ASX: ORP

ASX RELEASE I 22 APRIL 2025

Project Acquisition Within Geologically Proven Pirie Basin, Supported By $1.25M Placement to Fund Exploration Activities

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Highlights

- **100% acquisition of 1,100km^2 landholding (subject to completion of certain conditions precedent considered standard for a transaction of this nature) from FMG Resources Pty Ltd, a wholly owned subsidiary of Fortescue Ltd (ASX: FMG) ("Fortescue"), which is adjacent to Alligator Energy's (Alligator, ASX: AGE) Samphire Uranium Project with 17.5Mlbs Mineral Resource[1].**
- **Tenements host sediments of the highly prospective Pirie Basin underlain by fertile source rocks of the highly uriniferous Gawler Craton Hiltaba Suite.**
- **The Pirie Basin is one of only two basins in South Australia to host sedimentary-style uranium deposits that have active advanced staged feasibility or producing in-situ recovery uranium projects.**
- **Upfront consideration of $400,000 funded from existing cash balance, with the balance of consideration (comprising of deferred and conditional cash payments) to be paid to Fortescue, subject to satisfaction of various milestones.**
- **Contemporaneous placement receives firm commitments for $1.25m at $0.028 per share (Placement) (8.1% discount to the 5-day WAP), to fund immediate commencement of exploration activities on the acquired tenure (post-completion of the sale agreement), whilst attracting strong support from a range of existing and new shareholders.**
- **The transaction incorporates the purchase of technical data including regional gravity data collected by Fortescue that will be reprocessed for uranium exploration and delineating paleochannels.**
- **The project has an established Native Title Mining Agreement (NTMA) with Barngarla Determination Aboriginal Corporation (on behalf of the Barngarla People), the determined Traditional Owners of the land the subject of the landholding, which will, subject to execution of a deed of assignment and assumption in respect of the NTMA (a condition precedent to this transaction), permit Orpheus to complete on ground activities following initial engagement with appropriate representatives and other relevant stakeholders.**
- **Up to ~535 ppm U_3O_8 (e.g., COD002) in historical drill holes, validating the source potential of the local Hiltaba Suite Granites and potential for new discoveries within the project.**

Commenting on the exploration program, Orpheus Chief Executive Officer Clint Dubieniecki said:

"The 100% acquisition of the Pirie Basin Uranium Project is a transformative step for Orpheus Uranium, further solidifying our position as a leading uranium explorer in South Australia. With this addition, Orpheus now holds prized exploration ground across three proven uranium provinces—the Pirie, Frome, and Murray (Radium Hill)) basins — each with significant potential for high-quality discoveries.

The Pirie Basin has long been recognised as one of the most favourable settings for sedimentary-style uranium mineralisation, with all the key geological ingredients required for the formation of economic deposits. These include widely distributed uranium-enriched source rocks and overlying sediments that create the right geochemical conditions for uranium concentration.

This marks the first time that a majority of the consolidated land package linked to the Pirie Basin Uranium Project is under the ownership of a dedicated, uranium-focused junior company. CRA Exploration conducted the most extensive uranium exploration program on the acquired land in the late 1970s, with only a few regional uranium-focused exploration efforts taking place since then. With the recent rebound in spot uranium prices and Alligator Energy's announcement of a maiden 17.5Mlb resource at its Samphire Uranium project, we see significant exploration potential across the 40 kilometres of fertile basin now 100% owned by Orpheus, as we strongly believe that Samphire's success is not an isolated occurrence.

This acquisition significantly enhances Orpheus's portfolio, positioning us as a key player in South Australia's uranium sector and advancing our strategy to unlock the full potential of these premier uranium provinces."

1: Samphire Uranium Project – Alligator Energy Limited ASX: AGE - Successful upgrade of Indicated Mineral Resource for the Blackbush Deposit, Samphire Uranium Project, South Australia. Refer to ASX: AGE announcement dated 7 December 2023

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Summary

Orpheus Uranium Limited (ASX: ORP) (Orpheus or the Company) is pleased to announce the acquisition of two exploration licences located on the Eyre Peninsula, South Australia, referred to as the Pirie Basin Uranium Project (see Figure 1) covering an area of approximately 1,100km2. The licences, which will be purchased from Fortescue (subject to completion of certain conditions which are considered customary for a transaction of this nature), are located on the western margins of the Pirie Basin which hosts Alligator Energy's (AGE) Samphire Uranium Project, a project that has a Mineral Resource Estimate of 17.5Mlbs, and an exploration target of 14-75Mlbs[1].

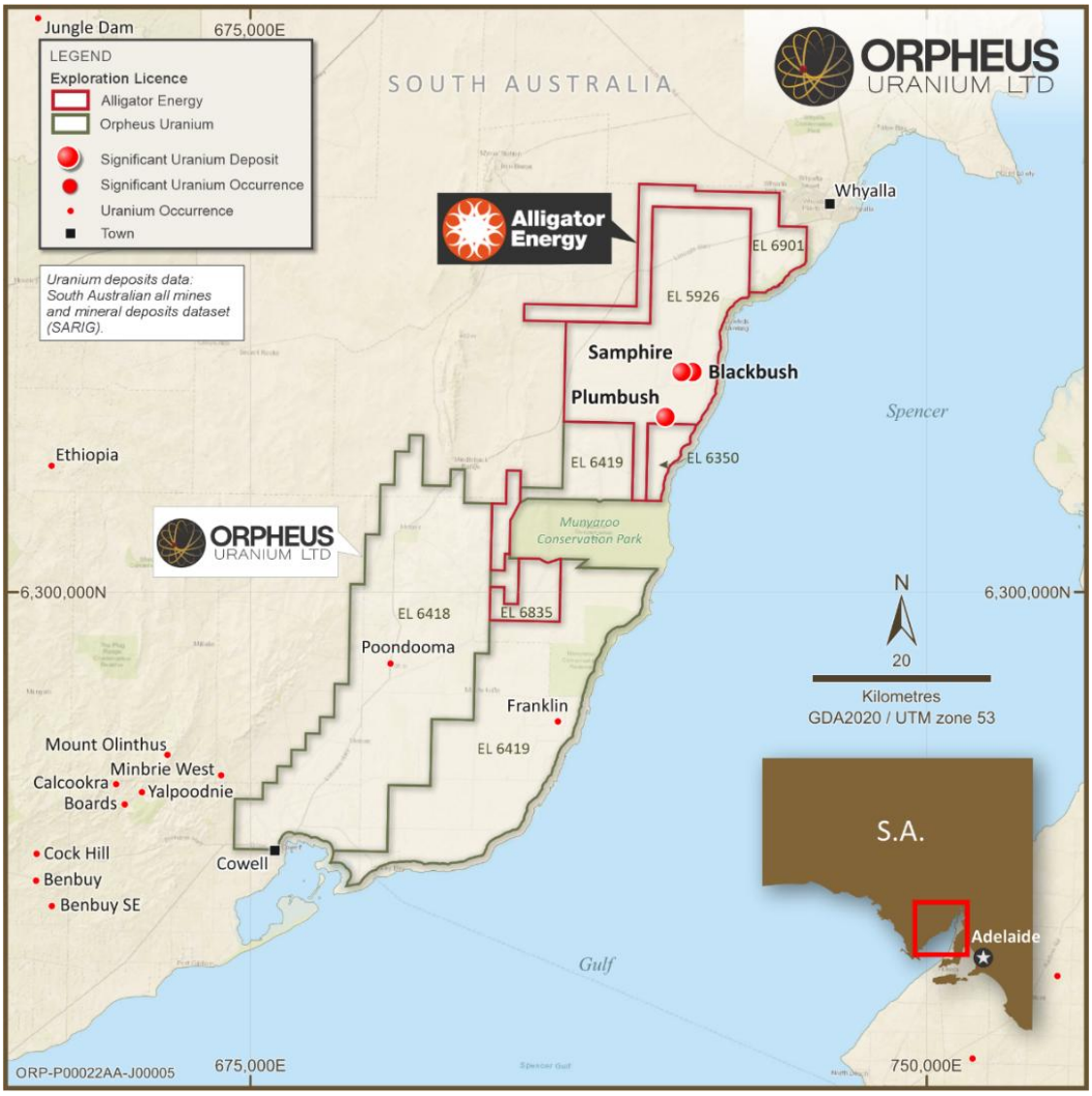


Figure 1 Location of the acquired tenements EL 6418 & EL 6419 highlighting Alligator's Samphire Uranium Project and associated deposits.

The acquisition aligns with Orpheus' strategy of consolidating unexplored extensions of proven uranium districts, leveraging the Company's internal technical expertise to unlock new discoveries. The acquisition was prioritised based on the following geological and commercial attributes:

1. 100% ownership of over 40km strike of highly prospective Pirie Basin sediments which are host to the 17.5Mlb U Samphire Mineral Resource and underlain by fertile Hiltaba Suite granites,

2. Uranium exploration limited, completed within localised areas in the late 1970s and early 2010s,

3. Being held by Fortescue exploring for Cu for almost the last six years, subsequent to a majority of the tenure being held in succession for the 17 years prior with primary focus on Cu/Au exploration.

Geological Setting and Uranium Potential of the Acquired Tenure

The Pirie Basin, located on South Australia's Eyre Peninsula, is an underexplored Teritary sedimentary basin with significant potential for uranium resources. Geologically, the Pirie Basin unconformably overlies the broader Adelaide Geosyncline, which is composed of Paleoproterozoic to Mesoproterozoic crystalline basement rocks and early Mesoproterozoic intrusives (see Figure 2). The latter includes members of the Proterozoic Hiltaba Suite Granites, the presence of which serve as ideal uranium source rocks within the surrounding region.

The overlying sediments comprising the Pirie Basin are considered promising hosts for uranium mineralisation due to favourable lithologies and variations in redox conditions. Sediments of the basin, in particular the Kanaka Beds provide a permeable sedimentary medium to allow the transport of mobilised uranium from the structural complex underlying Proterozoic basement rocks. The lithological composition of interbedded sands, carbonaceous siltstone, shale, and lignite, offer conditions conducive to uranium accumulation, especially where they unconformably overlie the uranium-bearing granitic source rocks.

Regional deposit scale data confirms the Pirie Basin as one of the most prospective basins for uranium mineralisation within South Australia. A recent technical review of historical data indicates the uranium potential to extend beyond what is currently defined in the northern part of the basin. With its underexplored nature and favourable geological settings, the acquired tenure remains a highly promising target for future uranium exploration and potential greenfield discoveries.

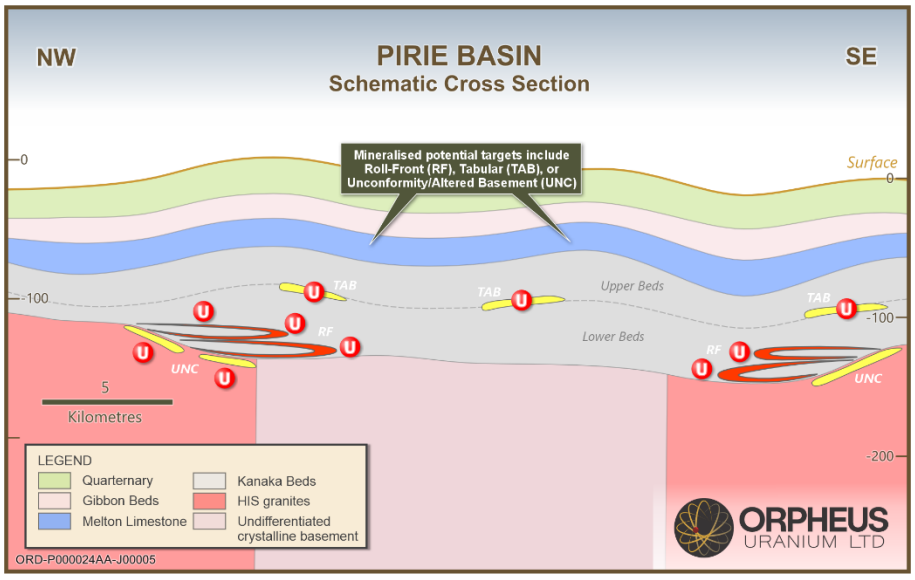


Figure 2: Schematic section of the generalised geological profile of areas within the acquired tenure where the Pirie Basin is present, in conjunction with conceptual mineralisation types associated with the tenure (see Figure 4 for section location).

In Detail - Source, Transport (Host Lithology) & Trap Settings

Source: Sedimentary uranium mineral systems, typically associated with roll-front or tabular styles of mineralisation, require a primary source rock that contains high concentrations of uranium. These source rocks are often enriched in uranium by a factor of ten or more compared to background levels. Uranium is released from these rocks through weathering or chemical processes, which allows it to either accumulate in enriched sediments or to enhance the uranium content in groundwater, contributing to the mineralisation process. Common source rocks include volcanic, porphyry, or granitic types.

Within the acquired tenure, there is a clear regional distribution of interpreted subsurface granitic source rocks, as identified through a regional assessment of government geological datasets (see Figure 4). Modelled regional and localised quasi-regional gravity data collected by Fortescue as operator of the tenure in conjunction with other historical and reginal surveys provides further supports the widespread presence of granitic source rocks (see Figure 5). Confirming the interpretation historical drilling intersects these granites sub-surface and with geochemical signatures that support the potential for them to act as a source rock with U3O8 concentrations ranging from 50ppm up to 500+ ppm in select granitic units (see Figure 3 & Table 1).

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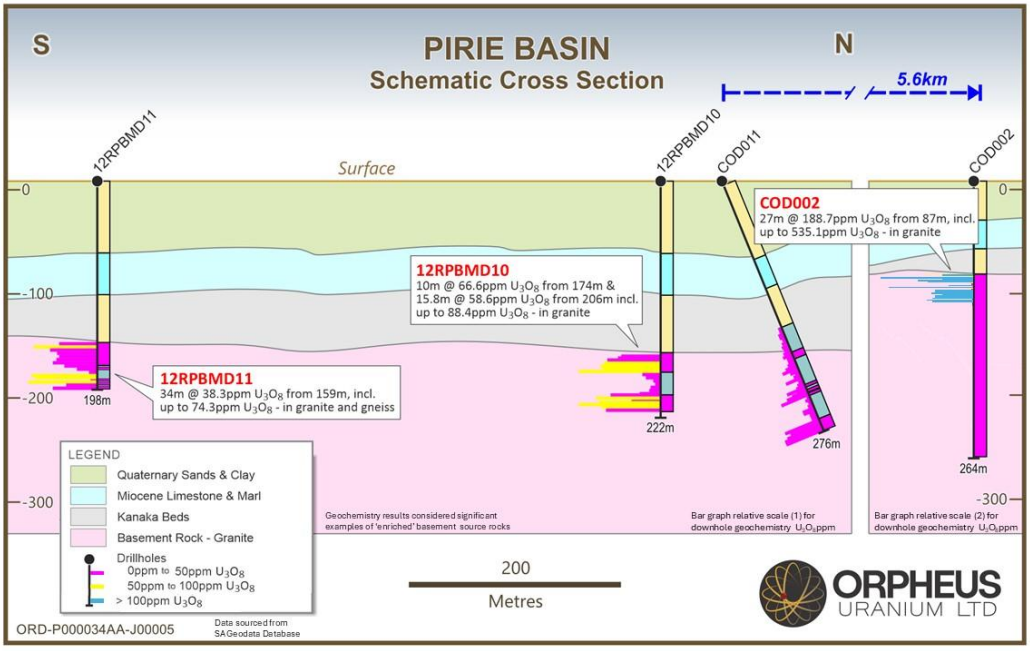


Figure 3: Schematic section with select holes highlighting the potential of the sub-surface granites as a source rock through presentation of downhole ppm U3O8 calculated from downhole geochemical analysis (see Figure 9 for drillhole locations).

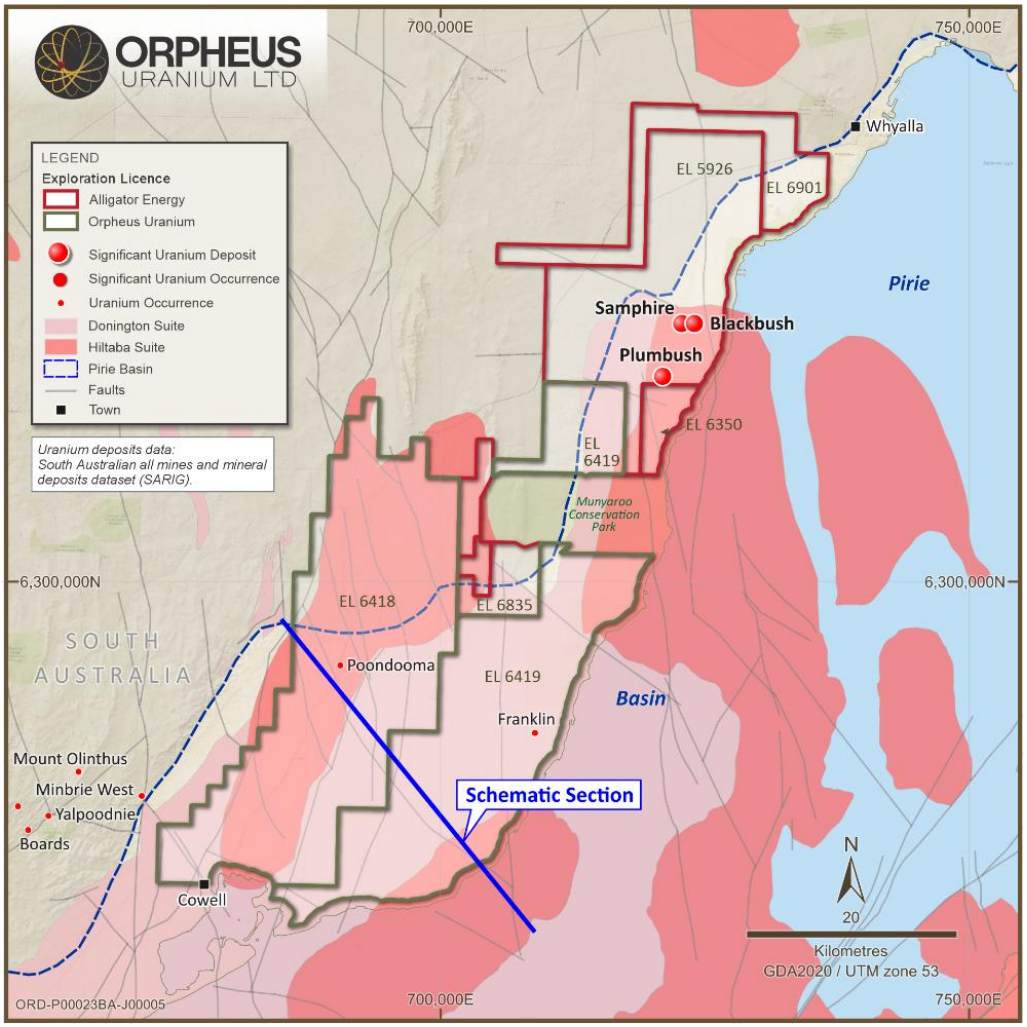


Figure 4: Granite distribution throughout the western Pirie Basin and surrounding areas.

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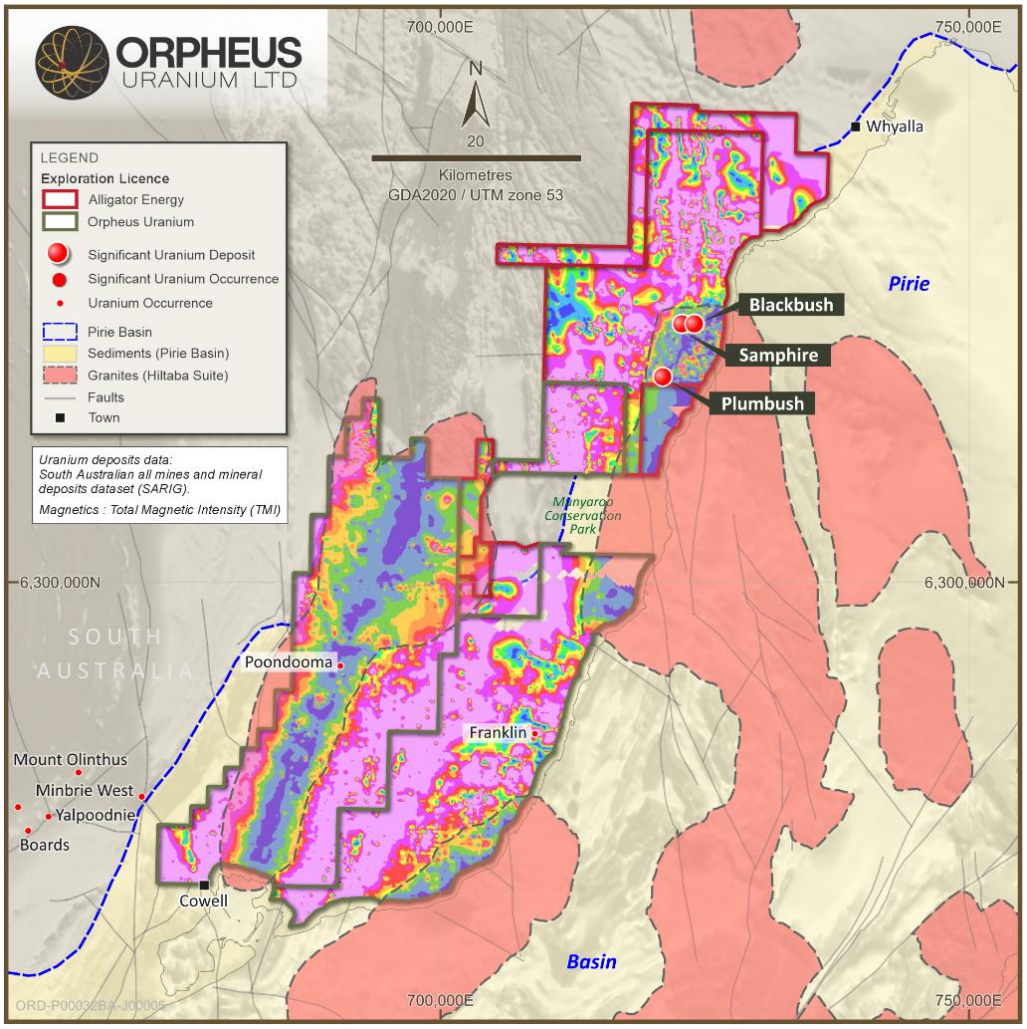


Figure 5: Hiltaba suite granite distribution throughout the western Pirie Basin overlain by gravity imagery (TDI - Tilt Derivative):

Transport (Host Sediments): Sedimentary uranium systems inherently require a permeable medium to facilitate the transport of enriched fluids either from the source rock or to accumulate uranium from the surrounding sediments. The ideal setting involves direct interaction between the source rock and the aquifer, which can occur through the unconformable deposition of overlying sediments or through post-depositional structural events that create contact between the two units.

On the eastern Eyre Peninsula, the Eocene-aged Kanaka Beds serve as a suitable transport medium (see Figure 6). These beds host the proximal Samphire Uranium Project and are considered an equivalent to the Callabonna Sub-Basin Eyre Formation, which hosts the Four Mile and Honeymoon uranium deposits (see Figure 8). The sediments are widespread, well-sorted, and range from clay to pebble-sized siliciclastic material, deposited in a fluviatile to marine delta environment. They are confined to palaeochannels that commonly incise into granitic or other crystalline basement rock.

Within the acquired tenure, the presence of the Kanaka Beds at surface, as identified through historical drilling, provide ample evidence to support government interpretation of their presence (see Figure 6 & 7). Furthermore, they have been identified to overlie crystalline basement rocks, including enriched granitic source rocks making them a desirable transport medium (see Figure 7), whilst the weathering associated with the deposition has been shown to have led to the argillic alteration and the formation of saprolite basement, which provides an unconventional but valid alternate uranium mineralising target.

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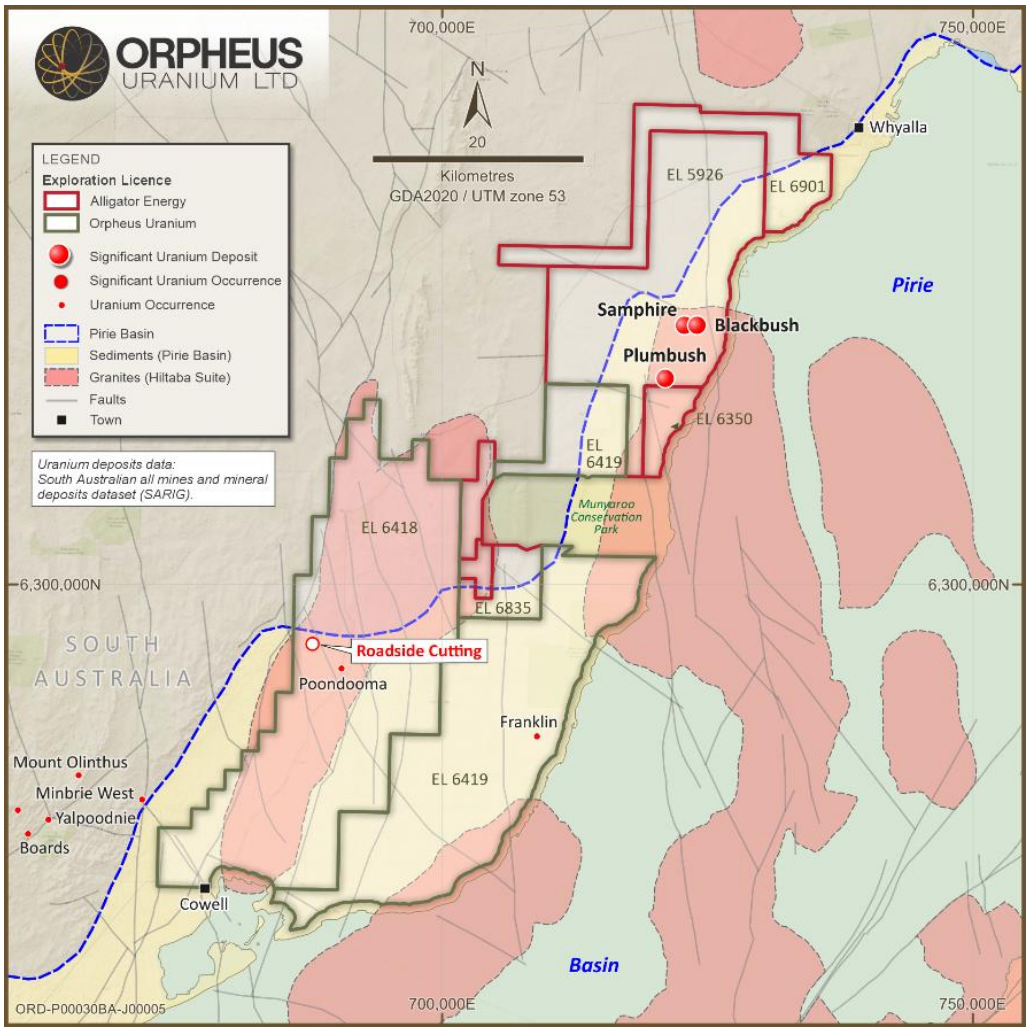


Figure 6: Distribution of the Pirie Basin sediments in conjunction with underlying Hiltaba Suite Granites

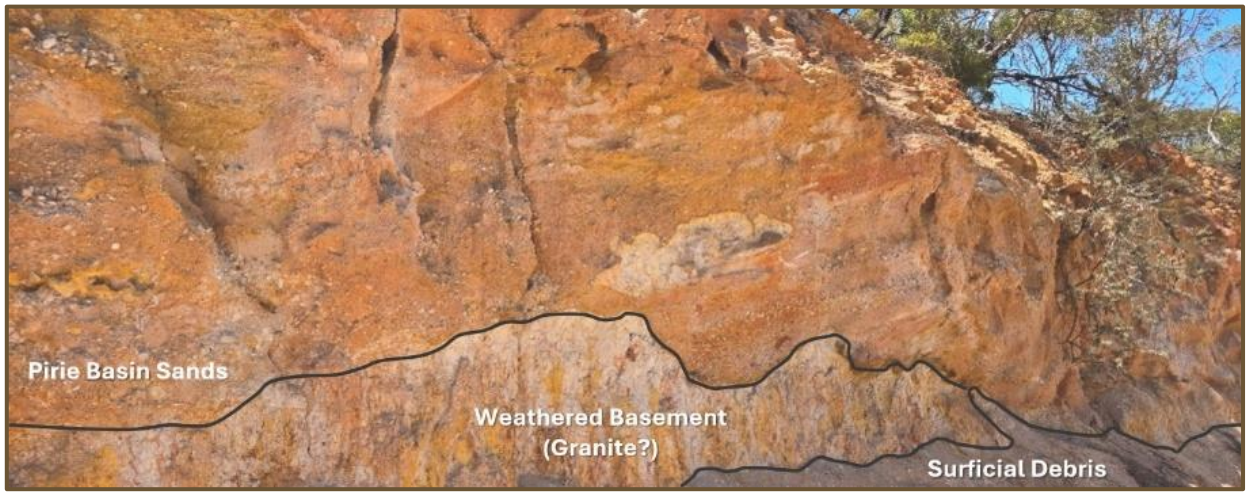


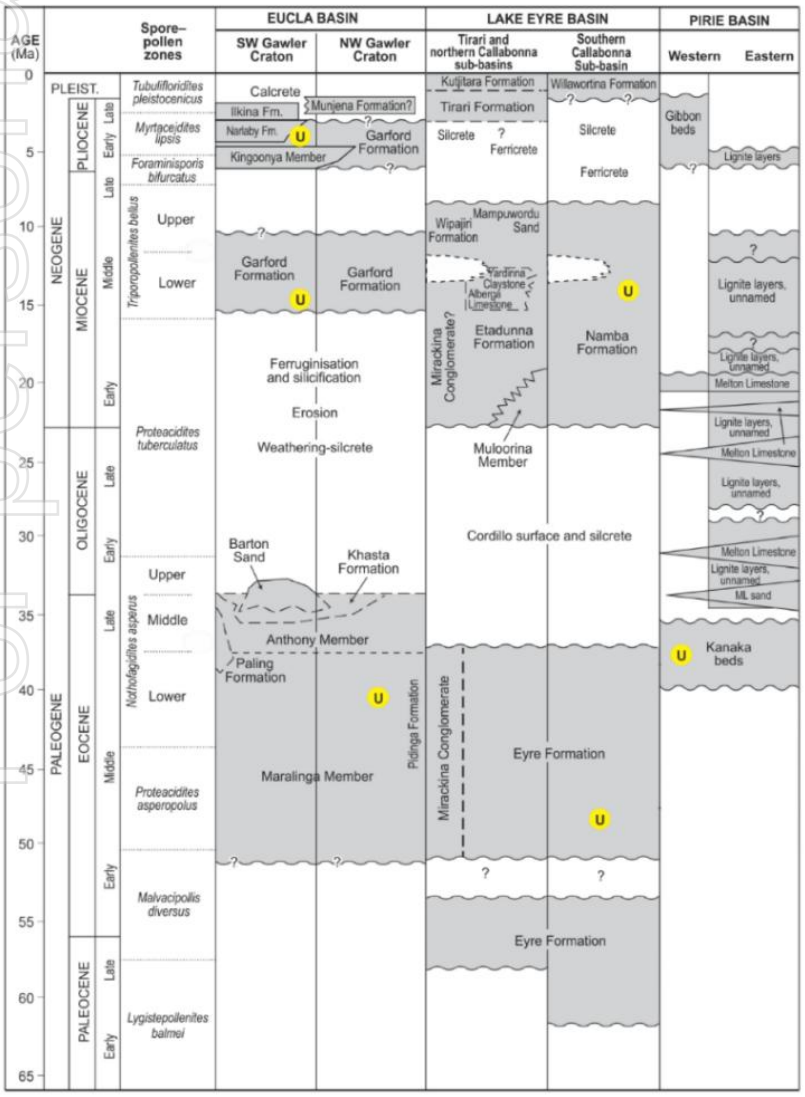
Figure 7: Roadside section of the Pirie Basin sediments (interpreted oxidised Kanaka Beds) (687,790 / 6,294,395 Zone 53 GDA 2020)

Traps: Sedimentary uranium mineral systems are typically controlled by a process called a chemical trap. Uranium-enriched groundwater moves from the source rock through a transport medium until it encounters reducing conditions, such as organic matter or iron-bearing minerals. These conditions trigger a geochemical change that leads to the precipitation of uranium. This process continues as oxidised uranium-bearing fluids migrate, with their movement being governed by the availability of reductants. Once these reductants are depleted, the mineralising front advances, and over time, uranium accumulates, forming an ore deposit.

The sediments of the Kanaka Beds provide an ideal environment for reductants. The subtropical climatic conditions of the Eocene period favoured the accumulation of organic matter and the formation of iron sulphides. This led to age-equivalent sediments that create a favourable geological setting for hosting multiple economic uranium deposits and prospects across South Australia, including the nearby Samphire Uranium Project (see Figure 8).

Historical data from the acquired tenure shows the presence of lignite, which is regionally and systematically distributed. The Kanaka Beds can be divided into an upper and lower member. In the western part of the project area, where historical uranium exploration was focused, drilling revealed that the upper member was predominantly oxidised. However, these same activities also identified localised oxidised sediments within the lower member, which correlated with reduced sediments in adjacent drill holes. At the time, the area's prospectivity was considered low.

However, recent advances in the interpretation of sedimentary-style uranium mineral systems, including a more refined understanding of the distribution of mineralising footprints, have led to a paradigm shift. When combined with more recent exploration data, this new interpretation highlights favourable conditions for a potentially larger mineralising system than previously thought.



Furthermore, located on the western edge of the basin, exposures of what are interpreted as Kanaka Beds at the surface unconformably overlay a highly altered basement that is believed to correlate with the Hiltaba Suite Granite. These exposures provide oxidised entry points for enriched fluids (see Figures 6 & 7). Groundwater may infiltrate the system through these exposures, potentially mobilising uranium from the underlying source rock into the mineralising system. As these enriched fluids interact with the reduced sediments below the surface, uranium can accumulate, contributing to mineralisation.

The identification of varying redox conditions further increases the likelihood of multiple target zones, each with the potential for economic uranium mineralisation.

Figure 8: Comparative stratigraphy of Palaeogene-Neogene sedimentary stratigraphy in South Australian basins and adjacent areas[2]

2: Sourced from Domnick, U., Cook, N. J., Ciobanu, C. L., Wade, B. P., Courtney-Davies, L., & Bluck, R. (2020). A Mineralisation Age for the Sediment-Hosted Blackbush Uranium Prospect, North-Eastern Eyre Peninsula, South Australia. Minerals, 10(2), 191. https://doi.org/10.3390/min10020191

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Historical Activities

The geological setting of the tenure presents opportunities for a range of commodities, including uranium, copper, gold, iron, graphite, and zinc. Consequently, the commodities sought within the tenure have historically varied, leading to the application of different geological, geochemical, and geophysical techniques. As a result, more detailed and advanced exploration activities have been carried out, often within localised geological settings specific to the target commodity, with the drill hole types and locations reflecting these variations (see Figure 9).

Remarkably, although the tenure contains a geological setting conducive to uranium mineralisation, there has been limited sustained systematic exploration for the commodity over time. Between 1978 and 1980, CRA Exploration carried out preliminary targeting and drilling for uranium in the western portion of the acquired tenement package. Despite a two-year drilling program and ongoing interpretation, the lack of significant uranium findings, coupled with a decline in uranium prices, led to the cessation of exploration activities and the relinquishment of the tenure, even though favourable geological settings and redox conditions had been identified.

When the uranium market rebounded in the mid to late 2000s, the tenement had been subject to continuous non-uranium exploration. The discovery of what is now the Samphire Uranium Project in 2007 sparked renewed interest in uranium exploration within the area. As a result, in 2010 Renaissance Uranium (subsequently Renascor Resources Ltd) entered into a joint venture with the tenement holder and conducted a series of regional drill holes, some of which also targeted basement mineralisation. However, due to global events and a sharp decline in uranium prices in 2011, uranium-focused exploration activities were halted, and Renascor subsequently refocused on the development of a nearby graphite project.

During the subsequent uranium downturn, Fortescue, a non-uranium exploration company, acquired the tenure in 2019. Since then, despite a positive upturn in the global uranium market, Fortescue's focus on non-uranium commodities has meant that no uranium-focused exploration has occurred, even during a time of renewed prospectivity, particularly with the ongoing development of the Samphire Uranium Project.

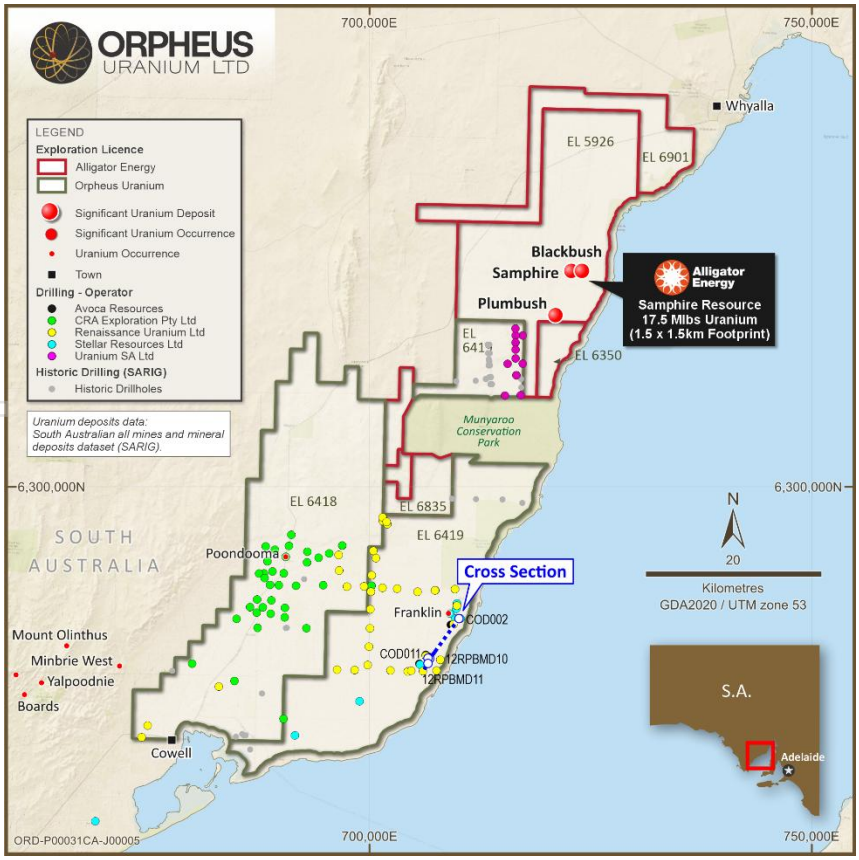


Figure 9: Historical drilling activities within the acquired tenure, coloured by company as per reference in JORC Section 1.

As a result of the tenure's history, systematic uranium exploration has been limited, especially since the economic potential of the Pirie Basin for uranium has become more apparent and the general targeting for sedimentary-style uranium mineralisation has evolved.

Fortunately, as the area has remained prospective for other commodities during the uranium downturn, data acquisition has continued. This has led to the collection of valuable datasets, including Fortescue's regional gravity data, as well as downhole geological and geochemical data, providing a significant dataset from which insights can be drawn for the systematic exploration of uranium within the tenure.

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Potential for Discovery

The geological setting of the acquired tenements could be considered one of the most favourable settings for sedimentary-style uranium mineralisation within South Australia. The region contains all the essential components required for the formation of these types of deposits. This includes the presence of the widely distributed source rocks, favourable sediments that act to transport the potential mobilised uriniferous fluids along with geochemical conditions that are conducive to the concentration of uranium. These elements, when combined, create an environment where uranium can accumulate and be preserved in economically viable quantities.

A key indicator of the basin's potential is Alligator Energy's Samphire Uranium Project, which lies less than 20 km from the northern boundary of the acquired tenure. Alligator Energy's success in the region underscores the area's fertility, as their project has demonstrated significant uranium mineralisation at what is potentially economic grades.

Moreover, the scale of not only the Samphire Uranium Project, but other sedimentary-style Uranium deposits in South Australia, reinforces Orpheus' confidence in the prospectivity and potential for economic uranium mineralisation in this area. The footprint of mineralisation within other economic projects suggests that there may be additional, previously unrecognised deposits within this acquired tenure. Historical drilling in the area may have missed these potential deposits, either by not drilling deep enough or by passing over mineralised zones or redox fronts that were not fully understood at the time.

Orpheus's ability to capitalise on this opportunity is greatly enhanced by its internal expertise in sedimentary-style uranium systems. This specialised knowledge, combined with a detailed understanding of the basin's geological characteristics, allows Orpheus to interpret historical data and acquired information in a way that maximises exploration efficiency. By leveraging both the historical drilling data and new geological insights, Orpheus is well-positioned to identify key areas where further exploration could lead to a major discovery.

Orpheus' Project Portfolio

The acquisition of the Pire Basin Uranium project significantly enhances Orpheus's existing portfolio, solidifying the company's position as one of the key players in uranium exploration in South Australia (see Figure 10). With this acquisition, Orpheus now holds one of the premier landholdings in the region, further establishing itself as a leader in the exploration of high-quality uranium resources.

Orpheus's tenure is strategically distributed across some of the most prospective regions for uranium exploration in South Australia. The company's landholdings span what could be considered three of the top five most promising regions for uranium discovery in the state, underscoring Orpheus's strong competitive position in the sector (see Figure 10).

Orpheus's Frome Project is located near, or adjacent to, the Billeroo Palaeochannel within the highly prospective Callabonna Sub-Basin. This region has long been recognised for its potential to host significant uranium deposits, and the proximity to Boss Energy's Gould's Dam deposit bolsters the potential for exploration success.

Orpheus's Radium Hill South Project is situated on the northern margins of the Murray Basin. The location of Radium Hill South is particularly notable as it is near what could be considered the source rocks for the basin, in the historic Radium Hill deposit. This proximity to the potential source rocks significantly increases the likelihood of discovering concentrated uranium mineralisation, making the project an exciting target for future exploration.

The acquired Pirie Basin Project, located in the underexplored western Pirie Basin, is another key asset in Orpheus's portfolio. This region is home to Alligator Energy's Samphire Uranium Project, which has already demonstrated significant uranium mineralisation. The Pirie Basin is largely underexplored, offering Orpheus a unique opportunity to explore an area with substantial discovery potential, further complemented by the presence of Samphire, which highlights the region's fertile uranium geology.

Extending beyond Orpheus' tenure and within the Callabonna Sub-Basin the areas surrounding the Beverley/Four Mile uranium deposits in the Northern Flinders and Honeymoon/Jasons uranium deposits in the Yarramba Palaeochannel are both highly prospective regions, however, are tightly held by Heathgate Resources and Boss Energy, respectively. While these areas are tightly held, Orpheus's holdings in nearby, prospective regions position the company well to capitalise on future exploration and development opportunities as the demand for uranium continues to grow.

Together, these projects showcase Orpheus's strategic approach to developing a strong, diversified portfolio of quality uranium assets. By acquiring key exploration ground in some of the most promising regions for uranium exploration, Orpheus is well-positioned to continue its exploration efforts and best position itself for discovery.

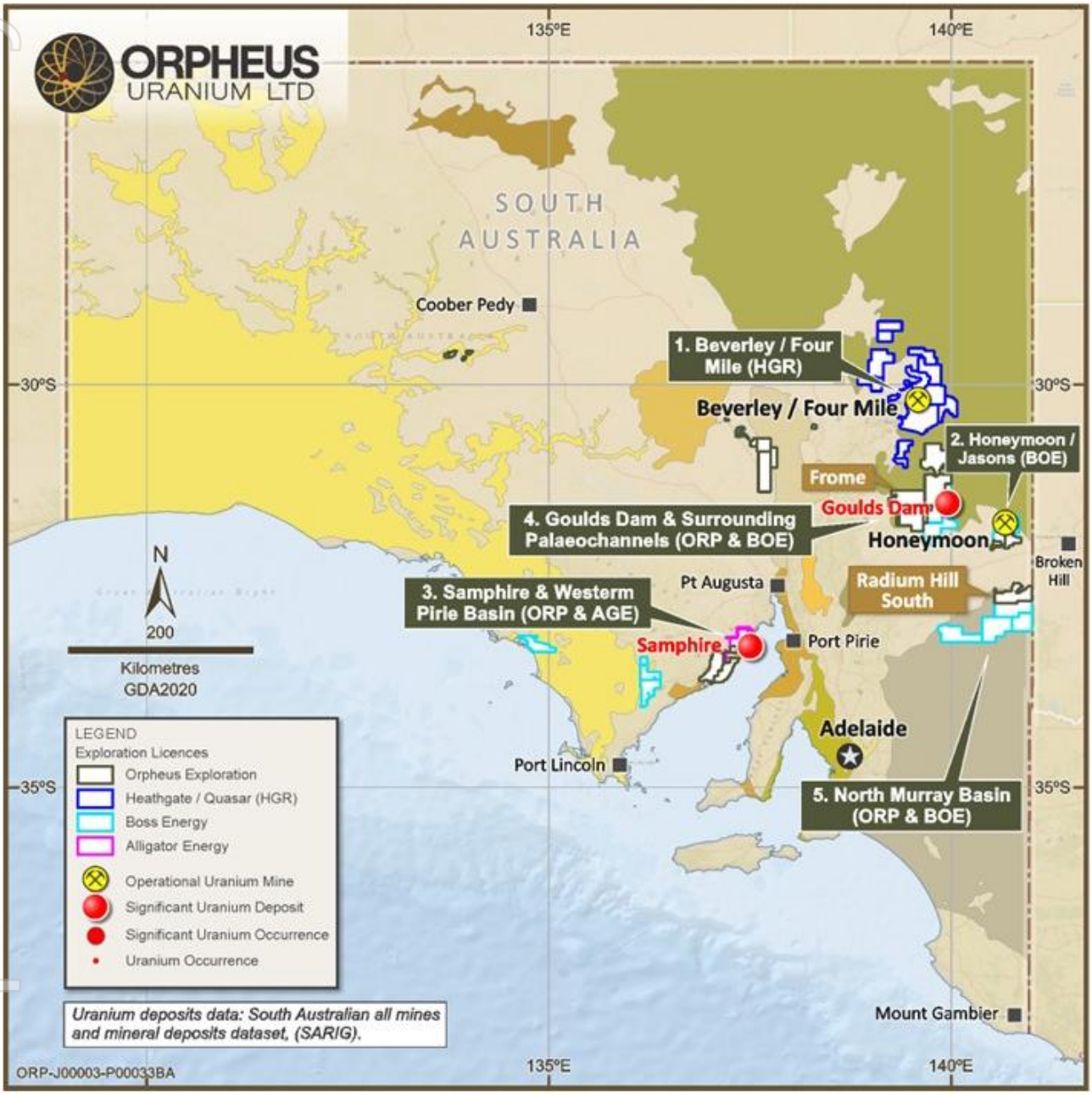


Figure 10: Orpheus' distribution of tenure relative to South Australia's known resources and the associated tenement holders (HGR = Heathgate Resources Pty Ltd; BOE = Boss Energy Ltd.; AGE = Alligator Energy Ltd.)

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Acquisition Details

Orpheus has entered into a sale agreement to acquire a 100% interest in two exploration licences from Fortescue, subject to satisfaction of certain conditions (which are considered customary for a transaction of this nature), the following upfront, deferred and conditional cash payments:

- $400,000 on completion of certain conditions precedent, including obtaining the consent of the Minister, execution of a deed of partial assignment and assumption in respect of the NTMA, assignment of the titles and closing of the transaction (Upfront Payment)
- $350,000 upon the earlier of either approval for drilling on the tenure or two years from the completion date (Deferred Payment)
- $750,000 on completion of 20,000 meters of drilling (First Contingent Payment).
- $1.5 million on declaration of a maiden JORC-compliant resource exceeding 10 million pounds of U3O8 (in all resource categories, with a nominal 250ppm eU3O8 or pU3O8 cut-off) (Second Contingent Payment)
- An additional $2 million on declaration of a JORC-compliant resource exceeding 20 million pounds of U3O8 (in all resource categories, with a nominal 250ppm eU3O8 or pU3O8 cut-off) (Third Contingent Payment)

Included in the sale and transferred through a Deed of Assignment and Assumption (DOAA)', Orpheus will acquire the existing NTMA with the Barngarla Determination Aboriginal Corporation (representing the Barngarla People), the recognised Traditional Owners of the land associated with the acquired tenure. The assignment and assumption will satisfy South Australia's Native Title 9B access agreement requirements, which will enable Orpheus to initiate exploration activities after consultation with representative of the Barngarla Determination Aboriginal Corporation and after completion of the required conditions associated with the sale agreement.

Funding the Acquisition

Contemporaneous to the acquisition Orpheus has received firm commitments for a share placement via the issue of 44.6 million new fully paid ordinary shares at $0.028 per share, raising $1.25 million (before costs) (Placement).

The Placement will be completed under the Company's existing placement capacity under ASX Listing Rules 7.1 and 7.1A.

The Placement proceeds will be used to fund immediate commencement of exploration activities on the acquired tenure (post-completion of the sale agreement), referred to as the 'Pirie Basin Uranium Project', along with contributions towards developing Orpheus' geologically relevant project pipeline, general working capital and the costs associated with the Placement.

The Placement will comprise the issue of approximately 44.6 million new fully paid ordinary shares (New Shares) at an issue price of $0.028 per share, which represents a:

- 8.1% discount to the 5-day VWAP price A$0.0305
- 1.8% discount to the 15-day VWAP price A$0.0285

The New Shares will rank equally with the Company's existing shares on issue. The Placement is being made to investors qualifying under Section 708 of the Corporations Act.

Taylor Collison Limited is Sole Lead Manager to the Placement.

Indicative Timetable

The proposed key dates for the Placement are as follows:

Event	Date
Announcement of the Placement	Tuesday, 22 April 2025
Settlement of Placement Securities	Monday, 28 April 2025
Allotment of Placement Securities	Tuesday, 29 April 2025

Next steps

Orpheus will work with Fortescue to progress the terms of sale to completion. During this process, the Company is expected to continue analysing historical data related to the tenure and surrounding areas. This will involve reviewing available drill core and cuttings, reprocessing geophysical data where applicable, and conducting geological modelling. At the same time, Orpheus will engage with key stakeholders to build relationships and facilitate on-ground exploration activities. Given the success of gravity surveys in identifying incised channels linked to mineralisation on other Eyre Peninsula projects, Orpheus plans to explore relevant geophysical techniques and apply them based on land accessibility and historical data analysis. Upon completion of these efforts, Orpheus will work with all necessary stakeholders to secure regulatory approvals, including the PEPR, to support the first drilling campaign. This will require engaging a priority drilling contractor once access agreements with landholders are in place.

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

For further information, please contact:

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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.

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 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.

Appendix 1 – Drill Hole Details

Table 1: Drill hole details of historical drillholes Drill Holes Considered relevant for targeting uranium mineralisation within the Pirie Basin Uranium Project (EL 6418 & EL 6419) with max U3O8 where available from downhole geochemistry. All data sourced from South Australian Geodata Database projected in GDA94 UTM Zone 53.

HoleID	Easting	Northing	RL (m)	Dip	Azi	Drilling Type	Operator	Total Depth (m)	Date Drilled	Max U3O8 (>50 ppm)
78 RHC 1	687340	6284052	-	-90	0	Rotary Mud	CRA Exploration Pty Ltd.	75.6	1/08/1978	-
78 RHC 2	684960	6285073	-	-90	0	Rotary Mud	CRA Exploration Pty Ltd.	86	2/08/1978	-
78 RHC 3	692860	6284013	-	-90	0	Rotary Mud	CRA Exploration Pty Ltd.	95	2/08/1978	-
78 RHC 4	684730	6278053	-	-90	0	Rotary Mud	CRA Exploration Pty Ltd.	68	3/08/1978	-
78 RHC 5	679940	6280013	-	-90	0	Rotary Mud	CRA Exploration Pty Ltd.	53	3/08/1978	-
78 RHC 6	690270	6273773	-	-90	0	Rotary Mud	CRA Exploration Pty Ltd.	102.5	3/08/1978	-
78 RHC 7	700220	6288813	-	-90	0	Rotary Mud	CRA Exploration Pty Ltd.	111.5	3/08/1978	-
78 RHC 10	690890	6293313	-	-90	0	Rotary Mud	CRA Exploration Pty Ltd.	167	4/08/1978	-
78 RHC 8	690520	6292083	-	-90	0	Rotary Mud	CRA Exploration Pty Ltd.	160	4/08/1978	-
78 RHC 9	691160	6294573	-	-90	0	Rotary Mud	CRA Exploration Pty Ltd.	20.5	4/08/1978	-
78 RHC 11	692930	6291453	-	-90	0	Rotary Mud	CRA Exploration Pty Ltd.	123.5	5/08/1978	-
78 RHC 12	694760	6288873	-	-90	0	Rotary Mud	CRA Exploration Pty Ltd.	127	5/08/1978	-
78 RHC 13	691690	6288813	-	-90	0	Rotary Mud	CRA Exploration Pty Ltd.	167.5	5/08/1978	-
79 RHC 14	688900	6287163	-	-90	0	Rotary Mud	CRA Exploration Pty Ltd.	140	26/02/1979	-
79 RHC 15	687240	6285773	-	-90	0	Rotary Mud	CRA Exploration Pty Ltd.	92	26/02/1979	-
79 RHC 16	687930	6286373	-	-90	0	Rotary Mud	CRA Exploration Pty Ltd.	124	27/02/1979	-
79 RHC 17	687290	6287263	-	-90	0	Rotary Mud	CRA Exploration Pty Ltd.	110	27/02/1979	-
79 RHC 18	688820	6285653	-	-90	0	Rotary Mud	CRA Exploration Pty Ltd.	153	28/02/1979	-
79 RHC 19	690400	6285243	-	-90	0	Rotary Mud	CRA Exploration Pty Ltd.	104	28/02/1979	-
79 RHC 20	690430	6286313	-	-90	0	Rotary Mud	CRA Exploration Pty Ltd.	154	1/03/1979	-
79 RHC 21	688460	6291573	-	-90	0	Rotary Mud	CRA Exploration Pty Ltd.	156	1/03/1979	-
79 RHC 22	688750	6288903	-	-90	0	Rotary Mud	CRA Exploration Pty Ltd.	106	2/03/1979	-
79 RHC 23	689740	6288873	-	-90	0	Rotary Mud	CRA Exploration Pty Ltd.	156	2/03/1979	-
79 RHC 24	689300	6292883	-	-90	0	Rotary Mud	CRA Exploration Pty Ltd.	186	3/03/1979	-
79 RHC 25	688260	6293263	-	-90	0	Rotary Mud	CRA Exploration Pty Ltd.	129	3/03/1979	-
79 RHC 26	692970	6292663	-	-90	0	Rotary Mud	CRA Exploration Pty Ltd.	130	3/03/1979	-
79 RHC 27	696910	6293353	-	-90	0	Rotary Mud	CRA Exploration Pty Ltd.	88	4/03/1979	-
79 RHC 28	695430	6292473	-	-90	0	Rotary Mud	CRA Exploration Pty Ltd.	94	4/03/1979	-
79 RHC 29	694240	6291973	-	-90	0	Rotary Mud	CRA Exploration Pty Ltd.	172	4/03/1979	-

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HoleID	Easting	Northing	RL (m)	Dip	Azi	Drilling Type	Operator	Total Depth (m)	Date Drilled	Max U3O8 (>50 ppm)
79 RHC 30	690300	6290213	-	-90	0	Rotary Mud	CRA Exploration Pty Ltd.	163	5/03/1979	-
79 RHC 31	689030	6290433	-	-90	0	Rotary Mud	CRA Exploration Pty Ltd.	148	5/03/1979	-
79 RHC 32	688070	6290203	-	-90	0	Rotary Mud	CRA Exploration Pty Ltd.	133	5/03/1979	-
79 RHC 33	687510	6290193	-	-90	0	Rotary Mud	CRA Exploration Pty Ltd.	143	6/03/1979	-
79 RHC 34	686490	6286393	-	-90	0	Rotary Mud	CRA Exploration Pty Ltd.	74	6/03/1979	-
79 RHC 35	688130	6289673	-	-90	0	Rotary Mud	CRA Exploration Pty Ltd.	146	6/03/1979	-
COD001	706351	6281001	-	-90	0	Rotary – Mud Diamond Tail	Avoca Resources Ltd.	249.1	6/05/2003	247
COD002	710097	6285106	-	-90	0	Rotary – Mud Diamond Tail	Avoca Resources Ltd.	263.9	14/05/2003	535
COD003	706782	6280763	-	-90	0	Rotary – Mud Diamond Tail	Avoca Resources Ltd.	279.68	23/05/2003	97
COD004	705621	6280001	-	-60	90	Rotary – Mud Diamond Tail	Avoca Resources Ltd.	201	23/09/2005	-
COD005	709181	6284402	-	-60	90	Rotary – Mud Diamond Tail	Avoca Resources Ltd.	153	25/09/2005	-
COD006	709883	6286817	11	-90	0	Rotary – Mud Diamond Tail	Stellar Resources Ltd.	171.3	19/03/2007	51
COD007	710285	6285107	7	-90	0	Rotary – Mud Diamond Tail	Stellar Resources Ltd.	298.1	27/03/2007	54
COD009	698861	6275757	7	-90	0	Rotary – Mud Diamond Tail	Stellar Resources Ltd.	150	29/03/2007	-
COD010	691561	6271897	-	-90	0	Rotary – Mud Diamond Tail	Stellar Resources Ltd.	150.7	31/03/2007	-
COD008	709084	6285666	-	-90	0	Rotary – Mud Diamond Tail	Stellar Resources Ltd.	252	7/04/2007	177
COD011	706601	6280632	14	-60	45	Rotary – Mud Diamond Tail	Stellar Resources Ltd.	276.3	12/01/2008	-
COD012	705701	6279902	13	-90	0	Rotary – Mud Diamond Tail	Stellar Resources Ltd.	270.3	20/01/2008	-
COD013	709701	6285101	7	-60	90	Rotary – Mud Diamond Tail	Stellar Resources Ltd.	204	01/02/2008	-
COD014	709801	6286202	7	-90	0	Rotary – Mud Diamond Tail-	Stellar Resources Ltd.	210.35	09/02/2008	55
POD001	669000	6262200	10	-60	90	Rotary – Mud Diamond Tail	Stellar Resources Ltd.	127.1	23/02/2008	-
MRM132	717301	6317101	31	-90	0	Rotary Mud	Uranium SA Ltd.	84	19/04/2010	-
MRM139	716504	6317096	35	-90	0	Rotary Mud	Uranium SA Ltd.	78	20/04/2010	-
MRM140	716487	6317889	41	-90	0	Rotary Mud	Uranium SA Ltd.	90	21/04/2010	-
MRM141	716498	6316302	35	-90	0	Rotary Mud	Uranium SA Ltd.	90	22/04/2010	-
MRM142	716501	6315503	31	-90	0	Rotary Mud	Uranium SA Ltd.	96	23/04/2010	-
MRM143	716503	6314503	28	-90	0	Rotary Mud	Uranium SA Ltd.	132	24/04/2010	-
MRM149	715599	6313898	34	-90	0	Rotary Mud	Uranium SA Ltd.	92	25/04/2010	-
MRM150	716598	6312601	15	-90	0	Rotary Mud	Uranium SA Ltd.	138	26/04/2010	-
MRM150A	716585	6312599	15	-90	0	Rotary Mud	Uranium SA Ltd.	132	27/04/2010	-
MRM151	717084	6310350	14	-90	0	Rotary Mud	Uranium SA Ltd.	96	28/04/2010	-
MRM152	715299	6310301	21	-90	0	Rotary Mud	Uranium SA Ltd.	96	29/04/2010	-
MRM153	717305	6313909	15	-90	0	Rotary Mud	Uranium SA Ltd.	132	30/04/2010	-

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HoleID	Easting	Northing	RL (m)	Dip	Azi	Drilling Type	Operator	Total Depth (m)	Date Drilled	Max U3O8 (>50 ppm)
11RPBAC01	700431	6292755	59	-90	0	Aircore	Renaissance Uranium Ltd.	70	1/04/2011	-
11RPBAC02	701520	6296117	110	-90	0	Aircore	Renaissance Uranium Ltd.	23	2/04/2011	-
11RPBAC03	701479	6296541	115	-90	0	Aircore	Renaissance Uranium Ltd.	3	2/04/2011	-
11RPBAC04	702004	6295775	96	-90	0	Aircore	Renaissance Uranium Ltd.	6	2/04/2011	-
11RPBAC05	701924	6296035	102	-90	0	Aircore	Renaissance Uranium Ltd.	19	3/04/2011	-
11RPBRM01	700721	6291932	55	-90	0	Rotary Mud	Renaissance Uranium Ltd.	79	6/05/2011	-
11RPBRM03	700147	6288140	37	-90	0	Rotary Mud	Renaissance Uranium Ltd.	180	8/05/2011	-
11RPBRM02	700243	6290003	38	-90	0	Rotary Mud	Renaissance Uranium Ltd.	180	9/05/2011	-
11RPBRM04	700091	6286156	35	-90	0	Rotary Mud	Renaissance Uranium Ltd.	180	10/05/2011	-
11RPBRM05	700047	6284000	28	-90	0	Rotary Mud	Renaissance Uranium Ltd.	157	11/05/2011	-
11RPBRM06	699929	6281926	23	-90	0	Rotary Mud	Renaissance Uranium Ltd.	110	12/05/2011	-
11RPBRM07	699786	6279856	20	-90	0	Rotary Mud	Renaissance Uranium Ltd.	190	13/05/2011	-
11RPBRM08	701461	6288577	31	-90	0	Rotary Mud	Renaissance Uranium Ltd.	198	14/05/2011	-
11RPBRM09	703115	6288484	25	-90	0	Rotary Mud	Renaissance Uranium Ltd.	174	15/05/2011	-
11RPBRM10	705422	6288132	22	-90	0	Rotary Mud	Renaissance Uranium Ltd.	180	27/05/2011	-
11RPBRM11	707423	6288291	16	-90	0	Rotary Mud	Renaissance Uranium Ltd.	80	28/05/2011	-
11RPBRM12	709650	6288428	11	-90	0	Rotary Mud	Renaissance Uranium Ltd.	144	29/05/2011	-
11RPBRM13	699374	6288745	43	-90	0	Rotary Mud	Renaissance Uranium Ltd.	216	31/05/2011	-
11RPBRM14	697444	6288716	46	-90	0	Rotary Mud	Renaissance Uranium Ltd.	114	1/06/2011	-
11RPBRM15	696563	6290534	51	-90	0	Rotary Mud	Renaissance Uranium Ltd.	132	1/06/2011	-
11RPBRM16	696495	6292295	66	-90	0	Rotary Mud	Renaissance Uranium Ltd.	126	2/06/2011	-
11RPBRM17	707385	6288290	9	-90	0	Rotary Mud	Renaissance Uranium Ltd.	201	3/06/2011	-
11RPBRM18	709864	6286558	7	-90	0	Rotary Mud	Renaissance Uranium Ltd.	150	5/06/2011	-
11RPBRM19	709487	6284448	6	-90	0	Rotary Mud	Renaissance Uranium Ltd.	204	6/06/2011	-
11RPBRM20	707562	6279228	9	-90	0	Rotary Mud	Renaissance Uranium Ltd.	108	7/06/2011	-
11RPBRM21	706028	6279163	11	-90	0	Rotary Mud	Renaissance Uranium Ltd.	156	8/06/2011	-
11RPBRM22	704340	6279132	12	-90	0	Rotary Mud	Renaissance Uranium Ltd.	198	21/06/2011	-
11RPBRM23	702358	6279239	13	-90	0	Rotary Mud	Renaissance Uranium Ltd.	185	22/06/2011	-
11RPBRM24	698311	6279286	22	-90	0	Rotary Mud	Renaissance Uranium Ltd.	180	24/06/2011	-
11RPBRM25	696327	6279323	27	-90	0	Rotary Mud	Renaissance Uranium Ltd.	168	26/06/2011	-
11RPBRM26	682961	6277415	-	-90	0	Rotary Mud	Renaissance Uranium Ltd.	79	27/06/2011	-
11RPBMD3	674234	6271692	-	-90	0	Rotary – Mud Diamond Tail	Renaissance Uranium Ltd.	62.7	29/06/2011	-
11RPBMD4	674918	6273011	-	-90	0	Rotary – Mud Diamond Tail	Renaissance Uranium Ltd.	52.5	30/06/2011	-

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HoleID	Easting	Northing	RL (m)	Dip	Azi	Drilling Type	Operator	Total Depth (m)	Date Drilled	Max U3O8 (>50 ppm)
11RPBMD6	704306	6279130	-	-85	90	Rotary – Mud Diamond Tail	Renaissance Uranium Ltd.	318.8	21/09/2011	72
12RPBMD07	704704	6279213	12	-90	0	Rotary – Mud Diamond Tail	Renaissance Uranium Ltd.	214.4	23/03/2012	-
12RPBMD08	707989	6280440	-	-90	0	Rotary - Mud	Renaissance Uranium Ltd..	204	25/03/2012	-
12RPBMD09	706351	6280893	8	-90	0	Rotary – Mud Diamond Tail	Renaissance Uranium Ltd.	180.3	26/03/2012	-
12RPBMD10	706788	6280569	10	-90	0	Rotary – Mud Diamond Tail	Renaissance Uranium Ltd.	221.84	29/03/2012	88
12RPBMD11	706601	6280031	8	-90	0	Rotary – Mud Diamond Tail	Renaissance Uranium Ltd.	198.4	31/03/2012	74

**Orpheus continues to work through and validate historical datasets, which includes extracting downhole geophysical logs. Where possible, data will be extracted and a calculation of eU3O8ppm completed.*

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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.*	• 1978 (CRA Exploration): 13 Rotary mud drilling (78 RHC1 to 13). Downhole geophysical logging Gamma, SP (1 to 13) and density (11 to 13) completed - all data is presented as paper logs which require digitisation. • 1979 (CRA Exploration): 22 Rotary mud drilling (79 RHC14 to 35). Downhole geophysical logging Gamma and PR (14 – 35) and SP (14 to 15, 19 to 20, 24 to 35) completed - all data is presented as paper logs which require digitisation. • 2003 (Avoca/Hiltaba): Diamond drilling (COD001 to 003). Samples from COD001 analysed at Amdel (FA1 and IC3E/M). COD002 to 003 samples analysed at Genalysis (FA50 and AT/OESMS) – no description of sampling techniques → ***COD002 material to this report.*** • 2006 (Avoca): Two diamond holes (COD004 to 005) drilled to test TEM conductors. No samples assayed from COD005; COD004 not confirmed as assayed. • 2007 (Stellar): Four holes (COD006 to 009) drilled with rotary mud pre-collars and diamond tails. Core slabbed (~⅓ submitted) and analysed at ALS using ME-MS41. pre-collar samples analysed for Au (Au-OG43) and U (ME-ICP41s). • 2008 (Stellar): Five pre-collared diamond holes (COD011 to 014, POD012). Core slabbed (~⅓ submitted) with assay intervals dependent on lithological variation 104 core samples submitted for assay at ALS using ME-MS41. A total

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		of 84 mud precollar drill cutting samples were submitted to ALS U and Th analysis by method ME-MS42 Two of the mud samples were destroyed due to high organic content. → ***COD011 material to this report.*** • 2010 (UraniumSA): 12 rotary mud holes (MRM132, 139 - 143,149-153 incl 150A) Drill hole samples were collected over 2m intervals from the return mud stream in a bucket at the collar; the samples are not statistically valid materials for assay purposes. Bucket samples were laid out in 20m rows on plastic ground sheets, geologically logged, and grab samples collected in chip trays. with downhole gamma probing completed. Each gamma sonde recorded responses at 1cm intervals. • 2011 (Renaissance Uranium/Stellar): 26 rotary mud holes (11RPBRM01–26) across EL3978. 2 m samples collected and logged; 48 composite samples assayed at ALS using ME-MS41 and Au-TL43. • 2012 (Stellar): Rotary mud chips were collected at 2 m intervals. Drill cuttings were collected in chip trays for detailed logging and future reference. Basement core was collected in core trays for detailed logging and future reference and metre marked. All core was halved and at 1 m intervals crushed. Via Gravimetric weighing, 100 g of each metre was then sampled and combined as 2m composites, sent for analysis with a total of 101 samples. Core samples the ALS Laboratory technique ME-MS41. --> ***12RPBMD10 & 12RPBMD10 material to this report.***
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).*	• 1978 (CRA Exploration): 13 Rotary mud drilling of vertical holes with regional spacing totalling 1,357.1m • 1979 (CRA Exploration): 22 Rotary mud drilling of vertical holes regional and infill holes concentrated in the west of the tenement package totalling 2,901m.

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		• 2003 (Avoca/Hiltaba): Rotary mud pre-collars with a diamond core tail vertical holes targeting geophysical anomalies → ***COD002 material to this report.*** • 2006 (Avoca): Rotary mud pre-collars with a diamond core tail to test TEM conductors (angled at -60º towards 90º). • 2007 (Stellar): Four holes (COD006–009) drilled with rotary mud pre-collars and diamond tails (HQ/NQ). Total 871.4 m (485.2 m mud + 386.2 m core). • 2008 (Stellar): Five rotary mud pre-collars with a diamond core tai (COD011–014, POD012) for total 960.95 m (741.5 m rotary mud + 219.45 m diamond core).2 vertical holes and 2 holes dipping at -60º → ***COD011 material to this report-60º towards 45º*** • 2010 (UraniumSA): 12 rotary mud holes (MRM132, 139 - 143,149-153 incl 150A) totalling 1,256m. • 2011 (Renaissance Uranium/Stellar): Five air core, 26 rotary mud holes and four rotary mud pre-collars and diamond tails. Holes spaced ~2 km apart to target Miocene/Eocene sands for ISR uranium, with diamond core tails used to test basement. • 2012 (Hiltaba Gold Pty Ltd.): 5 rotary mud holes four of which had diamond tails targeting five local geophysical anomalies within the Glensea Prospect area for a total of 1019 m, ***12RPBMD10 & 12RPBMD10 material to this report***
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.*	• Data is historic in nature, and all information is sourced from what is available within historical reports/available with South Australian Geodata Database.

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	• *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	• Recovery not systematically recorded across campaigns photographs commonly taken within programs post 2003, however, not available with technical reports.
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.*	• All programs involved geological logging, which has been compiled within the South Australian Geodata Database. • Across all programs generalised geological logging has been completed which has been compiled by the company geologist at the time of acquisition. • Notably no broad scale relogging for sedimentary style uranium has occurred, nor has the regional consolidation and interpretation of downhole geophysics where available.
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.*	• Data is historic in nature, and all information is sourced from what is available within historical reports/available with South Australian Geodata Database. • Core slabbed (~⅓ sampled) in 2007–08. Precollar samples collected separately. • Composites used in 2011. Sub-sampling methods otherwise not detailed.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*	• Data is historic in nature and all information is sourced from what is available within historical reports/available with South Australian Geodata Database.

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	• *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.*	• Amdel No internal QAQC procedures or standards, blanks, or duplicates reported in announcements. • ALS used in 2007–08 and 2011: ME-MS41, ME-MS42, Au-OG43, ME-ICP41s.
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.*	• No records of twinned holes or independent data verification were found in the available historical reports. However, the current announcement does not purport to present a full re-analysis or re-processing of all original datasets, and such data may exist but has not been reviewed or disclosed here.
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.*	• Only 2011 drilling confirms handheld GPS use (±5–10 m). Other campaigns did not specify survey methods or grid reference systems.
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.* • *Whether sample compositing has been applied.*	• 1978 to 1979: Drilling was regional in nature targeting areas of geophysical and geological interest. The program contained a selection of infill holes, however, was not close spaced enough to estimate a resource. • 2003 to 2011: drilling data between was exploratory. targeted geophysical features.

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		• 201:1 Regional in nature targeting paleochannel sands and basement targets. Not sufficient for resource estimation. *GEOPHYSICS* Ground gravity data presented is based upon digital compilation of historical data. Presented below are details relating to **gravity surveys viewed *as material to this announcement and Orpheus' tenement acquisition***. Where possible data has been sourced from the South Australian Geodata Database or where applicable from government agencies when associated with PACE. Below identified the material surveys. • 2003 (Avoca): Gravity survey completed within what is now EL 6419. 1141 stations were completed which provided regional 2km coverage with preliminary 1km spacing covering an associated magnetic alteration zone that was refined to between 100 to 400m locally as anomalies were identified. The survey broadly covers the southern and central portions of the acquired tenure, with localised grids contained primarily within EL6419s southern section (survey, completed for Avoca by Daishsat). • 2006 (Australasia Gold); The data was acquired using a Scintrex CG-5 digital gravity meter. Position and level data was obtained using Leica GPS units to produce precise real-time-kinematic locations. The survey was following up on a previously identified anomaly. The survey covered an area of approximately 32km2 and consisted of 425 new stations and captured predominately within a square 250m/250m station spacing grid. A selection of E-W lines increased the line spacing to 500m. The survey covers the south/west portion of EL6419 northern block (EL 3542 at time of acquisition). (survey was completed by Daishsat). • 2013 (UraniumSA): Survey completed over Blue Well Dam and Blackbush areas using the Scintrex CG5 Autograv

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		instrument and stations locating with Carrier phase GPS data has been collected using Trimble 4000 and 5000 series Geodetic receivers giving horizontal and vertical precisions of at least 5 cm. The survey consisted of 229 detail gravity stations in two separate grids, Blackbush and Blue Dam Well. The line lengths ranged from 350 metres to 2200 metres. This gravity survey is located off the acquired leases and is contained within what is now Alligator Energy's EL 5926 (survey completed by Haines Surveys). • 2023 (Fortescue): PACE supported regional gravity survey covering a majority of EL 6418 & EL 6419 was completed. 1,737 new gravity stations and 30 stations aligned with historical datasets were collected regionally at 800 x 800m square spacing and localised grids over areas of interest were collected on a 200m x 200m grid using Scintrex CG-5 Autograv gravity meters were used for gravity data acquisition and base station control. Leica GX1230 GNSS receivers were used for gravity station positional acquisition. Collection points covered a majority of the acquired tenure, except the northern portions of EL 6419 where access was not possible.
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.*	• Most holes were vertical, however, a selection of holes we angled between ~50° to -85° towards generally either east or west (See Appendix). Given the nature of drilling and mineralisation, no true mineralisation widths were confirmed. *GEOPHYSICS* Modelling presented is data sourced from • 2003 (Avoca) – Ground gravity survey, data was collected on an north-south & east-west orientation. Where areas of interest were identified spacing was closer on east-west lines, where anomalies were identified spacing was square.

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		• 2006 (Australasia Gold); The Murninnie survey covered an area of approximately 32km2 stations were orientated in an east-west direction, • 2013 (UraniumSA); Blackbush comprised 9 South to North trending lines coincident with GDA94 with line spacings of 50 metres and station intervals of 25 metres. Blue Dam Well comprised 8 West to East trending lines coincident with GDA94 with line spacings of 400 metres and station intervals of 200 metres. The line lengths ranged from 350 metres to 2200 metres. This gravity survey is located off the acquired leases and is contained within what is now Alligator Energies tenure. • 2023 (Fortescue): The survey was a detailed regional survey in nature, data was collected on a general north-south & east-west orientation. Where areas of interest were identified spacing was closer and completed with square spacing.
Sample security	• *The measures taken to ensure sample security.*	• Sample custody procedures were not described in the historical reports reviewed. While commercial laboratories (ALS, Amdel, Genalysis) were used, the current announcement does not include commentary on original chain-of-custody or sample handling. *GEOPHYSICS* • 2003 (Avoca); No description of sample security, • 2006 (Australasia Gold); No description of sample security. • 2013 (UraniumSA): No description of sample security. • 2023 (Fortescue): Samples were taken in digital format and backed up to laptop computers the same day.

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Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• No audits or reviews of the historical sampling methods or data have been documented in the reviewed reports. It should be noted that this announcement does not attempt to comprehensively reassess all past QAQC protocols. GEOPHYSICS • 2003 (Avoca) – Reviews were carried out and modelled by Jim Hanneson of Adelaide Mining Geophysics. • 2006 (Australasia Gold); Daishsat completed routine of data repeatability. • 2013 (UraniumSA); Reviews and modelling of gravity survey undertaken by Haines Surveys interpretations and modelling by Caon Geophysics and Intrepid Geophysics. • 2023 (Fortescue): Reviews were carried out and modelled by internal geophysicists. 27 (7.3%) sites were revisited for survey quality control and an additional 30 existing stations were reacquired for data accuracy and merging processes.

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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 current tenure EL 66418 & EL 6419 have been held by Fortescue since 2019 – no comments are made with respect to the drilling activities completed during this period. ○ Fortescue is the sole owner of the tenure and the sale agreement will result in the 100% Orpheus ownership of the tenure. ○ There have been no noted access or tenure issues.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Historically the tenure has had multiple operators and can summarised. • EL 397 - CRA exploration (1979 to 1980); work was focused within the west of the acquired tenure, Rotary mud drilling and associated geophysical surveys were completed to assess for Uranium prospectivity. • EL3016, EL3148, EL3418, and EL3978 - Avoca and Stellar including joint ventures (2004 to 2017). Work focused on exploration for IOCG style mineralisation with a selection of regional and targeted geophysical and drilling programs including gravity, magnetics, TEM, air core, rotary mud and diamond drilling along with PACE-supported programs. During the period a program for sedimentary style uranium was completed. • EL3542 and EL4804 – Uranium SA (2011 to 2013)/ Work was focused within the northern block and focussed on uranium exploration including a selection of rotary mud drill holes and airborne magnetic survey.

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		• There have been no noted access or tenure issues.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• Sedimentary-style uranium in the form of roll0front or tabular is sort. This will be constrained with the unconsolidated Miocene–Eocene Pirie Basin sediments which unconformably overlay underlying basement rocks of the Gawler Craton (the latter includes potential granitic source rocks. • Descriptions within the report elaborate on potential sedimentary-style uranium mineralisation contained within the younger Pirie Basin Sediments.
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.*	• Drillhole data is presented in Appendices 1 and all information has been sourced from South Australian Geodata Database. Note that RL data is not always available. Upon acquisition techniques will be assessed to acquire this information.
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.*	• Data is historic in nature and all information is sourced from what is available within historical reports/available with South Australian Geodata Database, however, where applicable reported intercepts generally single downhole intervals. Where applicable compositing has been noted in the

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	• *Where aggregate intercepts incorporate short lengths of high grade results and 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.*	sampling techniques above, however, no top-cutting, or weighting detailed has been undertaken.
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, however, where applicable all intervals reported as downhole lengths. No estimates of true width provided. • The report presents details about a potential source rock as opposed to the sort after 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. • Where applicable information has been presented within in the body of this announcement. All other sections, and maps detailed to the relevant activities are Included in historic reports Commonly plans, sections, and logs referenced in appendices.
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.*	• This announcement summarises multiple historical exploration campaigns. While key assay highlights and geological outcomes are referenced, it is not intended to provide a comprehensive dataset or re-report all results in full. Further historical QAQC and sampling detail may exist in original reports but is not re-stated herein.

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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; potential deleterious or contaminating substances.*	• Orpheus is working through all historical data to provide further guidance and context of historical data as to establish details on other meaningful data.
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.*	• Orpheus will continue the completion of historical datasets, and associated literature review. This will be complimented by stakeholder engagement as to obtain on ground access and gain regulatory approvals. Geophysical or other exploration techniques will be assessed, whilst advanced stage activities such as drilling will be pursued targets sedimentary style uranium mineralisation.

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