ER0177	353404	6488504	102.9	182	0	-90
ER0178	352199	6488662	103	203	0	-90
ER0179	353806	6488496	103.4	182	0	-90
ER0180	354208	6488504	100.2	174	0	-90
ER0181	355002	6488497	101.7	213	0	-90
ER0182	355801	6488502	101.2	210	0	-90
ER0184	352801	6489495	101.5	192	0	-90
ER0185	353208	6489494	100.9	210	0	-90
ER0186	353596	6489497	101.3	198	0	-90
ER0188	351001	6490497	100.7	192	0	-90
ER0189	351805	6490506	100.2	191	0	-90
ER0190	352600	6490503	97.9	198	0	-90
ER0191	353401	6490506	100.3	204	0	-90
ER0192	354201	6490499	99.5	202	0	-90
ER0193	354993	6490495	102	196	0	-90
ER0194	355800	6490499	96.9	186	0	-90
ER0195	353800	6490499	99.3	186	0	-90
ER0196	352997	6490496	99.7	186	0	-90
ER0197	352191	6490496	98.3	198	0	-90
ER0198	351396	6490500	103	198	0	-90
ER0199	353597	6490507	99.5	192	0	-90
ER0200	353200	6490504	101	192	0	-90
ER0201	353498	6490506	100.5	198	0	-90
ER0202_C	355084	6487283	103.9	294	0	-90
ER0203	353302	6490506	101.3	192	0	-90
ER0204	353096	6490493	99.5	192	0	-90
ER0205	351605	6490500	100.9	192	0	-90
ER0206_C	350214	6493498	96.3	171	0	-90
ER0207	351998	6490497	98.2	198	0	-90
ER0208	352799	6490495	96.7	190	0	-90
ER0209	351701	6490495	100.8	186	0	-90
ER0210	350201	6492501	94.4	192	0	-90
ER0211_C	352509	6489023	102.6	202	0	-90
ER0212	351004	6492503	92.4	174	0	-90
ER0213	351798	6492385	94.5	186	0	-90
ER0214	352603	6492503	97.9	168	0	-90
ER0215_C	352415	6488995	102.7	197	0	-90
ER0216	353405	6492501	96.3	184	0	-90
ER0217	354204	6492497	96	192	0	-90
ER0218	354999	6492512	96.8	184	0	-90
ER0219	355800	6492500	98.8	174	0	-90
ER0220_C	353398	6489503	103.6	183	0	-90
ER0221	353002	6491497	97	174	0	-90
ER0222_C	352997	6490490	99.6	195	0	-90
ER0223_C	353395	6490497	100.1	181	0	-90
ER0227	353797	6489500	101.4	192	0	-90
ER0228	353998	6489492	97.8	204	0	-90
ER0229	350198	6494493	93.7	216	0	-90
ER0230	350998	6494507	89.5	196	0	-90
ER0231	350603	6494508	93.3	210	0	-90

For personal use only

orpheusuranium.com
info@orpheusuranium.com
+61 8 8231 0381

Hole ID	Easting	Northing	Elevation (m)	Depth (m)	Dip	Azim
ER0232	351801	6494491	94.1	200	0	-90
ER0233	352611	6494489	94.5	208	0	-90
ER0234	353410	6494498	93	168	0	-90
ER0235	354200	6494504	94.1	196	0	-90
ER0236	355007	6494506	93.8	198	0	-90
ER0237	355796	6494506	94.6	168	0	-90

For personal use only

orpheusuranium.com
info@orpheusuranium.com
+61 8 8231 0381

For personal use only

JORC Code, 2012 Edition

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report.* • *In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.*	Sampling techniques have been sourced from historic Company open file reports. Only those that are considered Material to the Public Report have been listed. Orpheus has not undertaken any sampling or assaying of materials. Refer to section "Exploration done by other parties" for full company and tenure references. • Areva (2004 – 2014). Drillholes were geophysically logged using downhole methods, gamma, resistivity, S.P and neutron. Cuttings from drillholes were collected systematically every 2m during circulation using a shovel. Chip trays and 250g samples were collected. Cutting samples of representative drillholes and one diamond core drillhole were submitted to the South Australian Government Core Library. • Data within this report focuses has been on the 2004-2009 AREVA data (ER series of holes) due to the concentration within and proximal to the target exploration area.
Drilling techniques	• *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	Drilling techniques have been sourced from historic Company open file reports. Refer to section "Exploration done by other parties" for full company and tenure references. • Areva (2004 – 2014). Rotary Mud drilling and Diamond Coring was conducted. Drillholes were geophysically logged using downhole methods, gamma, calliper,, resistivity, induction, and S.P
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *Whether a relationship exists between sample recovery and grade and whether*	Drilling was of Rotary Mud method and Rotary Mud-Diamond Tails. • Limited records of drill sample recovery from Company open file reports suggest that recovery is at times poor due to unconsolidated sands. Diamond coring and hole twinning was undertaken locally to overcome this.

orpheusuranium.com
info@orpheusuranium.com
+61 8 8231 0381

For personal use only

	sample bias may have occurred due to preferential loss/gain of fine/coarse material.	
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	Lithological logging and geophysical logging sourced from historic Company open file reports was used in the preparation of this Public Report. • Logging comprised lithological logs and geophysical logs from Rotary Mud drillholes and of Diamond core. Downhole geophysics was largely constrained to gamma, resistivity, induction and S.P and were mostly run the entire length of the drill hole, provided in a profile alongside lithological logging. • Orpheus considers downhole geophysical logging to be representative of downhole conditions. Downhole geological logging is suitable for use, however, the lack of detailed chip photos and lack of geological samples available from historical programs means that limitations on cross-referencing and ability to QAQC data. • Data within this report focuses has been on the 2004-2009 AREVA data (ER series of holes) due to the concentration within and proximal to the target exploration area. • This data has not been used to support Mineral Resource estimation, mining or metallurgical studies.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• Refer to sampling techniques.
Quality of assay data	• *The nature, quality and appropriateness of the assaying and laboratory procedures*	Quality of geophysical logging data is considered to be appropriate for exploration analysis. Geophysical logs (Total Gamma) are considered

orpheusuranium.com
info@orpheusuranium.com
+61 8 8231 0381

For personal use only

and laboratory tests	*used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	reliable for the estimation of equivalent uranium (eU3O8) grade. • Areva (2004 – 2014). Geophysical logging companies Borehole Wireline and Geoscience Associates were contracted to run geophysical tools. Calibration of tools was completed at the Adelaide calibration pits with geophysical logging contractors are required to calibrate their instruments routinely and have a high standard of QAQC on data. Results are considered to be appropriate for exploration analysis. • Data within this report focuses has been on the 2004-2009 AREVA data (ER series of holes) due to the concentration within and proximal to the target exploration area. • Further analysis and QAQC of the surrounding holes including the 2012-14 series is being currently undertaken
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	Verification of sampling and assaying is largely not reported in the historic Company open file reports. Few samples were assayed due to recovery issues and the geophysical logs (Total Gamma) are considered reliable for the estimation of equivalent uranium grade.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	The grid system for exploration data compiled by Orpheus for the Frome Project is: • Datum: Geodetic Datum of Australia 94 (GDA94) • Projection: Map Grid of Australia (MGA) • Zone: Zone 54 Collar locations have been sourced from historic Company open file reports and have been georeferenced to this datum. Drill hole locations were determined using a handheld GPS Garmin GPSmap 60CS with an accuracy of 10 m.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.*	Areva (2004 – 2014). Drilling across the Erudina Paleochannel was conducted on a grid spacing of 1,000m (N-S) and 800m (E-W) with infill drillholes between 400m and up to 20m (E-W). • No resource is being presented • The spacing of drill data is considered suitable for exploration stage drilling, and provides basis for geological and redox interpretation, however, contemporary and refined drill

orpheusuranium.com
info@orpheusuranium.com
+61 8 8231 0381

	• *Whether sample compositing has been applied.*	spacing is required for more detailed geological interpretation,
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	The primary target for uranium mineralisation is contained within Tertiary and possibly Cretaceous sediments which are deposited in relatively flat lying settings. Therefore, whilst there are a series of structures identified within the area and may be source of offset the sediments, the proposed mineralisation is expected to be horizontal or near horizontal, and drilling has been vertical, so therefore there is no bias from the deposit scale expected. The vertical structural controls relate more to fluid transport than deposition.
Sample security	• *The measures taken to ensure sample security.*	• None recorded
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• A review of the sampling techniques and data has been conducted by Orpheus. This has generated a number of sedimentary-hosted uranium targets within the project area and provides key areas that are drill ready to test for uranium mineralisation.

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	• The Frome Project is located within the Callobonna Sub-Basin and underlying Frome Embayment of South Australia and comprises four granted and contiguous mineral exploration licences, 100% owned by Trachre Pty Ltd (Trachre is a 100% subsidiary of Orpheus Uranium Limited). Exploration licences include: *EL 6554 Frome Downs, EL 6555 Curnamona, EL 6703 Erudina, EL 6900 Billeroo* • The Frome Project overlaps two native title determination areas registered to the Adnyamathanha Traditional Lands Association (Aboriginal Corporation) RNTBC for which Orpheus has an established Native Title Mining Agreement (NTMA) for exploration. • The Frome Project overlaps a number of pastoral properties, including Curnamona, Erudina, Frome Downs, Billeroo West, Martins Well, Wertaloona, Willippa and Wirrealpa. • There are no known impediments to obtaining a licence to operate in the area.

For personal use only

orpheusuranium.com
info@orpheusuranium.com
+61 8 8231 0381

Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	Mineral company exploration reports have been sourced from the South Australian Geological Database, SARIG. Those reports submitted and received by the Department would have been approved through the Ministerial Guideline for submitting mineral exploration reports. All historic Company open file reports are publicly available from the online SARIG website.
		
		Historic exploration led to the discovery of the nearby Goulds Dam Uranium Deposit and recognition of anomalous radioactivity within sediments of three significant palaeochannel systems: Erudina, Curnamona and Billeroo.
		
		A summary of historic exploration for uranium conducted across the Frome Project comprises the following:
		
		• Eric A Rudd Pty Ltd, SML 267 (1969).
		• Mines Administration Pty Ltd, SML 495 (1970 – 1971).
		• Mines Administration Pty Ltd, SML 531 (1971).
		• Petrocarb Exploration NL and Esso Australia Ltd, SML 579 (1971 – 1972).
		• Pacminex Pty Ltd and Esso Australia Ltd, SML 544 (1971 – 1973).
		• Mines Administration Pty Ltd, EL 254 (1976 – 1978).
		• Marathon Petroleum Australia Ltd, EL 337 (1977 – 1978).
		• BHP Minerals Ltd, EL 1738 (1991 – 1992).
		• Afmeco Mining and Exploration Pty Ltd (subsequently renamed Areva Resources Australia Pty Ltd - Areva), EL 3167/4234, EL 3168/4235 and EL 3169/4236 (2004 – 2014). Exploration was focused on the southern end of the Frome Embayment, for possible economic buried sedimentary uranium mineralisation hosted by Tertiary palaeochannel sands of the Callabonna Sub-basin, with focus on the Erudina Palaeochannel Prospect where it transects adjacent to the Poontana Fault Zone. Exploration was substantial and to summarise comprised:
		  • Acquisition of ground gravity and airborne electromagnetic (AEM) surveys, to investigate the distribution of sediments and palaeodrainage features in what Areva considered were previously under-explored areas, such as particular zones along the Erudina Palaeochannel where the sediments had not yet been tested by drilling.
		  • A rotary mud drilling and wireline geophysical well logging campaign was conducted to test AEM and gravity targets. Several drillholes intersected Eyre Formation sands. Comparing the total sand thickness in each hole with the residual

For personal use only

orpheusuranium.com
info@orpheusuranium.com
+61 8 8231 0381

For personal use only

		gravity anomaly map showed that sand thickness tends to increase where residual gravity values decrease. In EL 3168, ground gravity data appeared to be more reliable than AEM data to help locate channel sands. • Radiometric anomalies were observed in both the Namba and Eyre Formations. More than 75 drillholes (located within the Frome Project area) intersected mineralised intervals with anomalous radiometric values (above 100ppm EqU). Radiometric anomalies in the Eyre Formation comprised values >1,500ppm EqU at the boundary between sands and organic clays, in association with strong redox processes. This area, the Erudina Palaeochannel Prospect was designated as a priority target for exploration programs. • Further drilling programs of rotary mud and diamond coring were conducted. Within the Frome Project area, Areva drilled 325 holes for total depth of 58,064m, average hole depth was 178m. • The Erudina Palaeochannel was found to display a quite complex shape that correlates well with AEM. Areva determined that the higher induction subsurface zones that had been originally targeted using the AEM data may not necessarily be related to lithological variations but may be related to salinity variations of the water table below modern drainages. • On EL 3168, a correlation was found between sand thickness and residual gravity lows, but further drilling was needed to confirm this relationship. Areva concluded that it is probably more difficult to identify palaeochannels on EL 3167 and EL 3168 using ground gravity surveys, because of the low density contrast between Tertiary sediments and underlying Cretaceous or Cambrian sedimentary formations. Further details on Areva's AEM surveys, refer to section "Other substantive exploration data". • Cauldron Energy Ltd, Uranium Equities Limited and Scimitar Resources Ltd, EL 3388/4608, EL 3392/4612, EL 3410/4613, EL 4507 and EL 4558 (2005 – 2012). • Paladin Energy Minerals NL, Deep Yellow Limited and Manhattan Corp Limited (Siccus Joint Venture) EL 3288 & EL 4527 (2005 – 2014).
Geology	• *Deposit type, geological setting and style of mineralisation.*	The Frome Project is located within the southwestern region of the Callabonna Sub-basin and underlying Frome Embayment, bound to the east, west and south by the Barrier, Flinders and Olary Ranges, respectively. Exploration is targeting sandstone-hosted roll-front and tabular deposits, similar to the nearby Beverley, Four Mile,

orpheusuranium.com
info@orpheusuranium.com
+61 8 8231 0381

For personal use only

		Honeymoon, Goulds Dam, Jasons, Saffron and Oban uranium deposits. • Tertiary or underlying Cretaceous stratigraphic units that host uranium mineralisation includes: • Cretaceous (undifferentiated): Age equivalent sediments that host the economic Four Mile West Uranium deposit, • Eyre Formation (Eocene); economic uranium mineralisation has been encountered in sands of the Eyre Formation at Four Mile, Honeymoon, Goulds Dam, Jasons, Saffron and Oban; and • Namba Formation (Miocene); economic uranium mineralisation has been encountered in sands of the Namba Formation at Beverley. Descriptions within the report primarily elaborate on potential sedimentary-style uranium mineralisation contained within the Eocene Eyre Formation sediments (primary target) of the Lake Eyre Basin. Consideration will be given to alternate host sediments as the project progresses.
Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* ○ *easting and northing of the drill hole collar* ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* ○ *dip and azimuth of the hole* ○ *down hole length and interception depth* ○ *hole length.* • *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*	• Refer to Appendix 2 of this Public Report that contains relevant drillhole information. • Drillhole data is presented in Appendices 2 and all information has been sourced from South Australian Geodata Database (including published historical reports)
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high grade results and*	• Data is historic in nature and all information is sourced from what is available within historical reports/available with South Australian Geodata Database, • Where applicable reported intercepts generally single downhole intervals. No data aggregation has been utilised in this report. Max value

orpheusuranium.com
info@orpheusuranium.com
+61 8 8231 0381

For personal use only

	longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	eU3O8 (ppm) uranium grades have been used for representation in this report. No resource or exploration target has been presented.
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').*	• Data is historic in nature, and all information is sourced from what is available within historical reports/available with South Australian Geodata Database, or primary downhole geophysical assay datasets. Where applicable maximum mineralisation is presented as a point value, and all downhole data in section is shown as downhole geophysical log format. No estimates of true width provided. • As sedimentary sequences and interpreted mineralisation is expected to occur horizontally, or near horizontally, then holes drilled as vertical are believed to present an accurate representation of mineralisation.
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	• Data is historic in nature, and all information is sourced from what is available within historical reports/available with South Australian Geodata Database
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	• A review of the historic Exploration Results of work by Areva has been conducted by Orpheus. This has generated a number of sedimentary-hosted uranium targets within the project area and provides key areas that are drill ready to test for economic uranium mineralisation. • The work completed by AREVA is the most comprehensive, and widely distributed dataset, and is the most recent data available over the project area. Whilst data within this report focuses has been on the 2004-2009 AREVA data (ER series of holes) due to the concentration within and proximal to the target exploration area.
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics;*	• Orpheus continues to review and integrate varying local and quasi regional datasets relevant to the project area. Ongoing assessment will continue and be incorporated into geological models as determined suitable,

orpheusuranium.com
info@orpheusuranium.com
+61 8 8231 0381

	potential deleterious or contaminating substances.	
Further work	• *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• Ongoing analysis and QAQC of historical data sets as to be added into the regional modelling, including where possible downhole geophysics including calibrated grade calculations • Orpheus are preparing to conduct an infill drilling campaign within the Target Exploration Area at the Erudina prospect. • Rotary Mud drilling methods will be applied to intersect the target sediments, with the support of diamond core or alternative techniques to be utilised as required. • Downhole geophysical surveys will be completed at the time of drilling including calibrated gamma, and will be utilised for geological interpretation and determination of mineralisation and any associated mineral resource.

For personal use only

orpheusuranium.com
info@orpheusuranium.com
+61 8 8231 0381