Significant Exploration Target Range established, Samphire Uranium Project, South Australia

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Highlights

- **Exploration Target Range estimate** of 16Mt to 37Mt at a grade between 390 and 903ppm eU_3O_8 **for a range of 14Mlbs to 75Mlbs of contained eU_3O_8** has been interpreted at 250ppm cut-off for Samphire. The range **does not include** the Blackbush Mineral Resource Estimate.

Samphire Uranium Project Area	Million Tonnes (Mt)	eU_3O_8 (ppm)	Million Pounds (Mlbs) eU_3O_8
Total	16 - 37	390 - 903	**14 - 75**

(***Exclusive of the Blackbush Mineral Resource – ASX Announcement 7 Dec 23***).

- The Exploration Target Range includes **extensions to mineralisation at Blackbush, the Plumbush prospect as well as other areas of known mineralisation and potential extensions**.
- In preparing this estimate, **Alligator conducted an extensive data review of over 1,000 historical and current drillholes** and associated geological and geophysical datasets.
- The work identified 11 discrete palaeochannel areas, of which 5 were used in the above estimate (see Table 1 and Figure 3). **Only Kanaka Bed sands hosted areas amenable to In-Situ Recovery (ISR) were considered.**
- With 64 kms of interpreted palaeochannel strike length, **only 10% of the prospective system (Blackbush Deposit and portion of Plumbush Prospect) have been well explored,** with a further 30% partly drill tested.
- To date, **58% (over 37 kms) of the prospective areas of the palaeochannel system remain completely untested**, indicating the significant potential for new discoveries in the Project area.
- The Exploration Target range underpins a multi-year exploration program which will kick off in late January 2024 testing Blackbush Extension 1 & 2 (see Figure 3)
- Further ground-based gravity surveys are planned for 2024 to the north and south of the Samphire Uranium Project Area, where palaeochannels are yet to be identified but are expected to exist.

Alligator's Samphire Project - Exploration Target Range does not include areas of existing Blackbush Mineral Resource Estimate and the potential quantity and grade reported are conceptual only in nature. Insufficient exploration has been conducted to estimate a JORC-compliant Mineral Resource and it is uncertain whether future exploration will lead to the estimation of a Mineral Resource in the defined areas.

Alligator's Managing Director and CEO Greg Hall stated: *"The Samphire Uranium Project has proven to contain an initial viable project based around the improving uranium market pricing and economics, using the Blackbush JORC compliant resource. The next steps will be to enhance this project through adjacent and regional exploration. The Exploration Target Range reported here shows the potential for this, ranging from a conservative added potential to very significant upside.*

This Exploration Target Range covers areas outside (i.e. in addition to) the current Blackbush resource envelope. The significant advantage of the In-Situ recovery technique is that a single process plant site can easily be fed by extracted solutions from many kms distant, resulting in very reduced mining impact. Hence future interpreted resources associated with this estimate have the potential to be piped to the initial plant site for processing".

Samphire Uranium Project – Location & Background

Alligator Energy Limited **ASX: AGE** (**Alligator** or the **Company**) is pleased to announce that it has defined an Exploration Target Range for its 100% owned Samphire Uranium Project south of Whyalla, South Australia.

The Samphire Uranium Project is located on the east coast of the northern Eyre Peninsula, approximately 20km SW of Whyalla. The project covers the two exploration licenses of EL5926 (332 km2) and EL6350 (73km2) (Figure 1) and was acquired by Alligator Energy Ltd (AGE) in Q4, 2020 from S Uranium Pty Ltd (SUL), formerly UraniumSA (USA). The Samphire Uranium Project is a sediment (palaeochannel) hosted uranium system host to the Blackbush Uranium Deposit and Plumbush Uranium Prospect.

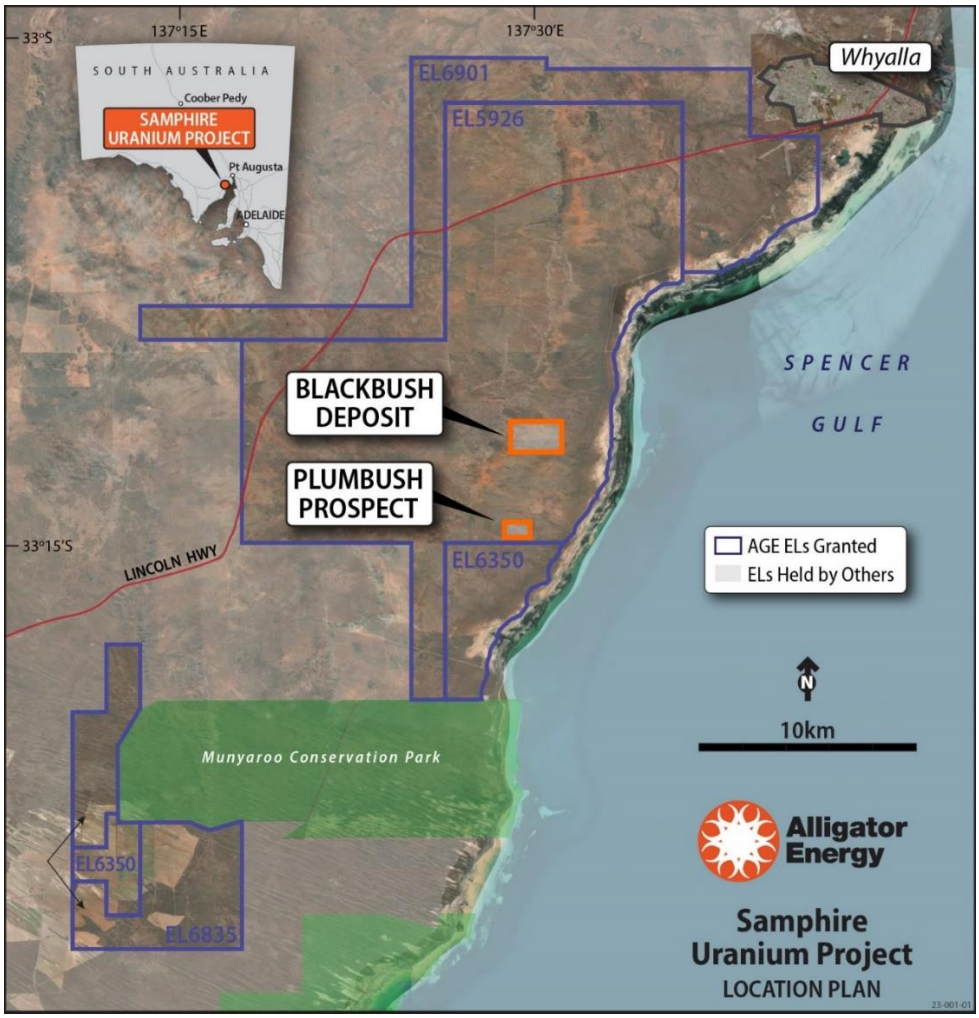

Figure 1: Location of the Samphire Uranium Project (including the Blackbush Uranium Deposit and the Plumbush Uranium Prospect) within current AGE Exploration Licenses.

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Historically, 791 holes had been drilled for 58,549m over a 6-year period, leading to an initial resource for the Blackbush Deposit and Plumbush Prospect by the previous owner. After purchasing the project, Alligator Energy commenced verifying the historical uranium intercept results (in addition to sampling for metallurgical testing) by drilling a 14-hole core program in late 2021 and early 2022. Following encouraging core results and good correlations to historical data, rotary mud infill and delineation drilling programs was then carried out over 2022 and 2023, comprising a total of 202 drill holes for 17,063m.

Subsequent to the completion of the Stage 1 drilling program in 2022, an initial Mineral Resource Estimate (MRE) targeting In-Situ Recovery (ISR) was released (1 September 20221) which contained a combined Inferred and Indicated Mineral Resource of 14.8Mlbs U3O8 at 250ppm cut-off. A further MRE was released 2 March 20232 incorporating additional Stage 2 drilling carried out in late 2022, which saw an increase to the global resource to 18.1Mlbs U3O8. An updated MRE for Blackbush incorporating 2023 drilling data focussed on further conversion of Inferred Mineral Resource to Indicated status has also been released – see ASX: 7 December 2023.

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Next Steps

Given the knowledge and experience AGE has obtained through carrying out drill programs and geological investigations over the Blackbush Deposit, plans are now in place to identify and drill several target areas that remain open and untested. Analysis of historical drilling density within the current interpreted palaeochannel system shows 10% of the prospective system (Blackbush Deposit and portion of Plumbush Prospect) has been well explored, 32% partly drill tested and 58% completely untested (Table 2, Figure 3), indicating the significant potential for new discoveries in the Project area.

Table 2: Interpreted strike length of available palaeochannel (based on reprocessed ground gravity data) and the percent (by area) tested by historical exploratory drilling.

Category	Palaeochannel Strike Length (km)	%
Well explored (AGE & USA)	6,423	10
Partly explored (USA)	20,5544	32
Unexplored	37,253	58
Total Palaeochannel System	***64,230***	***100***

These target areas will be the focus for future multi-year exploration programs covering:

- Drill testing areas adjacent to the limits of the existing Blackbush resource envelope to continue to upgrade potential project economics.
- Drill testing areas interpreted to be highly prospective to host uranium mineralisation, based on the presence of underlying uranium source rocks, overlying or adjacent palaeochannels sediments like those encountered at Blackbush and historical drillholes that have intersected mineralisation (**Figure 2 and 3**).

[1] *AGE ASX Release 1 September 2022* https://wcsecure.weblink.com.au/pdf/AGE/02562683.pdf
[2] *AGE ASX Release 2 March 2023;* 02639068.pdf (weblink.com.au)

- Undertake ground gravity to delineate further palaeochannels in areas where channels have not yet been delineated but are believed to exist (**Figure 2**).

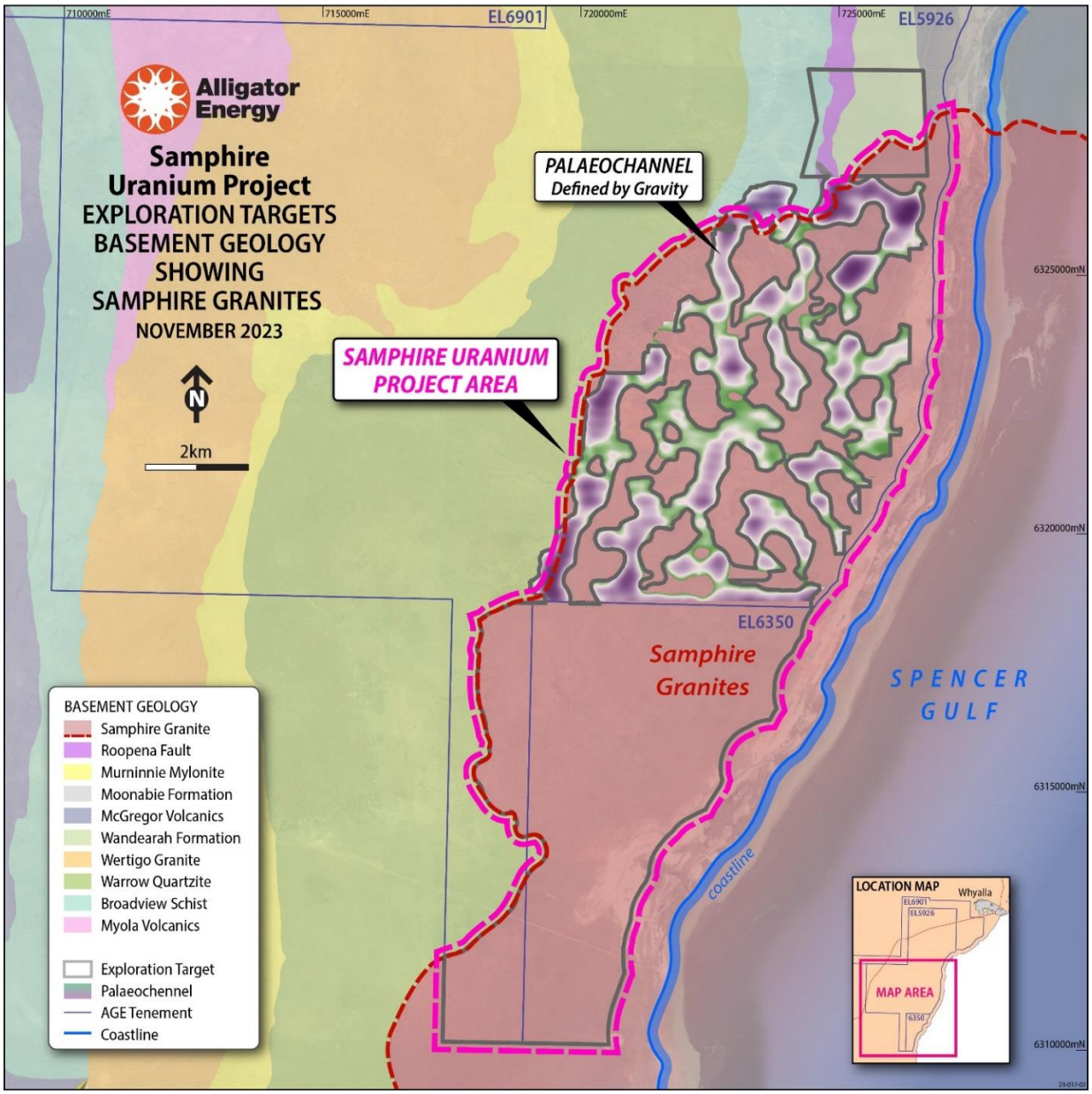

Figure 2: Map highlighting the Samphire Uranium Project Area with the underlying interpreted Samphire palaeochannel system and uraniferous Samphire Granite (interpreted source of uranium within the Samphire Project Area.

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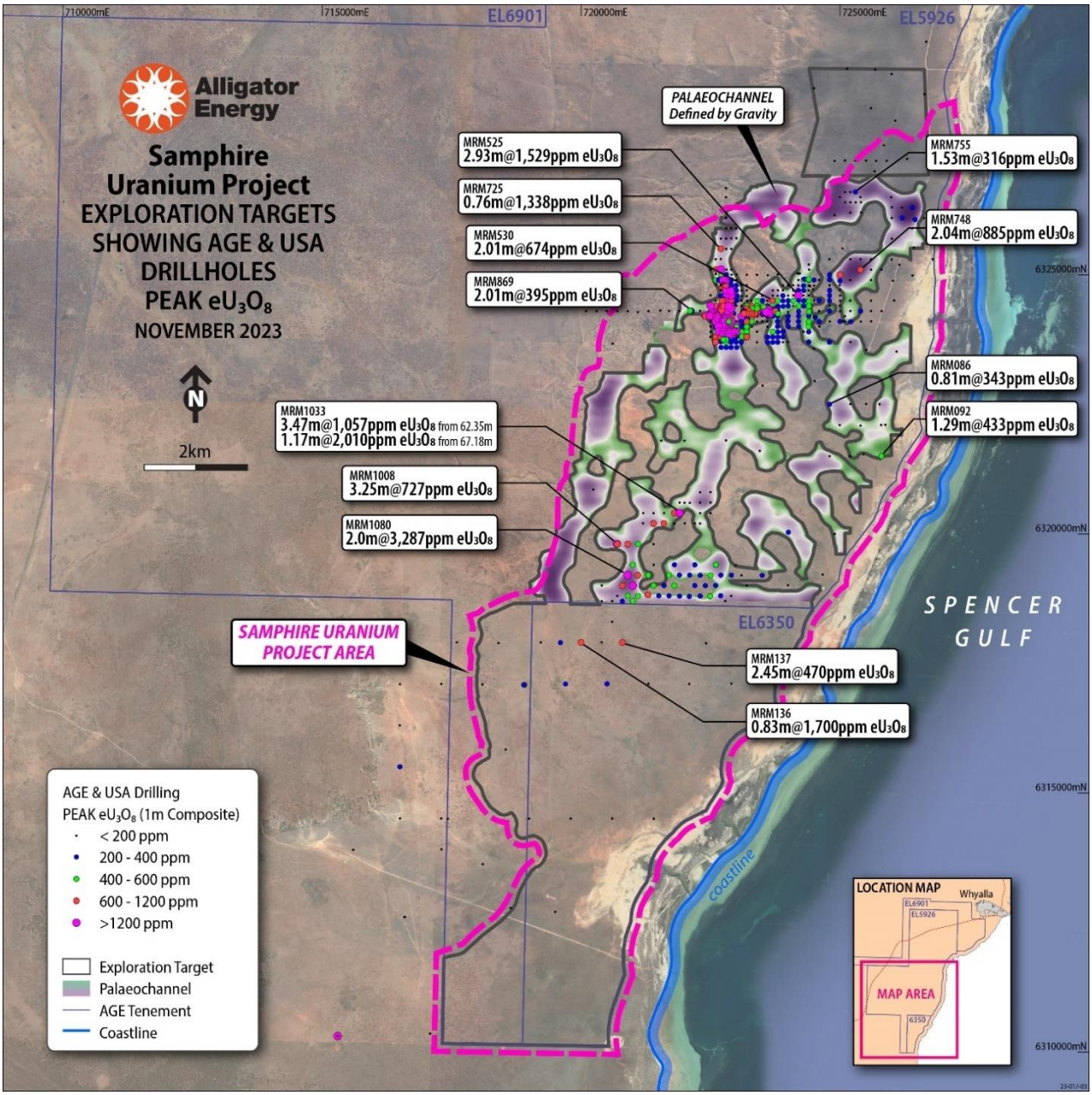

Figure 3: Samphire Project Area highlighting encouraging gamma eU_3O_8 results intersected from historical drilling in Kanaka Bed sands within the Samphire Uranium Project Area.

Geology and Mineralisation

The Samphire Uranium Project Area is located within Proterozoic aged Southern Gawler Craton on the Eastern Eyre Peninsula of South Australia. AGE is targeting uranium mineralisation that occurs within the Eocene aged siliciclastic sediments of the Kanaka Beds in the Pirie Basin, that directly overlie the Protertozoic granites attributed to the Hiltaba Intrusive Suite, of which the uraniferous "Samphire Granite" is a part.

The unconsolidated sediments are considered lagoonal-estuarine to lacustrine in origin and their distribution is interpreted to be controlled by the topography of the basement surface. The palaeochannel system shape that hosts mineralised intervals has been mapped using reprocessed ground gravity survey data and more importantly, verified by both historical and recent drilling.

Uranium mineralisation within the Samphire Project is interpreted to occur as roll front type uranium deposits hosted within sandstone horizons within the Kanaka Beds. Roll front deposits form due to a geochemical process where ancient oxidising groundwater dissolves uranium from a uraniferous source rock (i.e., granites) and transports the uranium in low concentrations through host sand units (i.e., palaeochannels), and then deposits the uranium along a redox

(reduction/oxidation) boundary. As favourable geochemical conditions of transport continue, uranium concentrations accumulate over time which may lead to an economic uranium deposit.

Within the Samphire system, coffinite is the dominant uranium mineral. The nature of roll front uranium deposits varies in length, shape, thickness, and grade. Instances where roll fronts occur over several intervals and often appear on top of one another in a single sand unit as “stacked” roll fronts. It is this style of uranium mineralisation which is interpreted to exist within the Blackbush Deposit within the Samphire Uranium Project Area.

Exploration Target Range

The Exploration Target Range is an estimate only in accordance with JORC 2012 Clause 17 and has been estimated based on several factors including historical drilling results including statistical analysis of high and low range grade intercepts, thicknesses of target sand horizons (Kanaka Bed sands), palaeochannel strike length and the presence of underlying uraniferous granites combined with geophysical structural interpretations (Table 1, Figure 4). A total of 5 areas (listed in Table 1) have been used to produce the target range where sufficient data exists within all of the categories described above.

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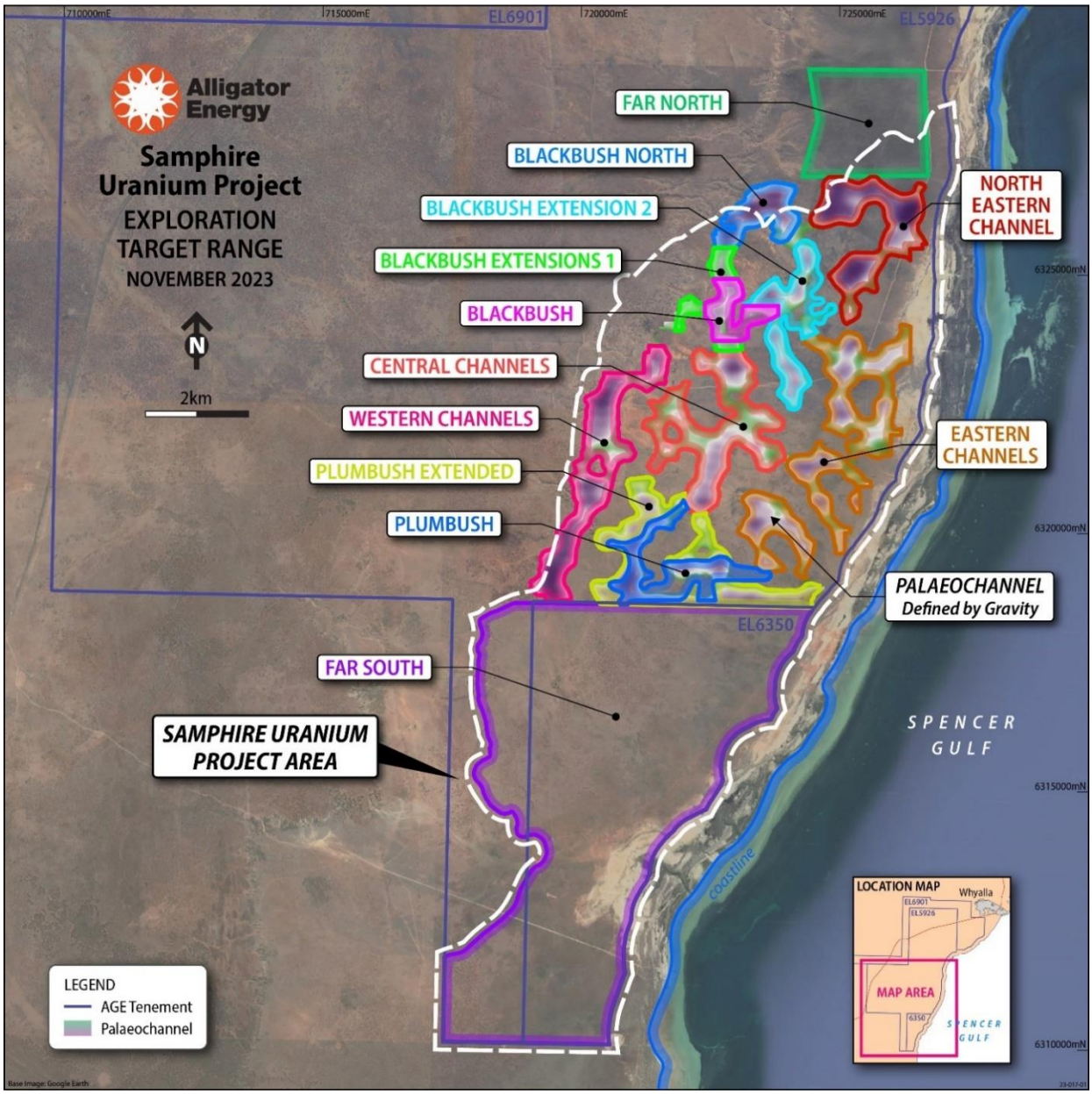

Figure 4: Map highlighting the 11 target area locations within the Samphire Uranium Project Area.

Table 1: Samphire Exploration Target Range including the 5 out of 11 target areas within the Samphire Uranium Project Area.

Target Area	Estimated Tonnage (Mt)		Estimated Grade (ppm U_3O_8)			Estimated Exploration Target Range (Mlb)	
	Min	Max	Min	Max	Average	Min	Max
Blackbush Extension 1	0.82	1.69	354	922	543	0.64	3.43
Blackbush Extension 2	2.09	4.94	382	697	487	1.76	7.59
North-eastern Channels	3.18	7.20	353	795	500	2.47	12.62
Eastern Channels	6.77	12.62	332	426	363	4.95	11.85
Plumbush	3.11	10.63	530	1676	912	3.63	39.28
Blackbush North	Not included in Target Range						
Central Channels	Not included in Target Range						
Western Channels	Not included in Target Range						
Plumbush Extended	Not included in Target Range						
Far North	Not included in Target Range						
Far South	Not included in Target Range						
					TOTAL	14	75

Areas where no or very little historical drilling has occurred, or gravity data is absent (Figures 2 and 3) an Exploration Target Range has not been calculated at this stage. AGE believe these areas are still prospective to host potential roll-front uranium mineralisation as evidenced by sporadic uranium mineralisation intercepts or confidence that the palaeochannel system extends into these areas and has input from the underlying granitic source rock. These areas will be included in future updates to the Exploration Target Range as more data becomes available.

The potential grade and quantity of uranium within each target area is conceptual, however is based on results and observations from AGE's re-interpretation of historical drilling data in addition to AGE's drilling carried out over the past three years at the Blackbush deposit. Detailed information about target area 1-11 is presented in Appendix 1. All uranium intercepts are reported as U_3O_8 equivalent basis (eU_3O_8) as regional historical drilling only used gamma sondes to acquire downhole grade data.

The specific parameters used for calculating the Exploration Target Range include:

- Prospective Area determined from analysis of existing geological data (location of granitic source rocks) and geophysical data (location of possible palaeochannels).
- The cartesian area of the palaeochannels was measured and a 0.6 factored applied based on Blackbush channel being 60% mineralised on average.
- Drillholes occurring within the 5 target areas were identified and mineralised intervals were calculated from downhole gamma data using criteria of Minimum Thickness = 0.5m, Maximum Internal Dilution = 0.25m, Cutoff grade = 250ppm eU_3O_8, Lithology = Kanaka Bed sand dominated.
- The minimum and maximum thickness of intercepts for each area were calculated from a plotted distribution curve, using 0.5 or 1 Standard Deviation from the mean, depending on the skew of the curve.

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- Volume of mineralised sand for each area calculated by multiplying factored potential area by the minimum or maximum interpreted intercept thicknesses.
- Estimated Tonnage was calculated by multiplying volume by average dry bulk density (as used for Blackbush MRE - 2.05 ton/m^3).
- Estimated minimum and maximum grades for each area were also calculated from a plotted distribution curve, using 0.5 or 1 Standard Deviation from the mean, depending on the skew of the curves.

This announcement has been authorised for release by the Alligator Energy CEO.

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Forward Looking Statement

This announcement contains projections and forward-looking information that involve various risks and uncertainties regarding future events. Such forward-looking information can include without limitation statements based on current expectations involving a number of risks and uncertainties and are not guarantees of future performance of the Company. These risks and uncertainties could cause actual results and the Company's plans and objectives to differ materially from those expressed in the forward-looking information. Actual results and future events could differ materially from anticipated in such information. These and all subsequent written and oral forward-looking information are based on estimates and opinions of management on the dates they are made and expressly qualified in their entirety by this notice. The Company assumes no obligation to update forward-looking information should circumstances or management's estimates or opinions change.

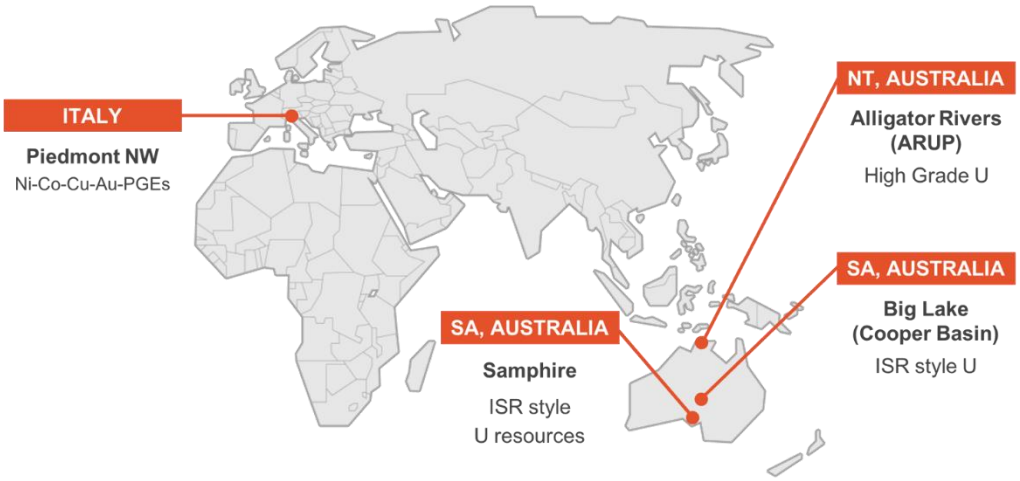
Competent Person's Statement

Information in this report is based on current and historic Exploration and Resource Drilling Results compiled by Dr Andrea Marsland-Smith who is a Member of the AusIMM. Dr Marsland-Smith is employed on a full-time basis with Alligator Energy as Chief Operating Officer, and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration (including 21 years in ISR uranium mining operations and technical work) and to the activity she is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Dr Marsland-Smith consents to the inclusion in this release of the matters based on her information in the form and context in which it appears.

About Alligator Energy

Alligator Energy Ltd is an Australian, ASX-listed, exploration company focused on uranium and energy related minerals, principally cobalt-nickel. Alligator's Directors have significant experience in the exploration, development and operations of both uranium and nickel projects (both laterites and sulphides).

Projects



APPENDIX 1 – Exploration Target Range Detail

The section below describes each of the 11 target areas in the analysis of the uranium potential for the wider Samphire Uranium Project. An Exploration Target Range has been estimated for those areas (Areas 1–5) where historical drilling has intersected anomalous eU_3O_8 above 250ppm eU_3O_8 cutoff within the targeted sand unit (Kanaka Beds) and the interpreted palaeochannel[3]. As previously stated, areas which lack sufficient data (i.e., drilling or gravity data), a target range value has not been estimated (Areas 6-11).

All 11 areas are exploration targets that AGE will incorporate into its future exploration program with Areas 1-5 being the priorities for AGE's exploration drilling program in 2024 and subsequent years.

Target Areas 1-5 (Basis of Exploration Target Range Calculations)

Target Area 1 - Blackbush Extensions 1

The Blackbush Extension 1 or Target Area 1 is located immediately adjacent to the north, south and west of the Blackbush West uranium mineralisation (Figure 3). Following the conclusion of the most recent drilling program (ASX Announcement 25 October 2023[4]), uranium mineralisation remains open in all three directions. The western area extension drilling intersected significant intercepts including 4.4m @ 1,740ppm pU_3O_8 (BBRM23-198) and 1.36m @ 4,440ppm pU_3O_8 (BBRM23-199), and clearly defined a redox boundary containing two roll fronts extending out to the west and away from current drilling. An encouraging historical intercept of **2.01m @ 395ppm eU_3O_8 (MRM869)** is located 300m to the west of where drilling ceased in 2023 (Figure 4), with little historical drilling existing in the immediate area.

Several encouraging drilling results in the northern area of Blackbush West form part of the northern extent within Target Area 1. Recent drilling intersected roll fronts including 2.18m @ 3,940ppm pU_3O_8 (BBRM23-142) and 0.86m @ 1,490ppm pU_3O_8 (BBRM23-149) with redox boundaries identified extending in a northerly direction. Historical drilling intersected **0.76m @ 1338ppm eU_3O_8 (MRM725)** located over 550m to the north of Blackbush West mineralisation (Figure 4) which is highly encouraging and will be investigated in 2024. A southern extension to Blackbush West is also highly encouraging having intersected several roll fronts providing intersects of 2.16m @ 2,030ppm pU_3O_8 (BBRM23-124) and 2.48m @ 8,930ppm pU_3O_8 (BBRM23-163). Interpretation of the gravity data clearly suggests that the palaeochannels extend in all three directions where mineralisation remains open. Historically, 35 holes have been drilled within Blackbush Extension 1 Area, with drill hole spacing ranging from 100m to 400m and encouragingly ALL holes intersecting Kanaka Bed sands. This area will be the first area tested as part of the 2024 exploration drilling program.

The Blackbush Extensions 1 Area has an estimated combined palaeochannel strike length of approximately 1.44 km and total palaeochannel area of 0.54 km^2. The estimated **Exploration Target is 0.82-1.69 Mt containing an estimated 0.64 to 3.43 Mlbs eU_3O_8 at grades between 354ppm and 922ppm eU_3O_8.**

Target Area 2 - Blackbush Extension 2

The objective for the Blackbush Extension 2 is to not only identify areas of possible mineralisation extensions immediately adjacent to the east and southeast of Blackbush East (Figure 3), but to investigate encouraging historical drilling intercepts such as **2.01m @ 674ppm eU_3O_8 (MRM530)**

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[3] *Note area is stated on the basis that 60% of the channel is available for potential uranium mineralisation based on observations at Blackbush.*

[4] *AGE ASX Release 25 October 2023 02729807.pdf (weblink.com.au).*

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and **2.93m @ 1,529ppm eU_3O_8 (MRM525)** within reduced Kanaka Bed sands located over 350m and 850m respectively away from Blackbush East mineralisation (Figure 4). Geophysical interpretation indicates the continuation of the meandering palaeochannel system overlying the uraniferous Samphire Granite within this entire area. In total, 100 holes have been drilled in Blackbush Extension 2 Area with over 95% intersecting Kanaka Bed sands.

The Blackbush Extension 2 Area has a combined interpreted palaeochannel strike length of approximately 5.7 km and an interpreted area of 1.85 km^2. The estimated **Exploration Target is 2.09-4.94 Mt containing an estimated is 1.76 to 7.59 Mlbs eU_3O_8 at grades between 382ppm and 697ppm eU_3O_8.**

Target Area 3 – Northeastern Channels

Target Area 3, or the Northeastern Channels area is located approximately 4km northeast of Blackbush mineralisation and comprises most of the northern extent of the currently defined Samphire Palaeochannel System (Figure 3). In total, 49 historical holes have been drilled in the area, with over 80% of holes drilled intersecting the Kanaka Bed sands, once again validated the use of gravity data for the targeting of palaeochannels in the Samphire Project Area. With holes drilled both inside and outside of the channel, it has confirmed the location of some palaeochannel boundaries. Encouraging gamma intersections from historical drilling within the Northeastern Channel include **2.04m @ 885ppm eU_3O_8 (MRM748)** and **1.53m @ 316ppm eU_3O_8 (MRM755)** located 2km and 3km respectively from Blackbush mineralisation (Figure 4). Both intersections were noted to occur within oxidised sands within the Kanaka Beds.

The Northeastern Channel Area has an interpreted palaeochannel strike length of approximately 6 km and an area of 2.68 km^2. The estimated **Exploration Target is 3.18-7.2 Mt containing an estimated 2.47 to 12.62 Mlbs eU_3O_8 at grades between 353ppm and 795ppm eU_3O_8.**

Target Area 4 – Eastern Channels

Target Area 4, or the Eastern Channels area, is located approximately 3.4km southeast of Blackbush mineralisation and comprises an area that hosts the longest interpreted palaeochannel strike length of any of the target areas (Figure 3). The interpreted palaeochannel strike length is approximately 14.3 km with an area of 4.9km^2 and remains largely untested by exploration drilling. In total, 19 historical holes are drilled in the area, with only 8 holes drilled within the interpreted palaeochannel. Holes drilled within palaeochannel have intersected Kanaka Beds, and more importantly have intersected both oxidized and reduced coarse sands which may lead to potential for a redox front being discovered with further drilling. Encouraging results intersected within the Eastern Channels include **0.81m @ 343ppm eU3O8 (MRM086)** and **1.29m @ 433ppm eU3O8 (MRM092)** located approximately 2.3km and 3.7km respectively from Blackbush mineralisation (Figure 4). With the presence of interpreted palaeochannels overlying uraniferous granites, Target Area 4 is considered a high priority exploration target area. The estimated **Exploration Target is 6.77-12.62 Mt containing an estimated 4.95 to 11.85 Mlbs eU_3O_8 at grades between 332ppm and 426ppm eU_3O_8.**

Target Area 5 - Plumbush Prospect

The Plumbush Prospect or Target Area 5 is located approximately 5kms to the south of Blackbush Deposit (Figure 3). The prospect has an historical published estimate of uranium mineralisation by UraniumSA[1] based on 43 rotary-mud holes drilled 200m x 200m and 200m x 400m centres. The mineralisation is noted to be hosted within the Kanaka Beds. No new work has been undertaken in this area by AGE since acquiring the project but intends to drill test the Plumbush Prospect[5] using the Prompt Fission Neutron (PFN) downhole tool to QA/QC the equivalent uranium intercepts, much the same way it did with the Blackbush deposit over the last two years. Huge potential exists

[5] *UraniumSA ASX Release – 8 April 2011* https://www.asx.com.au/asxpdf/20110408/pdf/41xy4brvxj3d3c.pdf

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with the prospect, with mineralisation remaining open to the northeast, East and South. The interpreted strike length of the Plumbush channel is 4.85 km with an approximate area of 1.82 km^2. Several highly encouraging gamma intercepts were drilled in the prospect including **2m @ 3,287ppm eU_3O_8 (MRM 1080)**, **3.25m @727ppm eU_3O_8 (MRM1008)** and **3.47m @1057ppm eU_3O_8 (MRM1033)**.

The estimated **Exploration Target is 3.11-10.63 Mt containing an estimated 3.63 to 39.28 Mlbs eU_3O_8 at grades between 530ppm and 1676ppm eU_3O_8.**

Target Areas 6-11 (Excluded from Exploration Target Range Calculations)

Target Area 6 - Blackbush North

Blackbush North or Target Area 6, is located approximately 2km north of Blackbush mineralisation and forms a part of the current most northern extent of gravity data that defines the Samphire Palaeochannel System. Over 90% of the area remains completely untested with any drilling, with a total of 7 holes drilled in the area with 4 holes intersecting interpreted oxidised Kanaka Bed sands ranging from 4m – 20m thickness. The remaining holes stopped short of interpreted target depth. Even though holes drilled in the area did not intersect any significant uranium grades, sands were noted to be oxidized and coarse grained, signifying potential to discover a redox front with future drilling along the 2.2 km of interpreted palaeochannel strike length with an area of 1.21 km^2.

Target Area 7 – Central Channels

Target Area 7, or Central Channels area, is located approximately 2.7km south of Blackbush mineralisation and just north of the Plumbush Uranium Prospect. The area remains largely untested with drilling, with only 14 drill holes drilled in an area of 3.7 km^2. A palaeochannel strike length of 11.5 km has been interpreted, with most holes in the area intersecting slightly reduced Kanaka Bed sands in a drill hole cluster at 100 to 200m centres several hundred metres north of the Plumbush Prospect. The intersection of slightly reduced sediments is encouraging and given the sediments overlie the uraniferous Samphire Granite is a target for future exploration even though no gamma intercepts were encountered with historical drilling.

Target Area 8 – Western Channel

The Western Channel area or Target Area 8 is located approximately 4km to the southwest of the Blackbush Deposit. Of all the Target Areas which have ground gravity data collected, the Western Channel is the area which has the least amount of drilling, with only three drill holes, all of which intersecting slightly reduced sands of the Kanaka Beds. A palaeochannel has been interpreted from the existing gravity data with an interpreted strike length of 8 km and an area of 3.2 km^2. Only three holes have been drilled in the Western Channel area but no uranium mineralisation has been encountered to date. Given the sediments overlie the uraniferous Samphire Granite the Western Channel is a target for future exploration.

Target Area 9 – Plumbush Extended

The Plumbush Extended area or Target Area 9 is located immediately adjacent to the north, east and west of Plumbush Prospect and approximately 4.8km south of the Blackbush Deposit. Only 17 drill holes have been drilled in this area, 14 of which have intersected slightly reduced sands of the Kanaka Bed sands with no anomalous uranium mineralisation intersected. The interpreted palaeochannel strike length is 7.3 km with an area of 2.4km^2. The area is deemed highly prospective given its proximal location to the Plumbush Prospect and its location within an interpreted palaeochannel.

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Target Area 10 – Far North

The "Far North" Area or Target Area 10 is located approximately 5km northeast of the Blackbush Deposit and is approximately 1.7 km^2 in area. The area has seen one line of 200m spaced historical scout exploration drilling, interspersed with a small number of follow up exploration holes up to 1km apart. In total, 17 holes have been drilled in the area with a small number of holes intersecting interpreted Kanaka Beds. No ground-based gravity data has been collected over the area; however, it is expected that palaeochannels will occur given the presence of Kanaka Beds which are in part underlain by the uraniferous Samphire Granite. Ground-based gravity will be acquired in the first half of 2024 to support focusing exploration in this area.

Target Area 11 – Far South

The "Far South" area or Target Area 11 is located approximately 9km to the south of the Blackbush Deposit and immediately south of the Plumbush Uranium Prospect. The area covers 34 km^2 partly over two EL's namely EL6350 and to a lesser extent EL5926. In total 23 holes have been drilled in the area at wide spaced centres (400 to 600m), with the two closest lines occurring 1km apart. Encouragingly, historical drilling has intersected anomalous uranium mineralisation including 2.45m @ 470ppm eU_3O_8 (MRM137) and 0.83m @ 1700ppm eU_3O_8 within coarse grained reduced sands of the Kanaka Beds. Even though no ground gravity data has been collected over the area, it is considered highly prospective due to both geological and geophysical interpretation indicating that area will host a vast southern portion of the Samphire Palaeochannel System and it is underlain by the uraniferous Samphire Granite. AGE plans to carry out a ground-based gravity survey in the future.

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APPENDIX 2

In accordance with ASX Listing Rule 5.7.2 the Company provides the drillhole data used in the Exploration Target Range.

TARGET AREA NUMBER	TARGET AREA NAME	DRILL TYPE	DRILL-HOLE DEPTH (m)	EASTING GDA94 (Z53)	NORTHING GDA94 (Z53)	ELEV. (m MSL)	DIP (°)	AZI-MUTH (°)	FROM (m)	TO (m)	LENGTH (m)	INTERVAL GRADE (U_3O_8 ppm)	GT (m.ppm)	AVERAGE GRADE (U_3O_8 ppm)	AVERAGE THICKNESS (m)	MIN. GRADE (Avg-1SD) (U_3O_8	MAX. GRADE (Avg+1SD) (U_3O_8	DESCRIPTION
1	BLACKBUSH EXTENSIONS 1	RM	72	722602	6324902	25	-90	0	62.48	63.85	1.37	423	580	543	1.06	353	922	MRM598: 1.37m at 423ppm eU_3O_8 from 62.48m
1	BLACKBUSH EXTENSIONS 1	RM	78	722700	6324901	23	-90	0	66.01	67.05	1.04	361	375					MRM599: 1.04m at 361ppm eU_3O_8 from 66.01m
1	BLACKBUSH EXTENSIONS 1								67.34	68.89	1.55	437	677					MRM599: 1.55m at 437ppm eU_3O_8 from 67.34m
1	BLACKBUSH EXTENSIONS 1	RM	76	722804	6324898	22	-90	0	61.38	61.92	0.54	336	181					MRM600: 0.54m at 336ppm eU_3O_8 from 61.38m
1	BLACKBUSH EXTENSIONS 1								65.58	66.12	0.54	403	218					MRM600: 0.54m at 403ppm eU_3O_8 from 65.58m
1	BLACKBUSH EXTENSIONS 1								70.24	72.57	2.33	980	2,283					MRM600: 2.33m at 980ppm eU_3O_8 from 70.24m
1	BLACKBUSH EXTENSIONS 1	RM	76	722903	6324902	22	-90	0	58.78	59.37	0.59	392	231					MRM601: 0.59m at 392ppm eU_3O_8 from 58.78m
1	BLACKBUSH EXTENSIONS 1	RM	72	722708	6325005	24	-90	0	59.81	60.65	0.84	452	380					MRM606: 0.84m at 452ppm eU_3O_8 from 59.81m
1	BLACKBUSH EXTENSIONS 1								62.13	63.41	1.28	443	567					MRM606: 1.28m at 443ppm eU_3O_8 from 62.13m
1	BLACKBUSH EXTENSIONS 1	RM	90	722701	6325102	24	-90	0	63.05	63.91	0.86	316	272					MRM609: 0.86m at 316ppm eU_3O_8 from 63.05m
1	BLACKBUSH EXTENSIONS 1								65.27	66.20	0.93	1,861	1,731					MRM609: 0.93m at 1861ppm eU_3O_8 from 65.27m
1	BLACKBUSH EXTENSIONS 1								70.29	71.27	0.98	340	333					MRM609: 0.98m at 340ppm eU_3O_8 from 70.29m
1	BLACKBUSH EXTENSIONS 1	RM	84	722998	6323702	20	-90	0	53.19	54.00	0.81	313	254					MRM659: 0.81m at 313ppm eU_3O_8 from 53.19m
1	BLACKBUSH EXTENSIONS 1	RM	72	722599	6323701	21	-90	0	58.01	60.11	2.10	556	1,168					MRM663: 2.1m at 556ppm eU_3O_8 from 58.01m
1	BLACKBUSH EXTENSIONS 1	RM	84	722897	6323598	20	-90	0	54.84	55.47	0.63	362	228					MRM710: 0.63m at 362ppm eU_3O_8 from 54.84m
1	BLACKBUSH EXTENSIONS 1	RM	84	723008	6323598	19	-90	0	54.82	55.72	0.90	273	246					MRM711: 0.9m at 273ppm eU_3O_8 from 54.82m
1	BLACKBUSH EXTENSIONS 1	RM	72	722700	6325503	27	-90	0	66.63	67.14	0.51	491	250					MRM725: 0.51m at 491ppm eU_3O_8 from 66.63m
1	BLACKBUSH EXTENSIONS 1								67.38	68.14	0.76	1,338	1,017					MRM725: 0.76m at 1338ppm eU_3O_8 from 67.38m
1	BLACKBUSH EXTENSIONS 1								68.84	69.36	0.52	582	303					MRM725: 0.52m at 582ppm eU_3O_8 from 68.84m
1	BLACKBUSH EXTENSIONS 1	RM	90	722750	6324897	22	-90	0	60.26	62.00	1.74	502	873					MRM850: 1.74m at 502ppm eU_3O_8 from 60.26m
2	BLACKBUSH EXTENSIONS 1	RM	88	722148	6324300	28	-90	0	69.55	70.13	0.58	396	230					MRM868: 0.58m at 396ppm eU_3O_8 from 69.55m
2	BLACKBUSH EXTENSIONS 1	RM	80	722104	6324305	28	-90	0	68.95	70.96	2.01	395	794					MRM869: 2.01m at 395ppm eU_3O_8 from 68.95m
2	BLACKBUSH EXTENSION 2	RM	96	724525	6324178	11	-90	0	49.22	49.99	0.77	404	311	487	1.05	383	697	MRM025: 0.77m at 404ppm eU_3O_8 from 49.22m
2	BLACKBUSH EXTENSION 2	RM	84	724401	6324098	11	-90	0	50.23	51.08	0.85	521	443					MRM059: 0.85m at 521ppm eU_3O_8 from 50.23m
2	BLACKBUSH EXTENSION 2	RM	80	724404	6324487	12	-90	0	48.00	48.88	0.88	522	459					MRM062: 0.88m at 522ppm eU_3O_8 from 48m
2	BLACKBUSH EXTENSION 2	RM	90	724000	6324500	14	-90	0	50.48	51.25	0.77	324	249					MRM063: 0.77m at 324ppm eU_3O_8 from 50.48m
2	BLACKBUSH EXTENSION 2	RM	80	724399	6324897	14	-90	0	56.80	57.55	0.75	547	410					MRM067: 0.75m at 547ppm eU_3O_8 from 56.8m
2	BLACKBUSH EXTENSION 2	RM	72	724300	6324902	15	-90	0	53.85	55.63	1.78	391	696					MRM072: 1.78m at 391ppm eU_3O_8 from 53.85m
2	BLACKBUSH EXTENSION 2								59.70	61.19	1.49	407	606					MRM072: 1.49m at 407ppm eU_3O_8 from 59.7m
2	BLACKBUSH EXTENSION 2	RM	84	723602	6323697	15	-90	0	59.85	60.81	0.96	317	304					MRM073: 0.96m at 317ppm eU_3O_8 from 59.85m
2	BLACKBUSH EXTENSION 2	RM	76	724313	6324919	15	-90	0	48.87	49.51	0.64	363	232					MRM508: 0.64m at 363ppm eU_3O_8 from 48.87m
2	BLACKBUSH EXTENSION 2	RM	78	724398	6324912	14	-90	0	52.47	53.66	1.19	637	758					MRM509: 1.19m at 637ppm eU_3O_8 from 52.47m
2	BLACKBUSH EXTENSION 2								54.30	55.31	1.01	620	626					MRM509: 1.01m at 620ppm eU_3O_8 from 54.3m
2	BLACKBUSH EXTENSION 2	RM	66	724500	6324900	13	-90	0	53.40	54.00	0.60	384	230					MRM510: 0.6m at 384ppm eU_3O_8 from 53.4m
2	BLACKBUSH EXTENSION 2	RM	78	724299	6324792	13	-90	0	50.47	51.21	0.74	462	342					MRM513: 0.74m at 462ppm eU_3O_8 from 50.47m
2	BLACKBUSH EXTENSION 2								52.21	55.19	2.98	364	1,085					MRM513: 2.98m at 364ppm eU_3O_8 from 52.21m

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2	BLACKBUSH EXTENSION 2	RM	78	724299	6324792	13	-90	0	57.15	57.97	0.82	366	300					MRM513: 0.82m at 366ppm eU_3O_8 from 57.15m
2	BLACKBUSH EXTENSION 2								62.19	62.88	0.69	420	290					MRM513: 0.69m at 420ppm eU_3O_8 from 62.19m
2	BLACKBUSH EXTENSION 2	RM	84	724198	6324698	14	-90	0	62.02	62.64	0.62	336	208					MRM520: 0.62m at 336ppm eU_3O_8 from 62.02m
2	BLACKBUSH EXTENSION 2								63.83	64.78	0.95	317	301					MRM520: 0.95m at 317ppm eU_3O_8 from 63.83m
2	BLACKBUSH EXTENSION 2	RM	85	724199	6324599	13	-90	0	51.68	52.22	0.54	338	183					MRM525: 0.54m at 338ppm eU_3O_8 from 51.68m
2	BLACKBUSH EXTENSION 2								67.46	70.39	2.93	1,529	4,480					MRM525: 2.93m at 1529ppm eU_3O_8 from 67.46m
2	BLACKBUSH EXTENSION 2	RM	85	723698	6324495	16	-90	0	49.86	51.87	2.01	674	1,355					MRM530: 2.01m at 674ppm eU_3O_8 from 49.86m
2	BLACKBUSH EXTENSION 2								56.42	56.93	0.51	331	169					MRM530: 0.51m at 331ppm eU_3O_8 from 56.42m
2	BLACKBUSH EXTENSION 2	RM	73	724098	6324496	14	-90	0	50.90	51.45	0.55	752	414					MRM532: 0.55m at 752ppm eU_3O_8 from 50.9m
2	BLACKBUSH EXTENSION 2	RM	79	724203	6324507	13	-90	0	68.23	68.75	0.52	423	220					MRM533: 0.52m at 423ppm eU_3O_8 from 68.23m
2	BLACKBUSH EXTENSION 2	RM	80	724301	6324501	12	-90	0	50.00	50.58	0.58	752	436					MRM534: 0.58m at 752ppm eU_3O_8 from 50m
2	BLACKBUSH EXTENSION 2	RM	90	724599	6324502	11	-90	0	48.35	49.61	1.26	346	436					MRM536: 1.26m at 346ppm eU_3O_8 from 48.35m
2	BLACKBUSH EXTENSION 2	RM	85	723503	6324499	17	-90	0	51.11	51.73	0.62	341	211					MRM537: 0.62m at 341ppm eU_3O_8 from 51.11m
2	BLACKBUSH EXTENSION 2	RM	90	724203	6324398	13	-90	0	49.54	50.58	1.04	689	717					MRM545: 1.04m at 689ppm eU_3O_8 from 49.54m
2	BLACKBUSH EXTENSION 2	RM	79	724402	6324399	12	-90	0	46.91	47.83	0.92	508	467					MRM547: 0.92m at 508ppm eU_3O_8 from 46.91m
2	BLACKBUSH EXTENSION 2	RM	68	723398	6324498	17	-90	0	55.76	57.82	2.06	362	746					MRM557: 2.06m at 362ppm eU_3O_8 from 55.76m
2	BLACKBUSH EXTENSION 2	RM	78	724205	6324001	12	-90	0	49.33	50.00	0.67	546	366					MRM667: 0.67m at 546ppm eU_3O_8 from 49.33m
2	BLACKBUSH EXTENSION 2	RM	78	724396	6324000	11	-90	0	50.78	51.47	0.69	707	488					MRM668: 0.69m at 707ppm eU_3O_8 from 50.78m
2	BLACKBUSH EXTENSION 2	RM	84	724200	6324099	13	-90	0	52.00	52.68	0.68	578	393					MRM671: 0.68m at 578ppm eU_3O_8 from 52m
2	BLACKBUSH EXTENSION 2	RM	84	723795	6324099	15	-90	0	53.00	53.76	0.76	428	325					MRM672: 0.76m at 428ppm eU_3O_8 from 53m
2	BLACKBUSH EXTENSION 2								62.09	63.84	1.75	319	558					MRM672: 1.75m at 319ppm eU_3O_8 from 62.09m
2	BLACKBUSH EXTENSION 2	RM	78	723799	6324200	15	-90	0	50.60	51.30	0.70	528	370					MRM674: 0.7m at 528ppm eU_3O_8 from 50.6m
2	BLACKBUSH EXTENSION 2	RM	86	724002	6324202	14	-90	0	50.68	51.37	0.69	469	324					MRM675: 0.69m at 469ppm eU_3O_8 from 50.68m
2	BLACKBUSH EXTENSION 2	RM	90	724201	6324202	13	-90	0	49.24	50.00	0.76	310	236					MRM676: 0.76m at 310ppm eU_3O_8 from 49.24m
2	BLACKBUSH EXTENSION 2	RM	86	724402	6324289	11	-90	0	47.22	47.96	0.74	547	405					MRM678: 0.74m at 547ppm eU_3O_8 from 47.22m
2	BLACKBUSH EXTENSION 2	RM	86	724202	6324290	13	-90	0	80.11	82.96	2.85	299	852					MRM679: 2.85m at 299ppm eU_3O_8 from 80.11m
2	BLACKBUSH EXTENSION 2	RM	78	724397	6323899	11	-90	0	50.47	51.70	1.23	428	526					MRM696: 1.23m at 428ppm eU_3O_8 from 50.47m
2	BLACKBUSH EXTENSION 2	RM	72	723901	6323903	14	-90	0	51.43	52.03	0.60	529	317					MRM698: 0.6m at 529ppm eU_3O_8 from 51.43m
4	NORTH-EASTERN CHANNEL	RM	82	726451	6326067	6	-90	0	46.18	46.71	0.53	300	159					MRM020: 0.53m at 300 ppm U_3O_8 from 46.18m
4	NORTH-EASTERN CHANNEL	RM	78	725002	6324998	11	-90	0	50.43	51.32	0.89	403	359					MRM688: 0.89m at 403 ppm U_3O_8 from 50.43m
4	NORTH-EASTERN CHANNEL								52.00	52.67	0.67	969	649					MRM688: 0.67m at 969 ppm U_3O_8 from 52.00m
4	NORTH-EASTERN CHANNEL	RM	90	725002	6324884	11	-90	0	52.76	53.30	0.54	319	172	500	0.98	353	795	MRM689: 0.54m at 319 ppm U_3O_8 from 52.76m
4	NORTH-EASTERN CHANNEL	RM	102	725399	6325097	10	-90	0	51.26	53.30	2.04	885	1,805					MRM748: 2.04m at 885 ppm U_3O_8 from 51.26m
4	NORTH-EASTERN CHANNEL	RM	96	725299	6326600	13	-90	0	74.00	75.53	1.53	316	483					MRM755: 1.53m at 316 ppm U_3O_8 from 74.00m
4	NORTH-EASTERN CHANNEL								80.42	81.08	0.66	309	204					MRM755: 0.66m at 309 ppm U_3O_8 from 80.42m

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6	EASTERN CHANNELS	RM	72	724397	6323702	12	-90	0	49.48	50.00	0.52	312	162					MRM075: 0.52m at 312 ppm U_3O_8 from 49.48m
6	EASTERN CHANNELS	RM	66	724801	6322500	10	-90	0	51.14	51.95	0.81	343	278	363	0.87	332	426	MRM086: 0.81m at 343 ppm U_3O_8 from 51.14m
6	EASTERN CHANNELS	RM	78	725800	6321499	5	-90	0	57.95	59.24	1.29	433	559					MRM092: 1.29m at 433 ppm U_3O_8 from 57.95m
9	PLUMBUSH	RM	110.05	720796	6318998	21	-90	0	64.49	68.00	3.51	681	2,390					MRM098: 3.51m at 681ppm eU_3O_8 from 64.49m
9	PLUMBUSH	RM	96	721598	6320200	22	-90	0	62.58	63.61	1.03	1,077	1,109					MRM1001: 1.03m at 1077ppm eU_3O_8 from 62.58m
9	PLUMBUSH	RM	96	721399	6320198	23	-90	0	64.82	67.01	2.19	773	1,693					MRM1002: 2.19m at 773ppm eU_3O_8 from 64.82m
9	PLUMBUSH	RM							76.14	76.95	0.81	290	235					MRM1002: 0.81m at 290ppm eU_3O_8 from 76.14m
9	PLUMBUSH	RM							77.03	78.47	1.44	448	645					MRM1002: 1.44m at 448ppm eU_3O_8 from 77.03m
9	PLUMBUSH	RM	78	720691	6319804	25	-90	0	61.11	62.00	0.89	1,794	1,597					MRM1004: 0.89m at 1794ppm eU_3O_8 from 61.11m
9	PLUMBUSH	RM							64.00	64.58	0.58	455	264					MRM1004: 0.58m at 455ppm eU_3O_8 from 64m
9	PLUMBUSH	RM	99	721102	6319801	23	-90	0	64.99	65.69	0.70	486	340					MRM1006: 0.7m at 486ppm eU_3O_8 from 64.99m
9	PLUMBUSH	RM	96	720899	6319799	24	-90	0	64.00	65.42	1.42	984	1,397					MRM1007: 1.42m at 984ppm eU_3O_8 from 64m
9	PLUMBUSH	RM	84	720701	6319798	24	-90	0	61.49	64.74	3.25	727	2,363					MRM1008: 3.25m at 727ppm eU_3O_8 from 61.49m
9	PLUMBUSH	RM	102	722198	6319400	16	-90	0	56.91	57.48	0.57	286	163					MRM1009: 0.57m at 286ppm eU_3O_8 from 56.91m
9	PLUMBUSH	RM	101	721000	6319399	22	-90	0	65.01	65.63	0.62	532	330					MRM1012: 0.62m at 532ppm eU_3O_8 from 65.01m
9	PLUMBUSH	RM							66.12	67.04	0.92	515	474					MRM1012: 0.92m at 515ppm eU_3O_8 from 66.12m
9	PLUMBUSH	RM	108	721801	6318997	16	-90	0	57.46	58.43	0.97	478	464					MRM1015: 0.97m at 478ppm eU_3O_8 from 57.46m
9	PLUMBUSH	RM							92.13	92.78	0.65	713	463					MRM1015: 0.65m at 713ppm eU_3O_8 from 92.13m
9	PLUMBUSH	RM	114	721001	6319000	20	-90	0	64.49	66.00	1.51	529	799					MRM1017: 1.51m at 529ppm eU_3O_8 from 64.49m
9	PLUMBUSH	RM							66.00	68.00	2.00	2,489	4,978	912	1.55	530	1,676	MRM1017: 2m at 2489ppm eU_3O_8 from 66m
9	PLUMBUSH	RM							68.00	69.50	1.50	3,175	4,763					MRM1017: 1.5m at 3175ppm eU_3O_8 from 68m
9	PLUMBUSH	RM	90	720797	6318697	19	-90	0	59.14	59.76	0.62	349	216					MRM1021: 0.62m at 349ppm eU_3O_8 from 59.14m
9	PLUMBUSH	RM	108	721000	6318701	19	-90	0	60.25	61.50	1.25	345	431					MRM1025: 1.25m at 345ppm eU_3O_8 from 60.25m
9	PLUMBUSH	RM							94.24	95.42	1.18	534	630					MRM1025: 1.18m at 534ppm eU_3O_8 from 94.24m
9	PLUMBUSH	RM	108	721801	6320402	21	-90	0	60.00	62.00	2.00	1,098	2,196					MRM1032: 2m at 1098ppm eU_3O_8 from 60m
9	PLUMBUSH	RM							62.00	69.96	7.96	635	5,055					MRM1032: 7.96m at 635ppm eU_3O_8 from 62m
9	PLUMBUSH	RM	84	721901	6320403	21	-90	0	58.60	60.00	1.40	799	1,119					MRM1033: 1.4m at 799ppm eU_3O_8 from 58.6m
9	PLUMBUSH	RM							60.00	61.20	1.20	789	947					MRM1033: 1.2m at 789ppm eU_3O_8 from 60m
9	PLUMBUSH	RM							62.35	65.82	3.47	1,057	3,668					MRM1033: 3.47m at 1057ppm eU_3O_8 from 62.35m
9	PLUMBUSH	RM							67.18	68.35	1.17	2010	2352					MRM1033: 1.17m at 2010ppm eU_3O_8 from 67.18m
9	PLUMBUSH	RM							71.67	73.35	1.68	291	489					MRM1033: 1.68m at 291ppm eU_3O_8 from 71.67m
9	PLUMBUSH	RM	114	721500	6318803	17	-90	0	59.22	60	0.78	377	294					MRM1070: 0.78m at 377ppm eU_3O_8 from 59.22m
9	PLUMBUSH	RM	108	721697	6319200	17	-90	0	93.86	94.46	0.6	902	541					MRM1076: 0.6m at 902ppm eU_3O_8 from 93.86m
9	PLUMBUSH	RM	78	721299	6319200	19	-90	0	59.49	60	0.51	915	467					MRM1078: 0.51m at 915ppm eU_3O_8 from 59.49m
9	PLUMBUSH	RM	84	721100	6319198	20	-90	0	62.99	64.21	1.22	730	891					MRM1079: 1.22m at 730ppm eU_3O_8 from 62.99m
9	PLUMBUSH	RM	108	720898	6319198	21	-90	0	66	68	2	3287	6574					MRM1080: 2m at 3287ppm eU_3O_8 from 66m
9	PLUMBUSH	RM	102	722603	6319401	15	-90	0	58.24	59.48	1.24	460	570					MRM1094: 1.24m at 460ppm eU_3O_8 from 58.24m

JORC Code, 2012 Edition – Table 1

Section 1 Sampling Techniques and Data

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 representativity 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.*	The work is based on rotary mud drilling and all grade determinations are from down hole geophysical logging. Sondes were appropriately calibrated. Rotary mud drilling was used to obtain 2m samples in the non-target area and 1m mud /chip samples within the target area.
Drilling techniques	• *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	Holes used were drilled using the rotary mud drilling technique. Mud was based on saline formation waters and very successfully facilitated hole stability and minimised collapse and wash out – all vertical
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 preferential loss/gain of fine/coarse material.*	During rotary mud drilling cuttings were collected at the standpipe over 1m or 2m intervals and laid out on black industrial plastic in a sample field. Every interval drilled is represented in an industry standard plastic chip tray which is retained in secure storage. Rotary mud collar samples may not be necessarily representative of the drilled interval because fine materials may be suspended in the return drill mud (density and viscosity modified saline formation waters) and by-pass straight to the drilling sumps. The samples are not suitable for assay.
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.*	The material laid out in sample fields and was geologically logged by the site geologist or by a UraniumSA trained geotechnician. A standardised log sheet for rotary mud drilling has been used for the project and records semi-quantitative data. The level of detail is sufficient for the construction of geological models, the investigation of sedimentology and the sub-domaining of mineralisation.
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 representativity of*	Rotary mud samples are collected at the standpipe are not fully representative of the interval drilled and are not suitable for assay.

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	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.*	
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 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.*	All drill holes used in the Exploration Target Range were logged with calibrated natural gamma sonde with raw data collected and field checked using industry standard WellCAD software and verified material captured to database. QAQC control was applied by the contractor and UraniumSA, and calibration certificates are held for all tools. Individual tool identifications are recorded at the time of use and cross-checked to ensure they have current calibration certificates.
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.*	All holes used in the estimation were logged by UraniumSA calibrated natural gamma tools. Duplicate runs have been used to qualitatively investigate response variation with time arising from settling of material in the fluid column and bleeding of mineralisation from the drilled formations. No material variation was identified. Approximately 37% of the holes were logged under contract by Geoscience Associates Australia. The duplication of natural gamma logging by UraniumSA is the basis for QA/QC of gamma equivalent grade and depth. Natural gamma profiles were evaluated in the field by the Site Geologist or Geotechnician, intersections to standard assumptions calculated using certified algorithms and an in-house developed intercept calculator, then plotted against geology from cutting logging. Raw data, field estimations and plots were electronically delivered to the Adelaide office of Uranium SA where they are interrogated and checked by a Senior Geologist, corrected if necessary, in consultation with the Site Geologist and captured to database. Mineralisation is known to be nuggety and no hole twinning had been carried out. The investigation of in-ground variability has been partially investigated with relatively close-spaced drilling in the wellfield area.
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.*	Handheld GPS has been used for drill collar location. All sites used in the estimation were revisited, coordinates reacquired and adjusted if results were outside a nominated error range. Precision is sufficient for the purposes of estimating the Exploration Target Range. The grid system was in GDA94 Zone 53
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.*	The drilling has evidenced the lateral continuity of the stratigraphy at all hole separations at levels of confidence sufficient for estimating the Exploration Target Range. The drilling has evidenced the geologic control on mineralisation and its lateral continuity at all drill hole

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	• *Whether sample compositing has been applied.*	separations at levels of confidence. Alligator Energy has used an in-house Python script to composite individual natural gamma data captured at 1cm intervals into mineralised intercepts compliant with AGE requirements (min. thickness = 0.5m, max. internal dilution = 0.25m, cut-off grade = 250ppm U3O8). The script has been extensively checked against data and is regarded as reliable and appropriate for the estimate.
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.*	All drill holes were collared vertical. Downhole surveys were available for ~37% of holes and indicate end-of-hole drift in the range 1m to 5m which is within the error of GPS collar locations. Geological interpretation and core logging shows the sediment sequence is flat-lying. For this estimation hole widths are true widths.
Sample security	• *The measures taken to ensure sample security.*	The principal grade estimation method is downhole geophysical logging. The data were generated on the drill site, verified as useable and electronically transmitted to UraniumSA head office.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	All data collected is subject to internal audit and 37% of the holes have been surveyed by both UraniumSA and contractors. Duplicate surveys are cross-collated to verify the data is comparable within limits of precision (raw count and depth).

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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 Blackbush deposit references historical drilling and geophysics covering the SUP which are now located on Exploration Licence EL5926 originally granted 20th November 2016 for a term expiring 2018. A renewal was granted by SA Department of Energy and Mining on 28 April 2023. AGE has submitted an application for a Retention Lease over the area that contains the Blackbush deposit to progress with a Field Recovery Trial at Blackbush, approval of the lease is pending. EL5926 is 100% held by S Uranium Pty Ltd a wholly owned subsidiary of Alligator Energy Ltd. The land covering the licence area is Crown Lease; consisting of several leases over 2 pastoral stations.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	Samphire Uranium Limited (SUL), previously UraniumSA (ASX: USA) historically conducted almost all previous exploration within EL5926 defining the Plumbush (JORC2004) and Blackbush (JORC2012) resources and all relevant drilling, geophysics except ground magnetics conducted by AGE in 2021. UraniumSA conducted preliminary In-Situ Recovery (ISR) hydrogeological and metallurgical test work on the Blackbush deposit with pump testing and hydrogeological modelling.
Geology	• *Deposit type, geological setting and style of mineralisation.*	Mineralisation is dominantly sediment hosted roll-front uranium style within the Eocene Kanaka Beds (sands). Minor amounts of mineralisation are present in the overlying Miocene Melton sands (informal name) and underlying Samphire granite (informal name).
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.*	The topography in the region of the Samphire Uranium Project is predominantly flat. All holes were drilled vertically with an average hole depth of approximately 80 m. Additional images, tables and relevant cross-sections have been included in the body and appendices of this report.
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 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.*	Mineralised intervals were chosen based upon a nominal 250 ppm eU_3O_8 cut-off, minimum 0.5 m interval thickness, and no fixed internal dilution. Consideration was given to mineralisation defined by a natural gamma (eU_3O_8) data.
Relationship between mineralisatio	• *These relationships are particularly important in the reporting of Exploration Results.*	Mineralised widths are considered true widths or close to true widths due to the generally flat lying orientation of the mineralisation and use of

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Criteria	JORC Code explanation	Commentary
n widths and intercept lengths	• *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').*	perpendicular vertical drilling.
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.*	Results are reported in appropriate diagrams and tables within this release.
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 avoiding misleading reporting of Exploration Results.*	This is for reporting of an Exploration Target Range and not new Exploration Results. Appendix 2 lists the drillhole collar locations used in the Exploration Target Range estimate. Otherwise, recent drilling by AGE has been reported as part of AGE public announcements or presentations. All other significant historic drilling data have previously been released to market by Uranium SA and have not been included in this report.
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.*	Ground gravity data has been reprocessed by AGE over the Samphire Uranium Project including Blackbush area to provide guidance on the location of the paleochannel. The dry bulk density used in the Exploration Target Range was 2.05 ton/m^3 in accordance with the density used in previous Blackbush Mineral Resource Estimates.
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.*	The program for 2024 includes: 1) Step out drilling where mineralisation is not closed off at Blackbush. 2) A small 3-month Field Recovery Trial at Blackbush. 3) Acquisition of ground gravity 4) Exploration on priority exploration target areas discussed in this report.

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