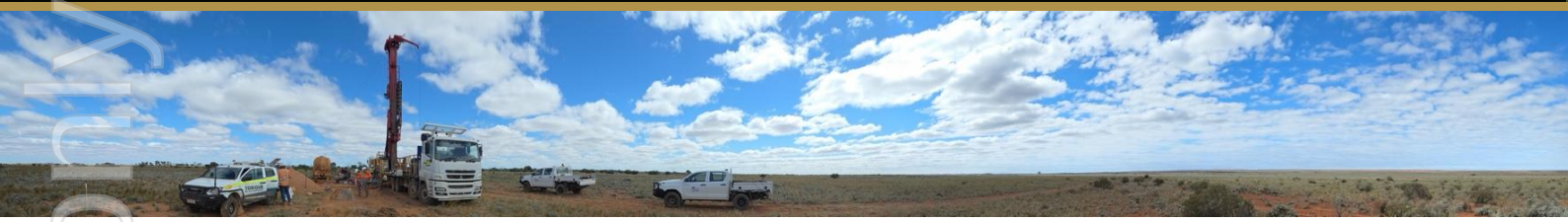
Frome Project: Drilling Defines Highly Prospective Redox Corridor



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Highlights

- The first pass drilling program at the Erudina Uranium Prospect, within Orpheus' broader Frome Project, has identified highly prospective geological settings and geochemical characteristics consistent with sedimentary-style uranium mineralisation hosted in the fertile Callabonna Sub-Basin.
- The results support targeted follow-up drilling and provide a basis for the longer-term objective of defining an Exploration Target within the Frome Project area.
- The program has refined targets for follow-up exploration, defining two north–south-trending corridors extending at least 2.2km in strike marked by distinct redox changes within Tertiary Eyre Formation Sediments of the Callabonna Sub-Basin, now named Siccus East and Siccus West.
- Two additional target areas remain under interpretation: Siccus North, a potential northern continuation of these corridors, and Siccus South, an early-stage exploration concept targeting a deeper, localised unit of possible Cretaceous age and possible association with glacial sediments.
- The newly defined prospect areas and regional drill spacing leave scope for deposits with mineralising footprints comparable to known Callabonna Sub-Basin deposits, including Heathgate's Four Mile East, Four Mile North-East, Pannikan and Pepegoona projects; Boss Energy's (ASX: BOE) Honeymoon and adjacent Gould's Dam projects; and deposits hosted in underlying Cretaceous sediments, such as Heathgate's Four-Mile West project.
- A total of 18 holes were drilled for 3,600 m, with downhole geophysical logging completed in 16 holes. Of the logged holes:
    - Nine recorded peak results exceeding 100 ppm eU_3O_8, including two exceeding 400 ppm eU_3O_8.
    - Six targeted oxidised sand packages where depleted uranium grades were expected.
- Future drilling programs are being planned, with timing to be determined in the context of Orpheus' broader uranium portfolio.

Managing Director Mr Clinton Dubieniecki commented:

"This program highlights the strength of our technical team and its ability to use historical data to develop and test geological models. The Frome Project covers an extensive area and its efficient testing for economic uranium deposits requires a rigorous approach based on geochemical interpreted first principals. Our approach here reflects the need to understand the redox front at scale and the recently completed drilling has supported key geological and geochemical predictions and helped refine four prospective areas, giving us a clearer basis for further exploration at Frome.

We can now plan more focused drilling around areas that share geological characteristics and comparable footprints with known deposits in the region. What is particularly encouraging is the opportunity to apply what we have learned across our other uranium projects, where we see similar potential to refine prospects and build on the work already completed"

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Summary

Orpheus Uranium Limited (ASX: ORP) ("Orpheus" or "the Company") has completed its inaugural drilling program at the Erudina Uranium Prospect within the Frome Project in South Australia (Figure 1). The program comprised 18 rotary mud holes totalling 3,600 m (Figure 2).

The Erudina Uranium Prospect lies within the Callabonna Sub-Basin and underlying Frome Embayment. Exploration focuses on sandstone-hosted uranium associated with redox transitions in the Tertiary (Eocene) Eyre Formation, with potential to extend assessment into the overlying Tertiary (Miocene) Namba Formation and underlying Cretaceous sediments.

The regional program tested an updated interpretation of historical drilling across multiple areas, providing a basis for identifying and ranking redox corridors for detailed investigation. This work refined four target areas within the broader Erudina Prospect, now named Siccus North, Siccus East, Siccus South and Siccus West (Figure 3). Given the extent of the Erudina Prospect, this represents an important step in focusing exploration on areas more closely aligned with the mineralising footprints of known deposits within the basin.

Collar locations and maximum results for individual holes are summarised in Appendix 1, with supporting mineralised intervals and average grades presented in Appendix 2.

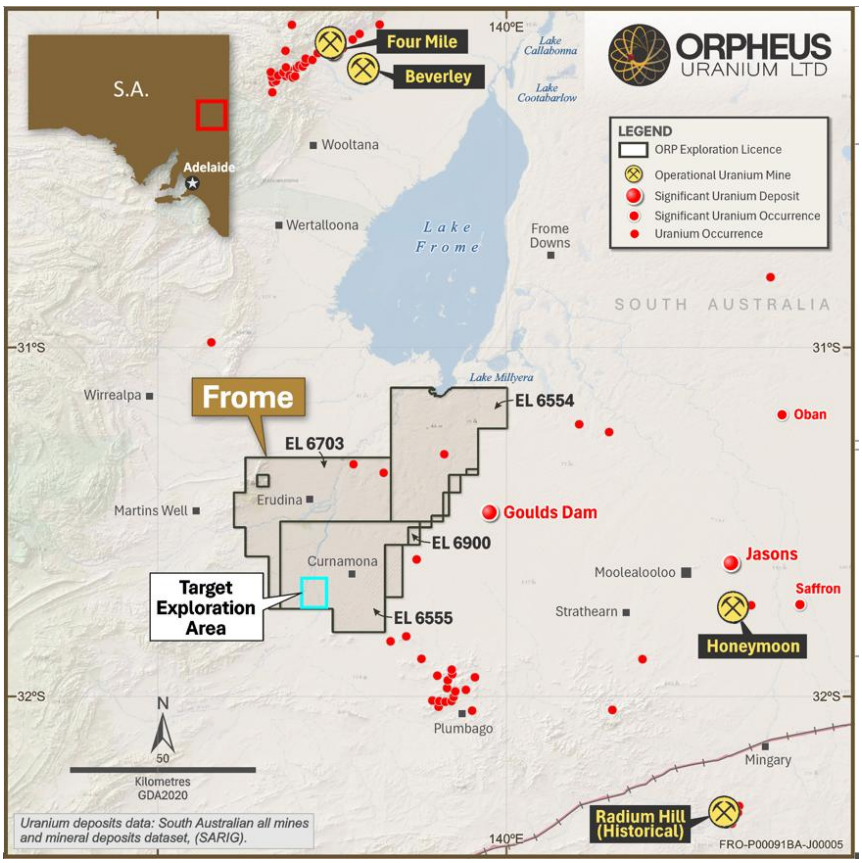


***Figure 1**: Location of the Frome Project and Erudina Prospect (Exploration Target Area).*

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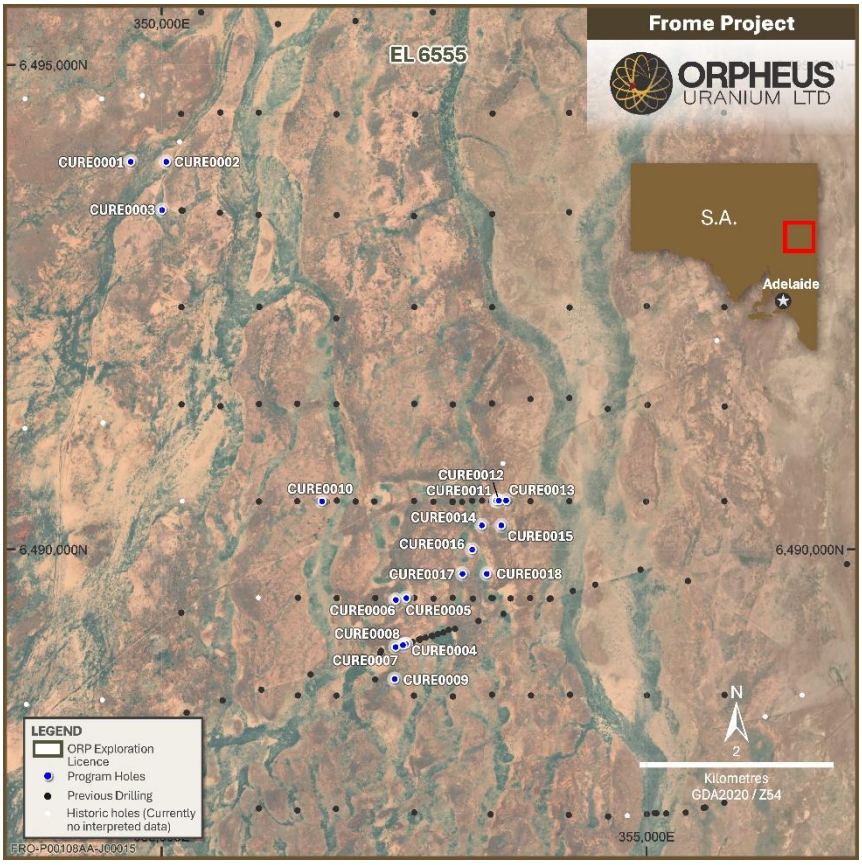


***Figure 2**: Location of drillholes completed during the program and historical holes at the Erudina Prospect.*

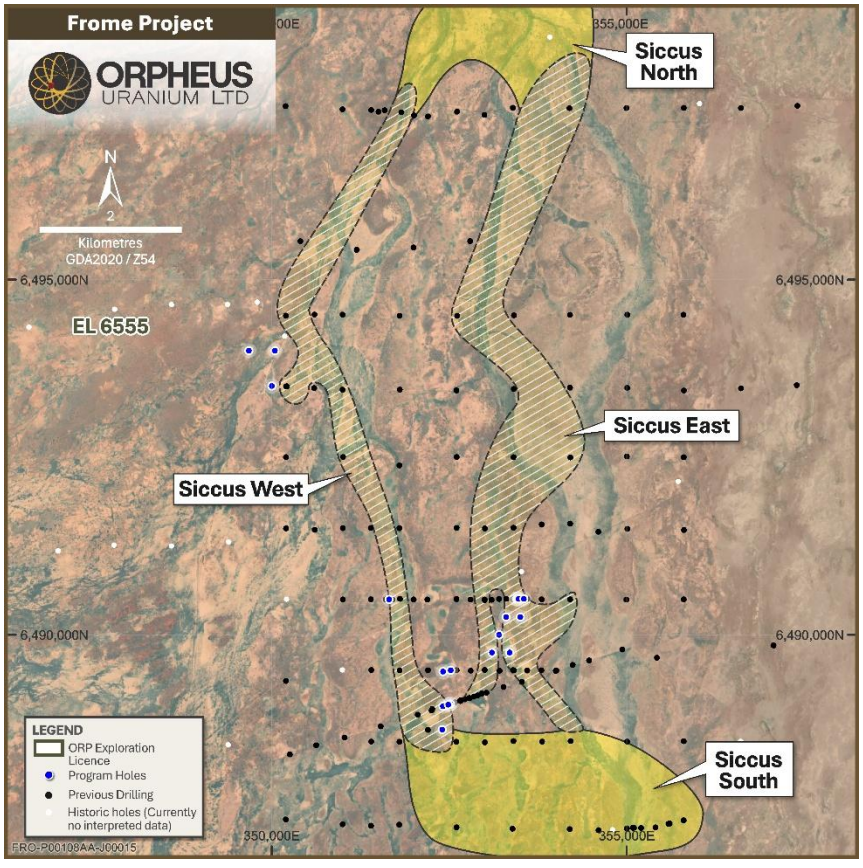


***Figure 3**: Newly defined target areas within the broader Erudina Prospect**.*

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Drilling Locations, REDOX Geochemical Systems/Corridors & Priority Follow Up Areas

The regional program was designed to test and refine the geological model developed from historical drilling, assess interpreted palaeochannel and redox relationships, and identify areas for more detailed investigation. The longer-term objective is to define prospects with geological settings that could support the development of an Exploration Target, subject to further drilling and, should results warrant, a JORC compliant resource.

The updated model draws on a detailed review of historical datasets by Orpheus' technical team, whose experience includes sedimentary uranium systems within the Frome region and broader South Australia. Geological observations from the program were largely consistent with the interpretation, supporting its use in identifying and ranking prospective redox corridors.

Although intersecting significant uranium mineralisation remains an objective, this regional program also sought to constrain the geological settings in which mineralisation may occur. Roll-front deposits can comprise narrow, sinuous mineralised fronts, making the identification of predictable redox transitions an important step in focusing subsequent drilling.

Uranium transported in oxidised groundwater may be deposited where it encounters reducing conditions. The presence of oxidised sediments within the generally reduced basin sequence, together with nearby reduced sediments, supports the interpretation of conditions capable of mobilising uranium and providing potential chemical traps. These relationships provide a basis for targeting, although not all redox boundaries are mineralised. A conceptual roll-front system and illustrative downhole gamma responses are shown in Figure 4.

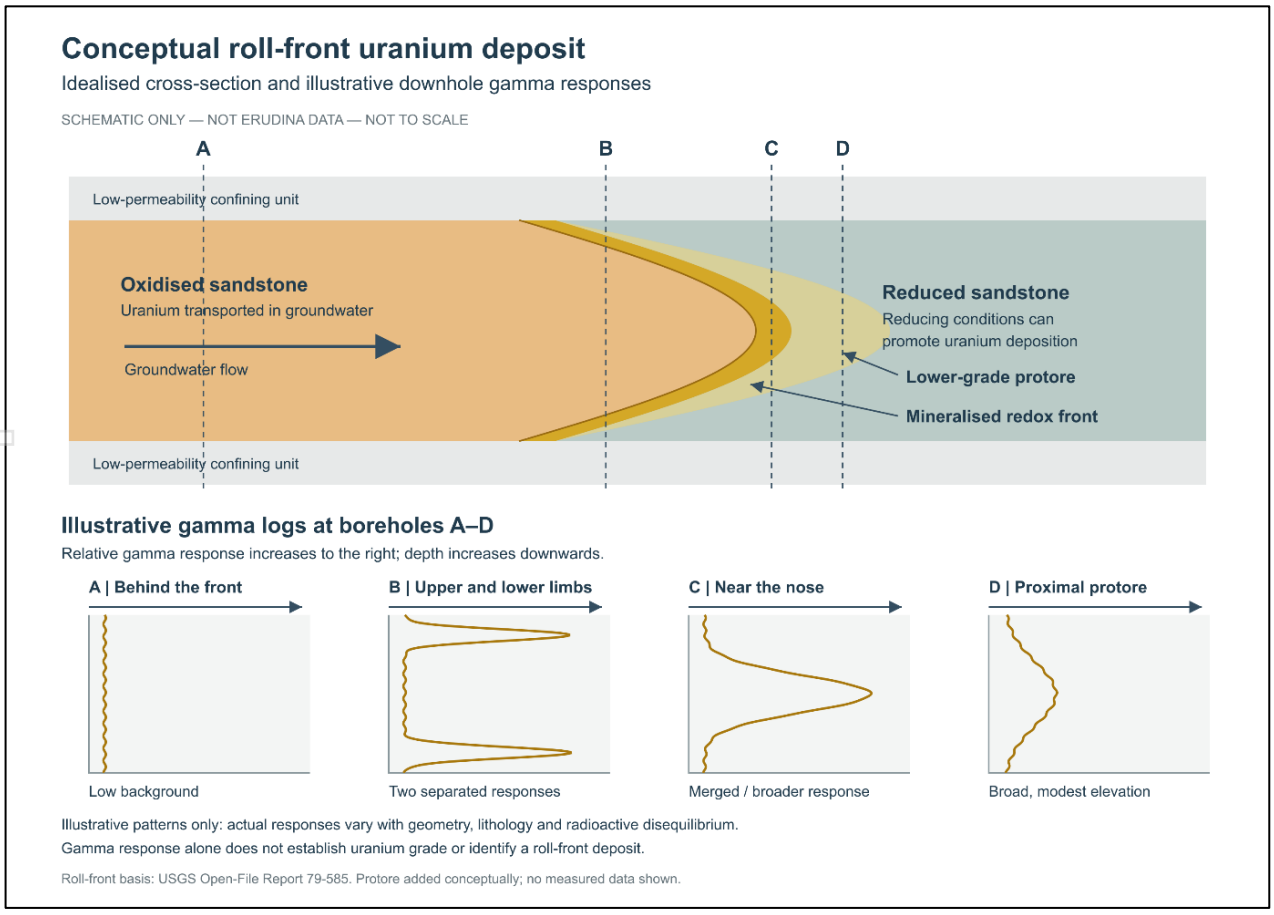


***Figure 4**: Conceptual cross-section of a sandstone-hosted uranium roll-front system.*

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Initial field interpretation of the final two holes of the program provides a useful example of these relationships. Whilst raw in nature their geological observations and downhole geophysical responses show characteristics consistent with a potential sedimentary uranium mineralising system (Figure 5). Geological logging elsewhere in the program also identified oxidised and reduced Eyre Formation sediments in positions consistent with the updated model, with representative drill samples shown in Figure 6.

Together, these observations support the refinement of the broader Erudina Prospect into the Siccus prospect areas shown in Figure 3. At Siccus West, contrasting redox conditions observed between CURE0007 and CURE0008 support the interpretation of a redox boundary between the holes (Figure 6).

At Siccus East, multiple drill holes with the current and historical program have identified a priority corridor interpreted to extend approximately 2.2 km along strike and up to 250 m wide (Figures 6–11). Figure 7 shows the interpreted corridor, while Figures 8–9 present geological sections across the interpreted front. Sections approximately parallel to the front support the interpreted lateral continuity of oxidised and reduced sediments (Figures 10–11).

These dimensions describe the geological area selected for investigation, rather than the extent of a demonstrated mineralised body. The corridor nevertheless provides a target area with a footprint comparable to those associated with known deposits in the region.

Further interpretation and follow-up drilling plans are being developed to better define the redox fronts and assess the distribution and continuity of uranium mineralisation along them. Subject to the results, this work would provide a basis for assessing whether an Exploration Target can be defined.

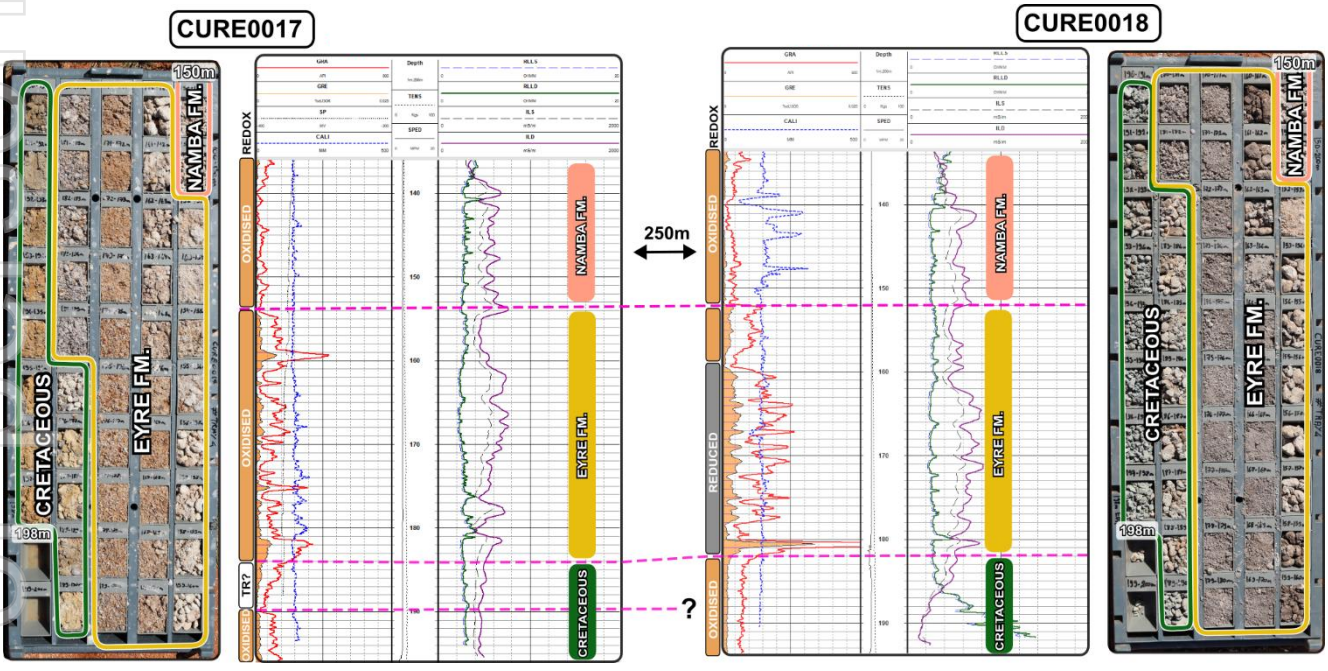


***Figure 5**: Initial field observations of the oxidised (Orange) Eyre Formation within CURE0017 (left) and reduced (Grey) Eyre Formation within CURE0018 (right), located within Siccus East and defining the extents of the REDOX corridor. The image contains 1m from 150m to total hole depth (198m), whilst the downhole geophysics logs including from top to bottom and left to right (GrA = Gamma in calibrated to API, GrE = Gamma calibrated to %eU3O8 (scale = 0 to 0.025%), SP = Self Potential, CALI = Hole Diameter in mm; RLLS = Resistivity Short, RLLD = Resistivity Deep, ILS = Induction Short and ILD = Induction Deep).*

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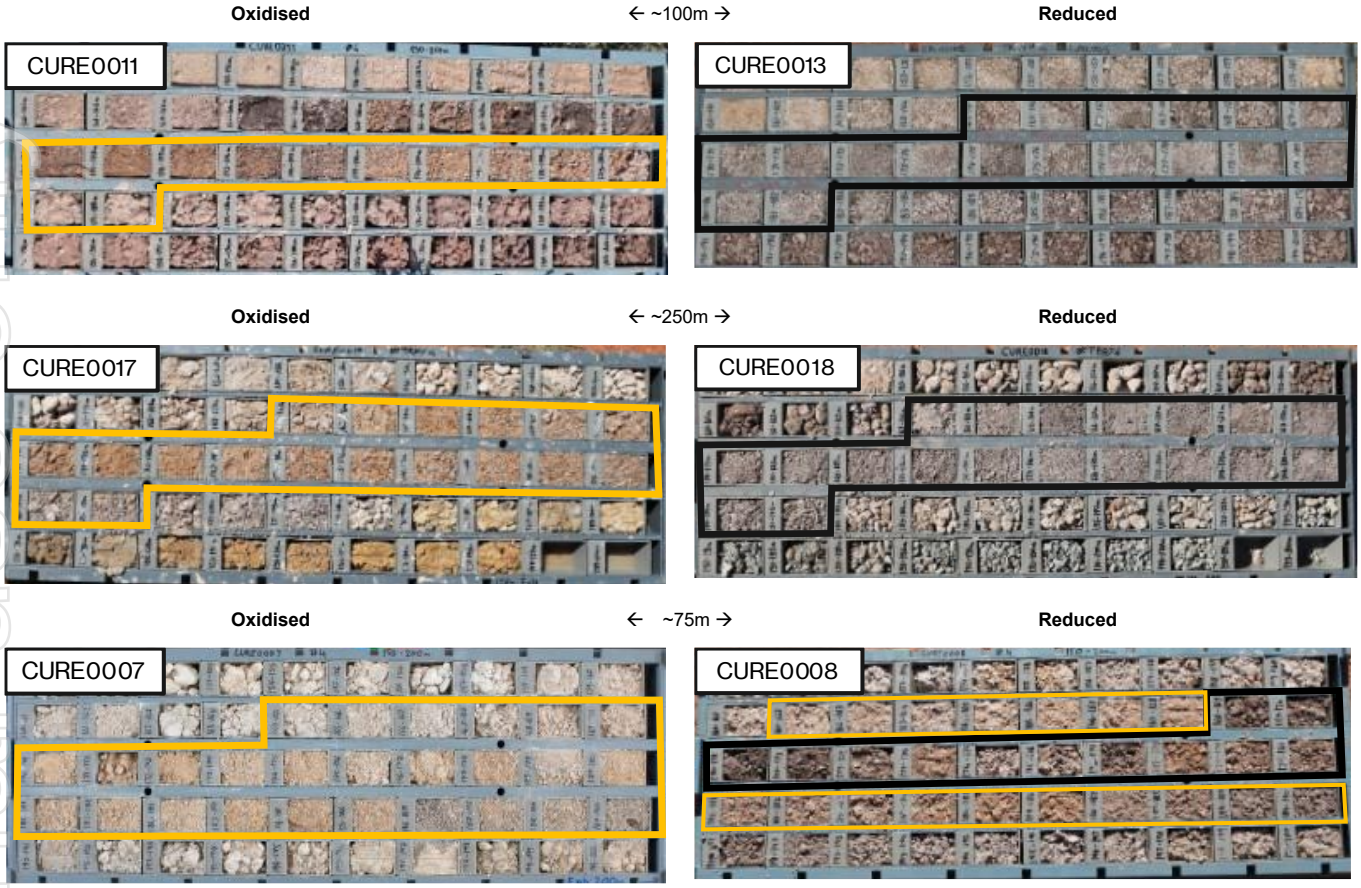


***Figure 6**: Downhole geological samples (1m) from select drill program holes (starting at 150m) highlight oxidised (orange border) and reduced (black border) sediments within proximal drill holes.*

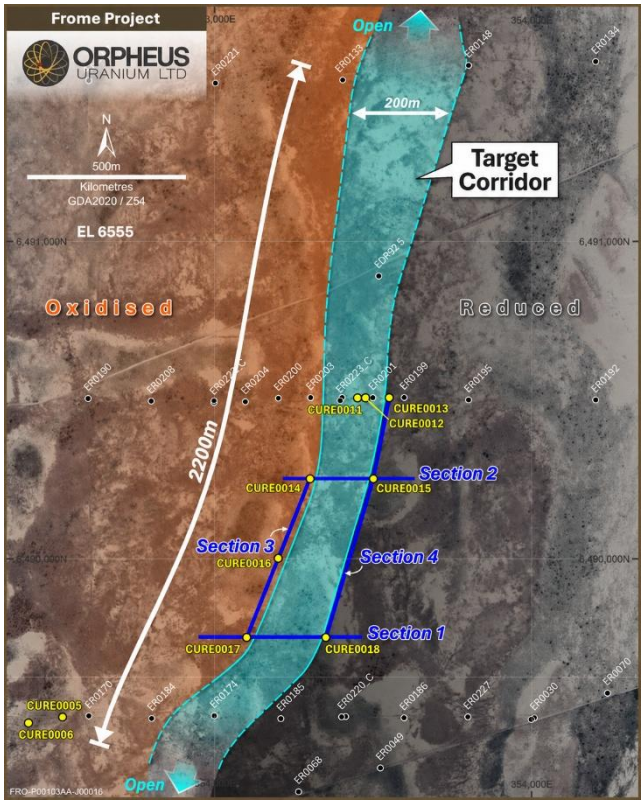


***Figure 7**: Siccus East Prospect target REDOX corridor with section locations.*

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Sections across the priority corridor sections 1 and 2 (Figures 7 and 8) show how the interpreted Eyre Formation geometry correlates along adjacent drill lines *(note the colour of the stratigraphic area adjacent to the holes have been modified to emphasise the REDOX facies of the Eyre Formation target area)*.

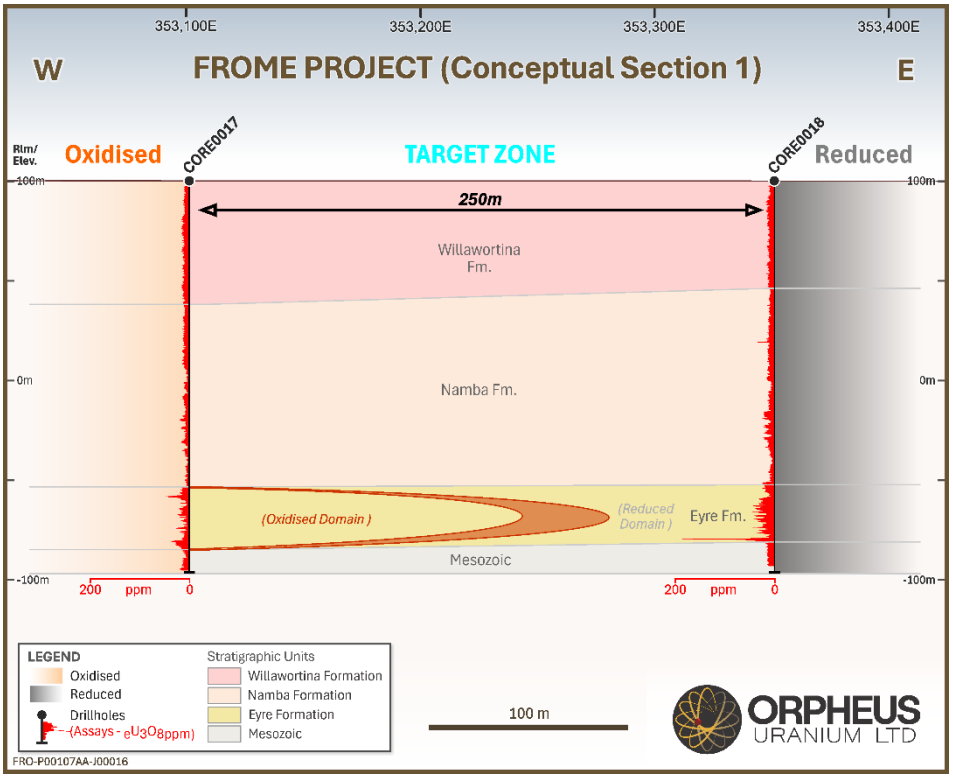


***Figure 8**: Siccus East Prospect Siccus East Prospect W-E section through REDOX corridor.*

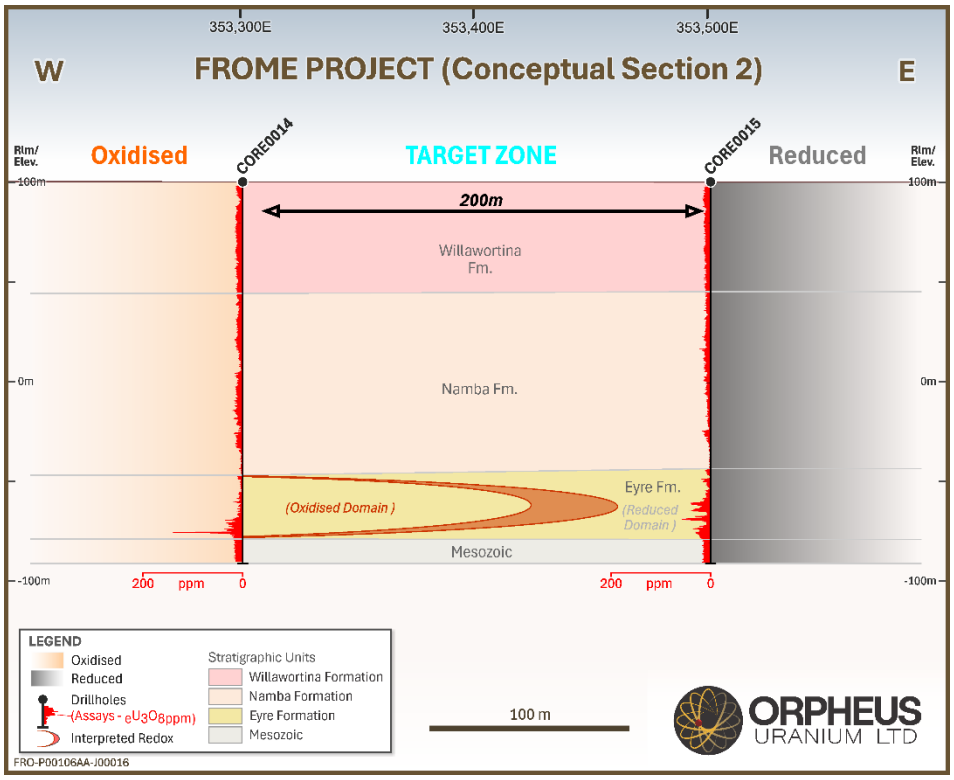


***Figure 9**: Siccus East Prospect SW-NE section identifying continuity of reduced domain.*

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Longitudinal geological correlation sections 1 and 2 (Figures 7 and 8) show how the interpreted Eyre Formation geometry correlates along adjacent drill lines. *(note the colour of the overlying/underlying stratigraphic units have been modified to emphasise the REDOX facies of the Eyre Formation target area).*

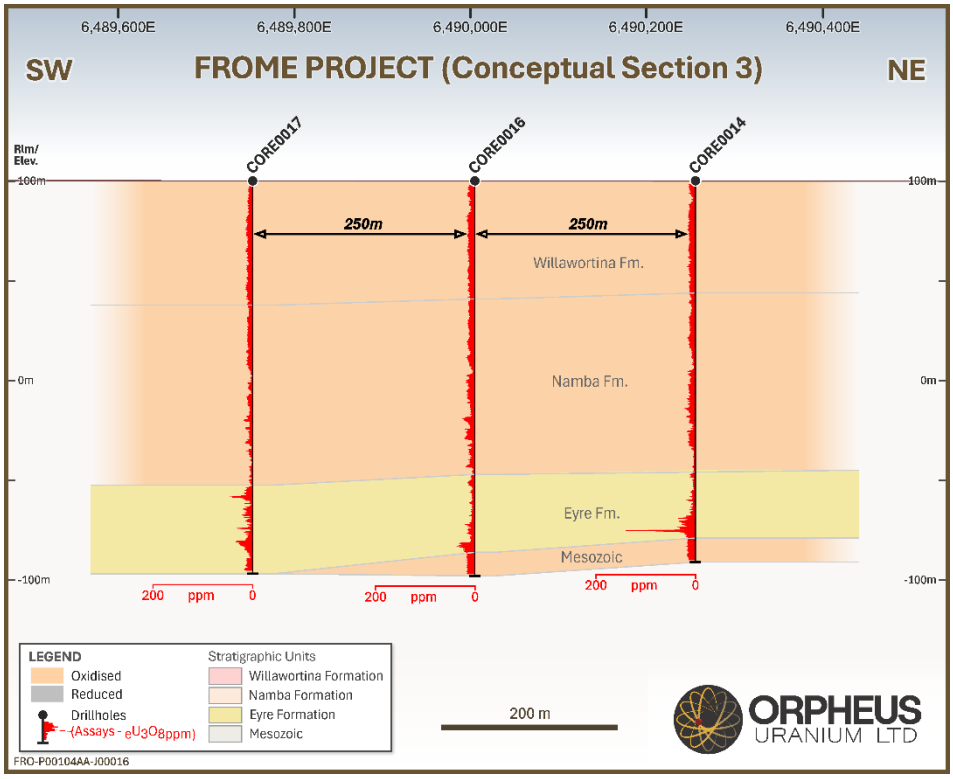


***Figure 10**: SW-NE section identifying continuity of oxidised domain.*

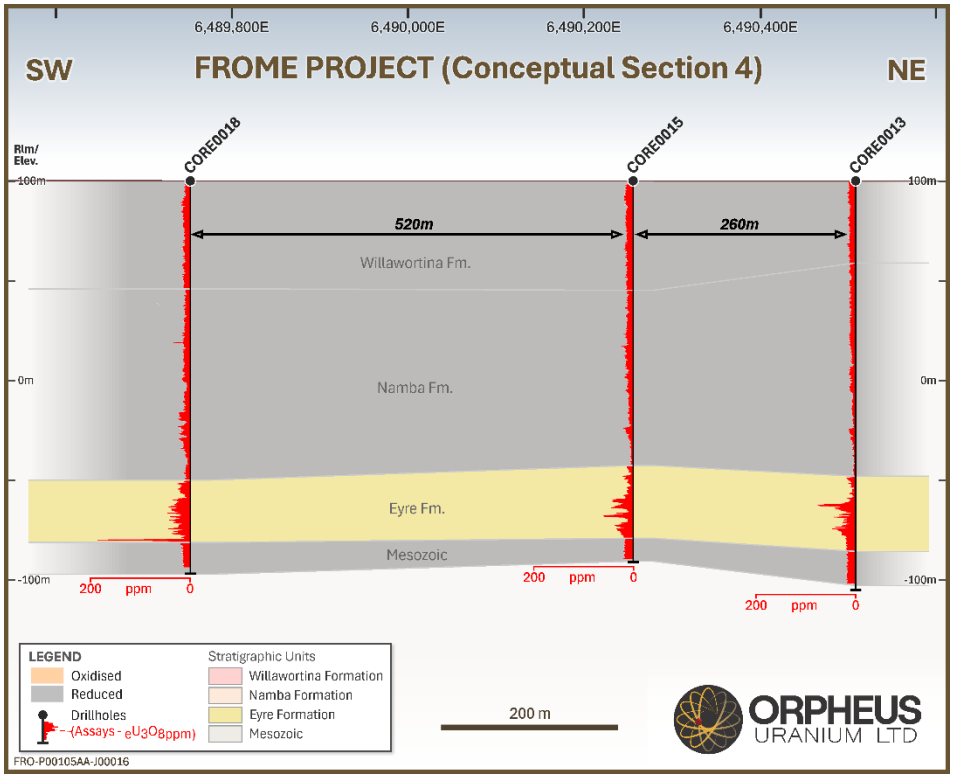


***Figure 11**: Siccus East Prospect SW-NE section identifying continuity of reduced domain.*

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Other regional areas and deeper geological opportunities

Beyond the priority corridors at Siccus East and Siccus West, interpretation is continuing at Siccus North and Siccus South (Figure 3). Siccus North represents a potential northern continuation of the interpreted corridors. Further assessment will consider the consistency of geological and redox relationships, radiometric responses and gaps in drilling coverage to determine follow-up priorities.

Siccus South represents an earlier-stage opportunity to investigate the deeper geological sequence beneath the Eyre Formation. A deeper unit intersected in CURE0007 is currently interpreted as either a possible Cretaceous sedimentary unit containing diamictitic material or a thicker weathering profile developed in the underlying basement. Its stratigraphic identity, permeability and uranium potential remain unresolved.

Four Mile West provides regional context for investigating this setting. Published descriptions place its mineralisation within medium- to fine-grained sands in the upper part of a Mesozoic diamictite unit. Currently there is no stratigraphic correlation established between that host unit and the deeper unit at Erudina, however, the presence of what appears to be a thinner unit of glacially derived sediments stratigraphically underlying the Eyre Formation within historical core holes, provides the basis for the hypothesis.

The deeper intersection in CURE0007, considered alongside the regional evidence of redox variation, warrants further geological characterisation and assessment of potential fluid pathways. This work will help determine whether the deeper sequence represents an additional exploration opportunity.

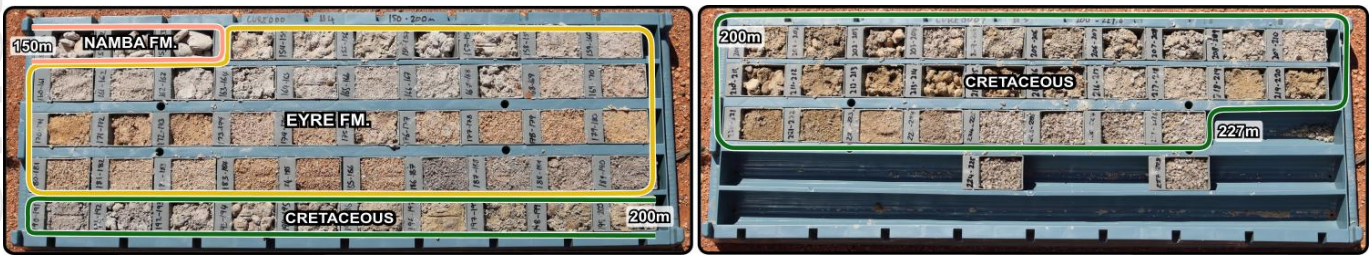
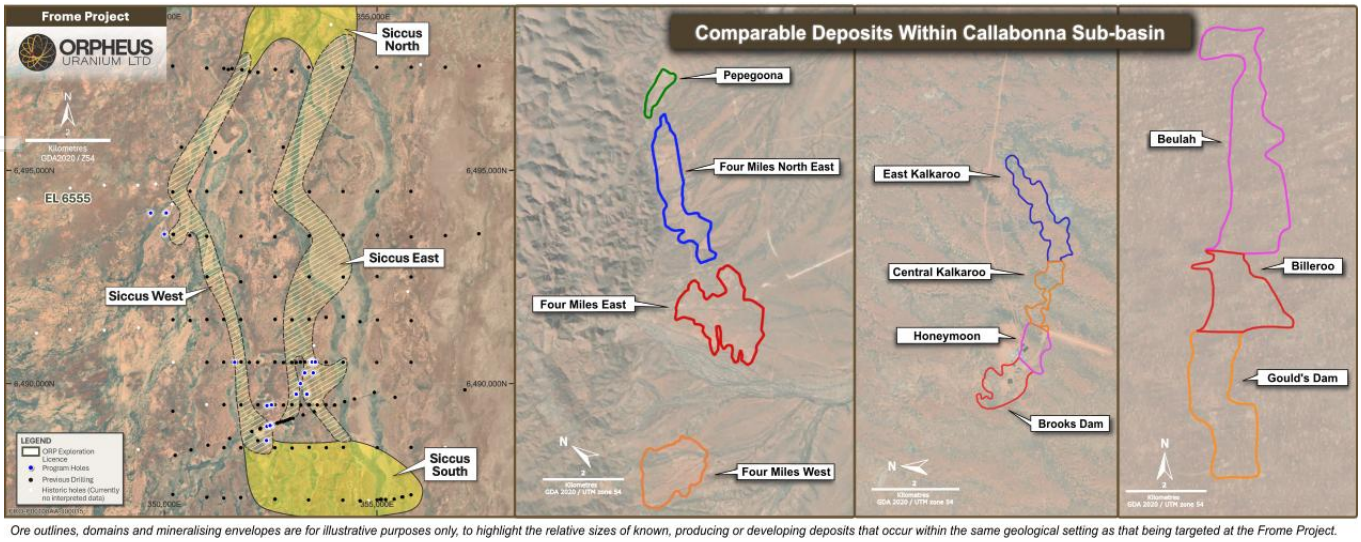


***Figure 12**: CURE007 1m downhole geological samples left (150 – 200m) and right (200 to 227m) noting the presence of a fine grained possible glacial (or weather basement) unit (~216 to 227m) – Note hole abandoned at 227m due to water loss.*



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

***Figure 13**: Ore outlines and mineralising envelopes of known deposits within the same geological setting as the Frome Project (for illustrative purposes only, as to provide contest of the size).*

Envelopes and Outlines are sourced from publicly available documents including Heathgate's Four-Mile Program for environment protection and rehabilitation (PEPR) & Boss Energy's (ASX: BOE) Honeymoon Program for environment protection and rehabilitation (PEPR) – both available on https://energymining.sa.gov.au/, and Gould's Dam from ASX announcement Boss Energy - 2026 Market Day Presentation released 15th Sept 2026

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Follow up program and pathway to an Exploration Target

Historical exploration and the reported regional drilling program have established a geological framework that supports further targeted drilling at the Frome Project. The integration of historical uranium anomalism with contemporary drilling observations, including a clear redox trend, has helped define four prospective areas and provided a basis for prioritising future work.

As illustrated in Figure 13, these four areas have interpreted footprints that can be considered comparable in scale to those of known uranium deposits within the Callabonna Sub-Basin. Their boundaries and prospective redox corridors will be refined as exploration progresses, with each area assessed independently. Orpheus considers that the favourable geological characteristics and identified redox trend support the potential to discover economic-scale uranium mineralisation within the project area, where drilling remains relatively widely spaced compared with known deposits.

The next phase will integrate and validate the available data, rank the four areas and develop follow-up drilling programs to test the relationship between redox boundaries and potential mineralisation. This work will progressively assess the geometry, thickness, grade and continuity of any mineralised intervals intersected, where applicable supporting the advancement of selected areas towards formal Exploration Targets and, subject to results and sufficient supporting data, JORC Mineral Resource estimates.

The Project and Prospect Maturity Pipeline (Figure 14) forms a subset of Orpheus' overall Project Pipeline (Figure 15) and provides a framework for systematically advancing each project area. Each area contains multiple prospects requiring robust testing to progress towards a potential discovery. The current program has defined four priority work areas, establishing a basis for assessing and advancing their prospects independently through successive stages of exploration maturity, each of which will be reviewed in comparison to their prospectivity both within the project itself, and within Orpheus broader project portfolio. Ultimately, providing the basis for ongoing opportunities to test multiple geologically relevant and prospective targets.

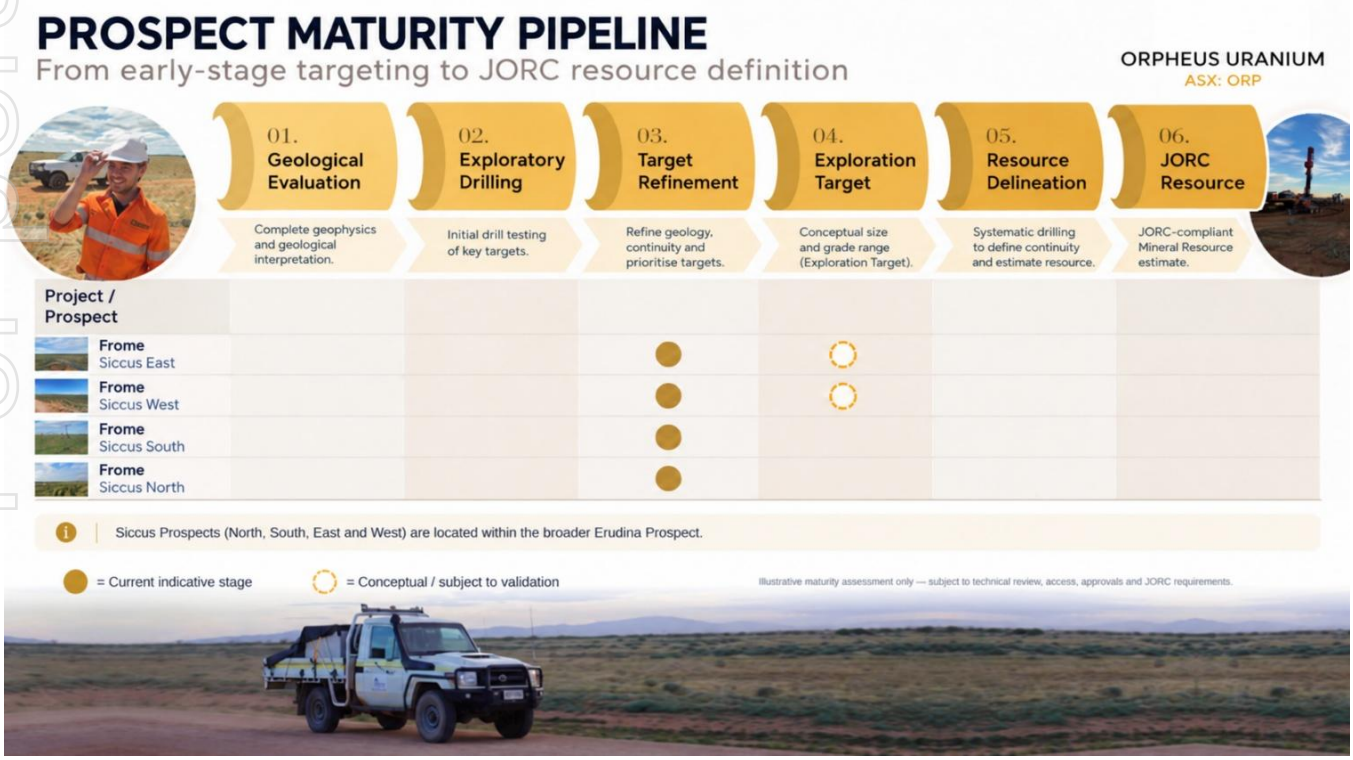


***Figure 14**: Frome Project prospect maturity pipeline highlighting the newly defined Siccus Prospects.*

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Portfolio context

Frome complements Orpheus' other South Australian sedimentary-style uranium assets and remains within the Advanced Exploration category of the Company's Project Pipeline. Historical drilling and the 2026 regional program have provided a basis for identifying and refining multiple prospects within the broader project area. Ongoing evaluation of these combined datasets will guide exploration priorities and define the work required to advance individual prospects and, in turn, the Frome Project through the pipeline.

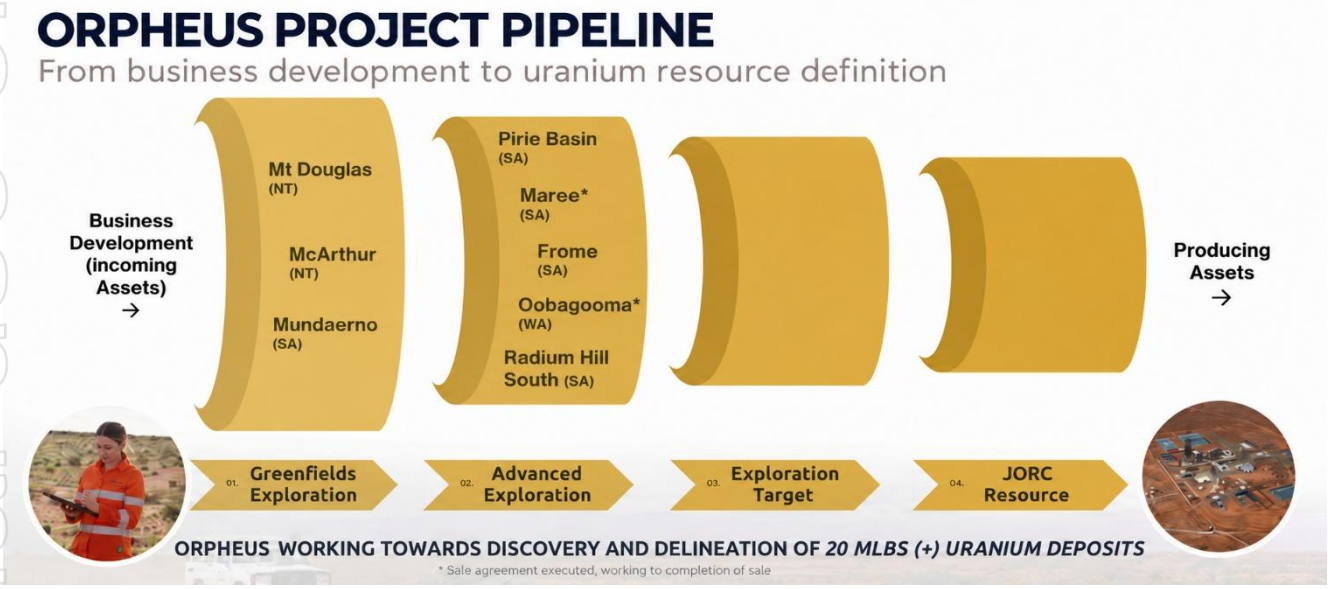


***Figure 15**: Orpheus Uranium Project Pipeline.*

Program delivery and operational experience

An initial weather event interrupted the drilling program. Additional work was undertaken to source water for the current campaign and future programs, while mobilisation of the drilling team from interstate required flexibility in roster planning and scheduling.

As the first drilling program in the area in approximately 15 years, the campaign also provided practical experience of local drilling conditions, water requirements and logistics. The implementation of Orpheus inaugural drill program provides a stronger basis for robust and productive future programs throughout the project portfolio.





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Figure 16: *Selection of photos from the drill program being reported on.*

-END-

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

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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 Isaac Lord 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 Lord 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 Lord 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.

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Appendix 1 – Collar Location with Maximum eU3O8 ppm,

Holes with a maximum Intersects of 100ppm eU3O8 or greater are considered as significant, all drilling was completed vertically as such dip and azimuth have been excluded from this table.

Drilling Type RM = Rotary Mud

Hole ID	Easting	Northing	RL (m)	Drill Depth (m)	Drilling Type	Max Grade eU_3O_8 (ppm)	Max Grade Depth (m)
CURE0001	349678	6494000	96	200	RM	Not Logged To Depth	-
CURE0002	350045	6494000	92	204	RM	217	156.2
CURE0003	350001.6	6493503	93	200	RM	105	177.3
CURE0004	352514	6489025	99	204	RM	416	170.8
CURE0005	352520	6489500	101	210	RM	66	176.3
CURE0006	352412	6489481	102	192	RM	83	165.1
CURE0007	352410	6488995	104	192	RM	Not Logged To Depth	-
CURE0008	352486	6489016	100	198	RM	94	168.8
CURE0009	352400	6488665	105	198	RM	164	177.9
CURE0010	351652	6490499	103	195	RM	194	161.2
CURE0011	353450	6490505	99	204	RM	216	162.7
CURE0012	353475	6490505	100	194	RM	406	161.6
CURE0013	353550	6490506	103	198	RM	87	165.7
CURE0014	353300	6490250	101	198	RM	147	176.1
CURE0015	353500	6490250	101	228	RM	75	169
CURE0016	353200	6490000	100	202	RM	42	182.9
CURE0017	353100	6489750	101	198	RM	53	159.3
CURE0018	353350	6489750	101	195	RM	203	180.5

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Appendix 2 – Significant Uranium Intersects within the Erudina Prospect

Holes with a maximum Intersects of 100ppm eU3O8 or greater for an interval equal to or great than 0.5m with no internal dilution greater than 0.5m

Hole ID	Depth From (m)	Depth To (m)	Thickness (m)	Average Grade (eU3O8ppm)	GT (m x eU3O8 ppm)
CURE0004	170.65	171.21	0.56	206.2	115
CURE0004	189.23	190.67	1.44	197.2	284
CURE0010	160.38	161.47	1.09	118.2	129
CURE0011	162.55	163.10	0.51	149.2	76
CURE0011	164.15	164.90	0.75	144.5	108
CURE0012	161.22	162.32	1.10	221.4	244

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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.*	• Drillholes were geophysically logged using downhole methods; Gamma, calliper, resistivity, induction, spontaneous potential and magnetic deviation. Cuttings from drillholes were collected systematically every 2m (for the first 4 holes) or 1m (remaining holes), during circulation using a shovel. Samples were collected using chip pods that fit in a NQ core tray. • Intervals of each hole determined to be Eyre Formation will also be analysed using a handheld XRF instrument by an external contractor. • Cutting samples of representative drillholes will be submitted to the South Australian Government Core Library.
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).*	• Rotary Mud drilling was conducted. Drillholes were geophysically logged using downhole logging methods, gamma, calliper, resistivity, induction, spontaneous potential and magnetic deviation.
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 sample bias may have occurred due to*	Drilling was of Rotary Mud method and Rotary Mud-Diamond Tails. • Sample recovery was generally successful, however limited up hole velocity due to poor mud pump flow rates resulted in sample lag and clumping clays. The use of downhole geophysical tools limits the negative impacts of this as chip sampling can be depth matched post logging.

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	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 was completed by trained staff on site for the entire hole length (where possible). At a minimum lithological logging of chip samples was completed for all holes where borehole conditions did not allow full geophysical logging. • Logging comprised lithological logs and geophysical logs from Rotary Mud drillholes. 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 and complements geological samples allowing for cross-referencing and ability to QAQC data. • 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 and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the*	Quality of geophysical logging data is considered to be appropriate for exploration analysis. Geophysical logs (Total Gamma) are considered reliable for the estimation of equivalent uranium (eU3O8) grade. • Geophysical logging company Borehole Wireline were contracted to run geophysical

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	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.*	tools. Calibration of tools was completed at the Adelaide calibration pits with geophysical logging contractors required to calibrate their instruments routinely and have a high standard of QAQC on data. Results are considered to be appropriate for exploration analysis.
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.*	Geophysical logs (Total Gamma) are considered reliable for the estimation of equivalent uranium grade. However, anomalous intervals will also undergo analysis via a portable XRF instrument via a trained external contractor. Downhole geophysical data is stored both in LAS & WellCAD logs supplied by Borehole Wireline in their original format. In addition to this a copy of the data is also stored as downhole tables in Orpheus' in-house database providing multiple storage methods to avoid data loss.
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 2020 (GDA20) • Projection: Map Grid of Australia (MGA) • Zone: Zone 54 Collar locations were recorded using a handheld GPS Garmin Rhino with an accuracy of 5 -10m. Historical hole location 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.* • *Whether sample compositing has been applied.*	Drilling was completed to compliment historical drilling, which 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). • Infill drilling was designed to further infill between wide spaced holes in areas Orpheus determined to be of high prospectivity. These drillholes were generally spaced 200-400m N-S and 10–200m E-W of historical drillholes. • 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

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		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.

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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

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		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,

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		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 1 of this Public Report that contains relevant drillhole information. • All drilling included as part of this report was completed vertically and as such has been excluded from this table, 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
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 historic in nature is sourced from what is available within historical reports/available with South Australian Geodata Database, • Where applicable reported intercepts are generally single downhole intervals. Max value eU_3O_8 (ppm) uranium grades have been used

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	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.*	for representation in this report. No resource or exploration target has been presented. • The significant intercepts list defines holes with a maximum Intersects of 100ppm or greater eU3O8 for an interval equal to or great than 0.5m with no internal dilution (values <100ppm eU3O8) greater than 0.5m. The max eU3O8 values at 10cm intervals are averaged across the interval thickness. This average value is multiplied by the interval thickness to define a Grade Thickness Value (Average PPM*M).
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').*	• 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 historic in nature, and all historical information is sourced from what is available within historical reports/available with South Australian Geodata Database • Drill data from the drill program is available in table format in Appendices 1 & 2 as well as displayed in various figures throughout this report.
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 reporting of the exploration results in relation to the most recent drill program completed by Orpheus is considered to be comprehensive by its own rights and reports on both high- and low-grade intercepts intersected.
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,

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	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 acquired and historical data sets as to be added into the regional modelling, including where possible downhole geophysics including calibrated grade calculations • As described in Figure 3, Orpheus has identified 4 main exploration priority areas inside of the broader Erudina prospect. This supports the targeting of future work including infill drilling and extensional drilling to confirm or extend these target areas.

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