Alligator Energy

ASX Announcement

21 November 2024

Significant Drilling Results - Samphire Uranium Project Update

Alligator Energy Limited **(ASX: AGE, 'Alligator'** or 'the **Company')** is pleased to announce significant uranium mineralisation intersections from its most recent resource and extension drilling program at the Samphire Uranium Project, near Whyalla, South Australia.

Highlights

- **Uranium mineralisation extended by a cumulative 500m of strike length outside the known Blackbush West Mineral Resource Envelope.**
- **Significant uranium intersections encountered in roll fronts focussing on the western and southern areas of Blackbush west.**
  - A total of 61 holes drilled for 5,158m from mid-July to mid November 2024.
  - Results align with the strategy outlined in Alligator's Exploration Target Range[1].
- **Continued refinement in understanding of the Blackbush West uranium roll fronts has delivered further targets outside of the Inferred mineral resource.**
  - Significant uranium mineralisation intersections include (see *Figure 1* for full detail):
    - **BBRM24-304 1.3 meters at 1.94% (19,391ppm) pU_3O_8[2] from 62.6m (GT 25,208)[3]**
    - **BBRM24-278 1.1 meters at 0.44% (4,392ppm) pU_3O_8 from 62.94m (GT 4,832)**
    - **BBRM24-338 2.4 meters at 0.20% (1,948ppm) pU_3O_8 from 56.7m (GT 4,675)**
    - **BBRM24-321 1.1 meters at 0.36% (3,633ppm) pU_3O_8 from 58.59m (GT 3,996)**
    - **BBRM24-282 1.7 meters at 0.23% (2,314ppm) pU_3O_8 from 63.1m (GT 3,934)**
    - **BBRM24-283 0.8 meters at 0.45% (4,506ppm) pU_3O_8 from 65.03m (GT 3,604)**
    - **BBRM24-318 0.7 meters at 0.36% (3,566ppm) pU_3O_8 from 59.1m (GT 2,497)**
    - **BBRM24-330 0.8 meters at 0.18% (1,791ppm) pU_3O_8 from 63.1m (GT 1,433)**
    - **BBRM24-314 0.6 meters at 0.17% (1,734ppm) pU_3O_8 from 59.14m (GT 1,040)**
- **An update of the JORC Resource Estimate, inclusive of the January to mid-April drill results[4] to be completed in Q1, 2025, targeting both resource expansion and category conversion from inferred to indicated**
- **Drilling contractor engaged for sustained exploration and resource drilling for the 2025 calendar year. Drilling to re-commence early Q1 2025.**

[1] *AGE ASX Release 7 December 2023, Significant Exploration Target Range established, Samphire Uranium Project 02751150.pdf*
[2] *Note: pU_3O_8 denotes that the grade has been determined by Prompt Fission Neutron downhole logging*
[3] *GT= grade(ppm) x thickness(m) – divide by 10,000 for m% GT*
[4] *ASX release 1 May 2024 – Extension of Uranium Mineralisation at Samphire, 02801940.pdf*

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Alligator's CEO Greg Hall stated: *"We are excited to see Blackbush deposit mineralisation extending well outside the current mineral resource envelope. The experienced roll-front mapping capabilities within our Samphire geological team continue to extend uranium mineralisation and are narrowing the search for other potentially economic roll front structures as we step-out further from the known resource at Blackbush."*

Samphire Q3/4 Drilling Program

Resource and extension drilling over recent months has been focussed on the extension of uranium mineralisation west and south of Blackbush West (Blackbush Extensions 1 Area – Exploration Target Range[5]), and further conversion of inferred to indicated resource within the current Blackbush mineralised envelope. Drilling in these areas has also provided important information on the exact location of the host paleochannel boundary, in particular the broader presence of Kanaka Bed sands (host to mineralisation) than previously interpreted from baseline gravity data (Figure 1).

A total of 61 holes for 5,158m have been drilled from 15 July to 17 November 2024. Drilling is currently ongoing, however is expected to cease on 24 November 2024 to then focus on rehabilitation activities. A full assessment will be undertaken of the 2024 drilling results in preparation for drilling to resume on priority target areas in early Q1 2025 (refer Figure 2).

Blackbush Extensions 1 (Western Area)

The Q3/4 drilling was focussed on the exploration of the palaeochannel extending west from the Blackbush West mineral resource envelope (Figure 1). Holes were drilled at 25m centres on 50m spaced drill lines to test the multiple mineralised roll fronts which now extend ~400m from the existing mineral resource envelope in this area.

While some intercepts listed below and in Figure 1 did not return potentially economic grades (i.e. <100ppm cut-off pU_3O_8), these holes remain significant as they confirm roll fronts exist in this area and warrant further investigative drilling in 2025. In addition, Alligator's previous interpretation from gravity data indicated the palaeochannel was striking to the west, but recent drilling has confirmed a north-south orientation and remains open.

Significant uranium intercepts in this area (for grade or mineralisation continuity), include:

- **BBRM24-278 1.1 meters at 0.44% (4,392ppm) pU_3O_8 from 62.94m (GT 4,832)**
- **BBRM24-282 1.7 meters at 0.23% (2,314ppm) pU_3O_8 from 63.1m (GT 3,934)**
- **BBRM24-283 0.8 meters at 0.45% (4,506ppm) pU_3O_8 from 65.03m (GT 3,604)**
- **BBRM24-330 0.8 meters at 0.18% (1,791ppm) pU_3O_8 from 63.1m (GT 1,433)**
- **BBRM24-280 0.6 meters at 0.05% (531ppm) pU_3O_8 from 63.51m (GT 319)**

[5] *AGE ASX Release 7 December 2023, Significant Exploration Target Range established, Samphire Uranium Project 02751150.pdf*

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Blackbush Extensions 1 (Southern Area)

The Southern Area program was primarily aimed to convert mineral resource from Inferred to Indicated category, with some extension drilling.

Of note is a series of holes (BBRM24-318, BBRM24-316, BBRM24-325, BBRM24-338, BBRM24-326 and BBRM24-314) which returned grades above 250ppm pU_3O_8 cutoff, and which included an intercept of **1.3m @ 1.94% pU_3O_8 (BBRM24-304)**. Drilling in this area not only refined the location of the channel margin, but extended uranium mineralisation outside the known mineralisation envelope by 100m and remains open to the south.

Significant uranium intercepts in this area (for grade or mineralisation continuity), include:

- **BBRM24-318 0.7 meters at 0.36% (3,566ppm) pU_3O_8 from 59.1m (GT 2,497)**
- **BBRM24-304 1.3 meters at 1.94% (19,391ppm) pU_3O_8 from 62.6m (GT 25,208)[1]**
- **BBRM24-304 1.2 meters at 0.05% (565ppm) pU_3O_8 from 76.93m (GT 678)**
- **BBRM24-304 1.3 meters at 0.07% (666ppm) pU_3O_8 from 80.13m (GT 799)**
- **BBRM24-338 2.4 meters at 0.20% (1,948ppm) pU_3O_8 from 56.7m (GT 4,675)**
- **BBRM24-338 0.6 meters at 0.16% (1,590ppm) pU_3O_8 from 72.4m (GT 954)**
- **BBRM24-314 0.6 meters at 0.17% (1,734ppm) pU_3O_8 from 59.14m (GT 1,040)**
- **BBRM24-326 1.0 meters at 0.10% (1004ppm) pU_3O_8 from 64.09m (GT 1004)**
- **BBRM24-316 0.5 meters at 0.05% (458ppm) pU_3O_8 from 59.91m (GT 229)**

All these results above will be included in an update to the Samphire Mineral Resource Estimate in Q1 2025.

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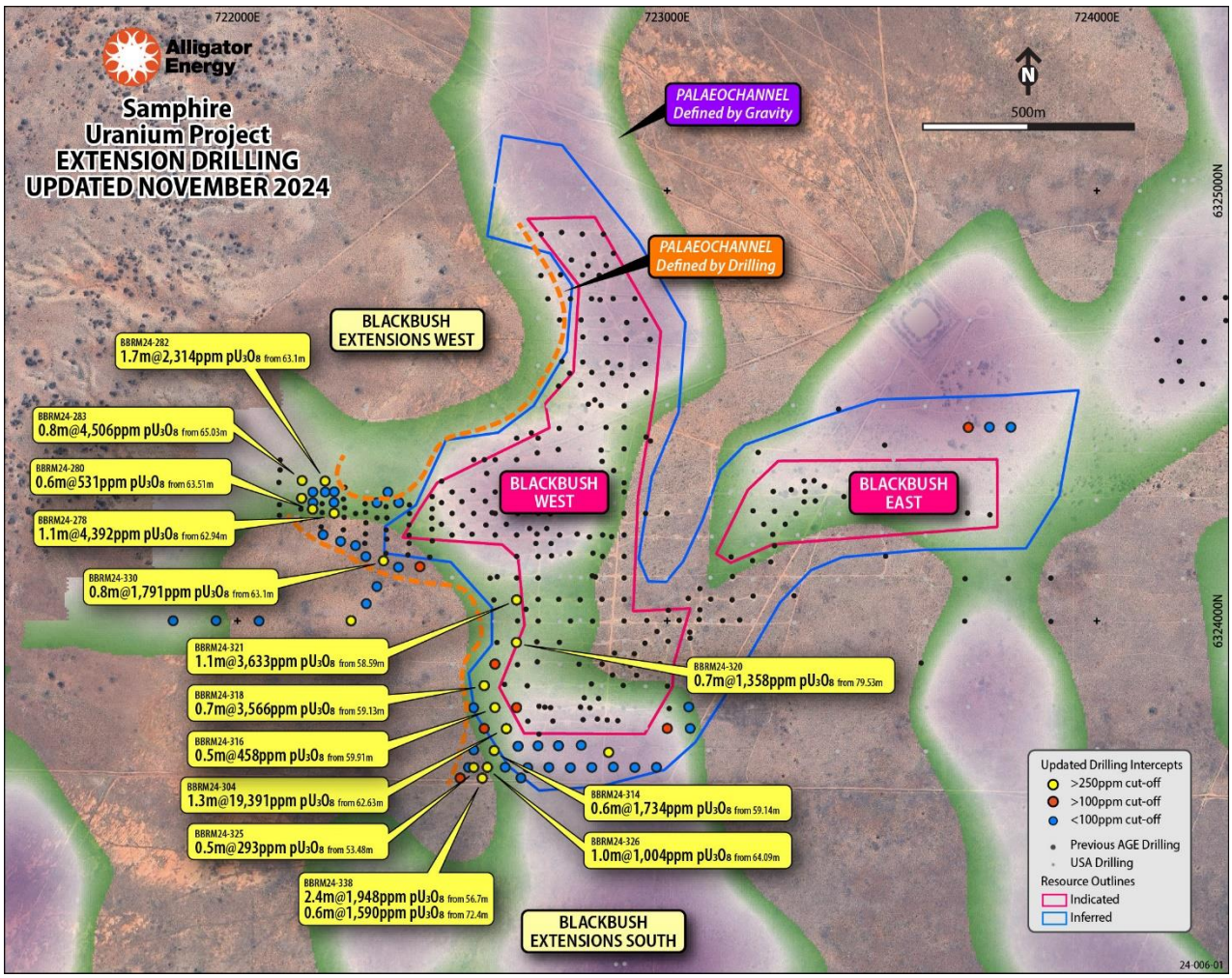

***Figure 1**: Recent drilling at the Samphire Project. Intercepts above 250ppm pU_3O_8 (yellow dots), 100ppm-250ppm pU_3O_8 (red dots) and <100ppm pU_3O_8 (blue dots). The orange dashed channel outline is the latest channel boundary validated by drilling, compared to the green–grey palaeochannel interpretation from ground gravity.*

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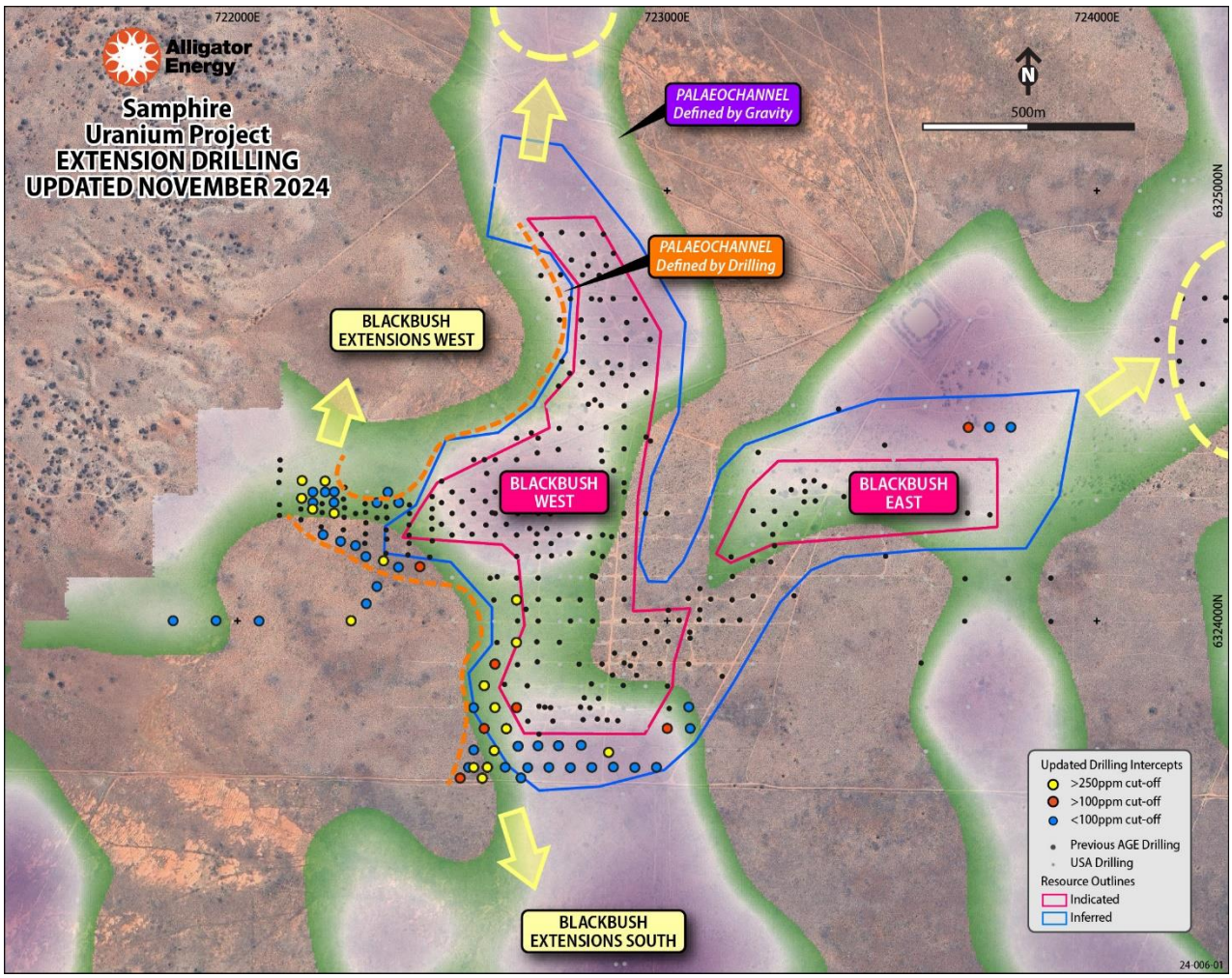

Figure 2:. *Extensional areas to be further drilled tested in 2025 are highlighted with a yellow arrow.*

This announcement was authorised for release by the CEO and Managing Director.

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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.

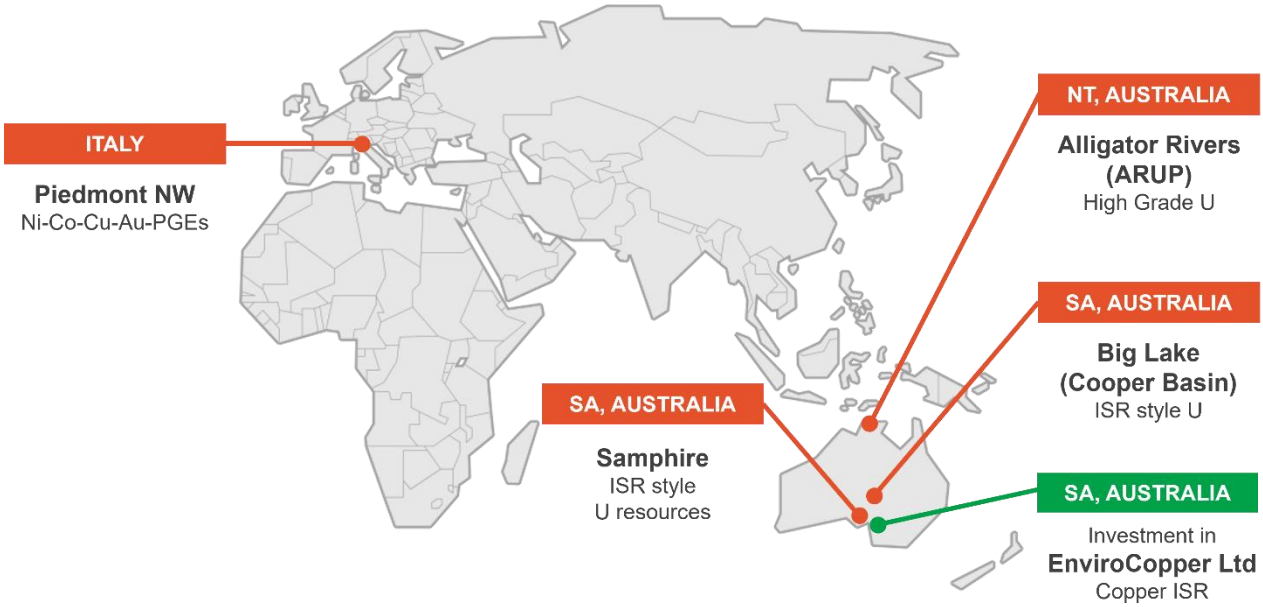
Competent Person's Statement

Information in this report is based on current and historic Exploration 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



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APPENDIX 1 - In accordance with ASX Listing Rule 5.7.2 the Company provides the following information.

Table 1: All significant uranium intersections from PFN logging (pU_3O_8) of the rotary mud drilling program summarised above 0.5m minimum thickness, ≥ 0.025% pU3O8 (250ppm pU3O8) with internal dilution 0.25m.

Note: pU3O8 grades have been acquired by a Prompt Fission Neutron Tool (PFN22) which was calibrated at the Australian Mineral Development Laboratories (AMDEL) calibration facility (Adelaide) and then checked for repeatability by regularly logging a fibreglass-cased calibration hole onsite (MRC002,723703E, 6324350N (GDA94), depth 84.5m). All pU_3O_8 grades were calculated and corrected for borehole size from calliper data taken every 5cm downhole and using the equation *{2.737*({EPITHERM}/{THERMAL}-0.02)}*{-1*Power(10,-06)*Power({CAL},2)+0.0097*{CAL}-0.0313}*

HoleID	Easting (GDA94,Z53)	Northing (GDA94,Z53)	RL	Azimuth	Dip	Hole Depth (m)	Depth From (m)	Depth To (m)	Thickness (m)	pU3O8 (%)	pU3O8 (ppm)	Grade x Thickness (m%)	Grade x Thickness (mppm)
BBRM24-278	722225	6324251	24.7	0	-90	84	62.94	64.04	1.10	0.44	4392	0.48	4832
BBRM24-279	722225	6324276	25.0	0	-90	84	No Significant Intersections						
BBRM24-280	722175	6324260	25.6	0	-90	78	63.51	64.11	0.60	0.05	531	0.03	319
BBRM24-281	722204	6324300	25.4	0	-90	94	No Significant Intersections						
BBRM24-282	722204	6324325	25.7	0	-90	80	63.10	64.80	1.70	0.23	2314	0.39	3934
BBRM24-283	722151	6324326	26.5	0	-90	84	65.03	65.83	0.80	0.45	4506	0.36	3604
BBRM24-284	722150	6324285	26.2	0	-90	95	90.41	91.01	0.60	0.03	279	0.02	167
BBRM24-285	722325	6324080	22.7	0	-90	72	No Significant Intersections						
BBRM24-286	722300	6324040	22.9	0	-90	64	No Significant Intersections						
BBRM24-287	722265	6324001	23.3	0	-90	66	46.82	47.32	0.50	0.04	354	0.02	177
BBRM24-287	722265	6324001	23.3	0	-90	66	60.92	61.62	0.70	0.04	403	0.03	282
BBRM24-287	722265	6324001	23.3	0	-90	66	62.22	62.82	0.60	0.06	556	0.03	334
BBRM24-288	722050	6324000	25.1	0	-90	66.5	No Significant Intersections						
BBRM24-289	721950	6324001	26.4	0	-90	80	No Significant Intersections						
BBRM24-290	721851	6324000	27.5	0	-90	78	No Significant Intersections						
BBRM24-291	723800	6324451	13.6	0	-90	95	No Significant Intersections						
BBRM24-292	723750	6324451	13.9	0	-90	110	No Significant Intersections						
BBRM24-293	723701	6324450	14.0	0	-90	98	92.19	93.19	1.00	0.03	332	0.03	332
BBRM24-293	723701	6324450	14.0	0	-90	98	93.89	95.09	1.20	0.03	341	0.04	409
BBRM24-294	722240	6324185	24.3	0	-90	66	No Significant Intersections						
BBRM24-295	722200	6324201	25.0	0	-90	72	No Significant Intersections						
BBRM24-296	722176	6324275	25.6	0	-90	89.5	No Significant Intersections						
BBRM24-297	722176	6324300	25.9	0	-90	92	No Significant Intersections						
BBRM24-298	722275	6324175	23.7	0	-90	75	No Significant Intersections						
BBRM24-299	722653	6323709	19.6	0	-90	96	No Significant Intersections						
BBRM24-300	722700	6323710	19.4	0	-90	96	No Significant Intersections						
BBRM24-301	722747	6323710	19.1	0	-90	103	No Significant Intersections						
BBRM24-302	722800	6323711	19.0	0	-90	96	No Significant Intersections						
BBRM24-303	722864	6323695	18.8	0	-90	85	54.70	55.30	0.60	0.07	670	0.04	402
BBRM24-304	722626	6323750	19.9	0	-90	93	62.63	63.93	1.30	1.94	19391	2.52	25208
BBRM24-304	722626	6323750	19.9	0	-90	93	76.93	78.13	1.20	0.06	565	0.07	678
BBRM24-304	722626	6323750	19.9	0	-90	93	80.13	81.33	1.20	0.07	666	0.08	799
BBRM24-305	722623	6323660	19.9	0	-90	90	No Significant Intersections						
BBRM24-306	722676	6323659	19.3	0	-90	94	No Significant Intersections						
BBRM24-307	722725	6323660	19.0	0	-90	95	No Significant Intersections						
BBRM24-308	722775	6323659	18.9	0	-90	100	No Significant Intersections						
BBRM24-309	722825	6323660	18.7	0	-90	97	No Significant Intersections						
BBRM24-310	722875	6323660	18.8	0	-90	94	No Significant Intersections						
BBRM24-311	722925	6323659	18.6	0	-90	96	No Significant Intersections						
BBRM24-312	722975	6323660	18.2	0	-90	104	No Significant Intersections						
BBRM24-313	722574	6323750	20.3	0	-90	78	No Significant Intersections						
BBRM24-314	722598	6323699	20.0	0	-90	84	59.14	59.74	0.60	0.17	1734	0.10	1040
BBRM24-315	722550	6323798	20.5	0	-90	85	No Significant Intersections						
BBRM24-316	722599	6323799	20.1	0	-90	90	59.91	60.41	0.50	0.05	458	0.02	229
BBRM24-317	722650	6323799	19.7	0	-90	89	No Significant Intersections						
BBRM24-318	722574	6323850	20.4	0	-90	110	59.13	59.83	0.70	0.36	3566	0.25	2497
BBRM24-318	722574	6323850	20.4	0	-90	110	60.63	61.13	0.50	0.03	307	0.02	153
BBRM24-318	722574	6323850	20.4	0	-90	110	67.53	68.23	0.70	0.03	291	0.02	204
BBRM24-319	722599	6323900	20.6	0	-90	80	No Significant Intersections						
BBRM24-320	722649	6323950	19.8	0	-90	84	79.53	80.23	0.70	0.14	1358	0.10	950
BBRM24-321	722650	6324049	20.1	0	-90	89	58.59	59.69	1.10	0.36	3633	0.40	3996
BBRM24-321	722650	6324049	20.1	0	-90	89	78.09	78.59	0.50	0.13	1299	0.06	650
BBRM24-322	723050	6323800	18.3	0	-90	90	No Significant Intersections						
BBRM24-323	723000	6323750	18.4	0	-90	96	No Significant Intersections						
BBRM24-324	723054	6323750	18.2	0	-90	99	No Significant Intersections						

HoleID	Easting (GDA94,Z53)	Northing (GDA94,Z53)	RL	Azimuth	Dip	Hole Depth (m)	Depth From (m)	Depth To (m)	Thickness (m)	pU3O8 (%)	pU3O8 (ppm)	Grade x Thickness (m%)	Grade x Thickness (mppm)
BBRM24-325	722550	6323659	20.5	0	-90	60	53.48	53.98	0.50	0.03	293	0.01	147
BBRM24-326	722582	6323660	20.3	0	-90	82	53.29	53.79	0.50	0.04	438	0.02	219
BBRM24-326	722582	6323660	20.3	0	-90	82	58.09	58.59	0.50	0.08	762	0.04	381
BBRM24-326	722582	6323660	20.3	0	-90	82	64.09	65.09	1.00	0.10	1004	0.10	1004
BBRM24-326	722582	6323660	20.3	0	-90	82	65.89	66.39	0.50	0.05	499	0.02	249
BBRM24-327	722550	6323700	20.4	0	-90	75	No Significant Intersections						
BBRM24-328	722425	6324126	21.8	0	-90	60	No Significant Intersections						
BBRM24-329	722375	6324125	21.7	0	-90	82	No Significant Intersections						
BBRM24-330	722340	6324140	22.7	0	-90	78	63.10	63.90	0.80	0.18	1791	0.14	1433
BBRM24-331	722299	6324150	23.3	0	-90	72	No Significant Intersections						
BBRM24-332	722226	6324300	25.1	0	-90	79	No Significant Intersections						
BBRM24-333	722376	6324275	22.8	0	-90	89	No Significant Intersections						
BBRM24-334	722350	6324299	23.2	0	-90	66	No Significant Intersections						
BBRM24-335	722325	6324275	23.3	0	-90	75	No Significant Intersections						
BBRM24-336	722538	6323660	20.6	0	-90	59	No Significant Intersections						
BBRM24-337	722518	6323635	20.5	0	-90	68	No Significant Intersections						
BBRM24-338	722570	6323634	20.0	0	-90	77	56.70	59.10	2.40	0.19	1948	0.47	4675
BBRM24-338	722570	6323634	20.0	0	-90	77	72.40	73.00	0.60	0.16	1590	0.10	954

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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 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.*	• Rotary mud drilling was used to obtain 2m samples in the non-target area and 1m mud /chip samples within the target area. • Downhole wireline logging using a Prompt Fission Neutron (PFN) tool was used to calculate pU_3O_8 from the ratio of epithermal and thermal neutrons. • The PFN used in this program was calibrated using industry standard procedures at the Australian Mineral Development Laboratories (AMDEL) calibration facility (Adelaide).
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).*	• All holes were drilled by Watson Drilling with typical hole diameter being 6" (152.4mm). • All holes were 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.*	• Caliper data show that borehole size increases in zones of unconsolidated sands, hence all pU_3O_8 grades were calculated and corrected for borehole size from caliper data taken every 5cm downhole using the equation {2.737*({EPITHERM}/{THERMAL}-0.02)}*{-1*Power(10,-06)*Power({CAL},2)+0.0097*{CAL}-0.0313}

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Criteria	JORC Code explanation	Commentary
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.*	Chip/mud samples were collected 2m in non-target areas and then 1m in the zones of interest (i.e. the target Kanaka Beds). • All samples are geologically logged compliant with industry standards which included lithology, mineralogy, grain size/rounding/sorting, colour, redox. • All samples were photographed using a high-resolution camera.
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.*	• The depth of investigation of the PFN tool approximately 25-40 cm radius around the borehole to allow for accurate measurement of the ratio of epithermal/thermal neutrons for pU3O8 calculations. • QA/QC of pU_3O_8 data included repeatability checks by regularly logging a fibreglass-cased calibration hole onsite (MRC002,723703E, 6324350N (GDA94), depth 84.5m). MRC002 has sufficient assay data in the target zone to compare/calibrate PFN data. • Repeat runs in rotary mud holes that remained open after drilling for sufficient time to allow for PFN logging was also performed.
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.*	Three geophysical tools were used: • Prompt Fission Neutron Tool (PFN) serial number 22 manufactured by Geoinstruments Inc, Nacogdoches, Texas. Neutron generator 78-80kV, logging at 0.5m/minute. • Multisurvey tool (MST) serial number 24 manufactured by Geoinstruments Inc, Nacogdoches, Texas. Measures 16Normal, 64Long borehole resistance, Point Resistance, and Self Potential and uncalibrated natural gamma for depth matching. • GeoVista 3-arm caliper, serial number 5589, measures the bore-hole size in millimetres for the length of the bore hole.
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,*	• QA/QC of pU_3O_8 data included repeatability checks by regularly logging a fibreglass-cased calibration hole onsite (MRC002,723703E, 6324350N (GDA94), depth 84.5m). MRC002 has sufficient assay data in the target zone to compare/calibrate PFN data.

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Criteria	JORC Code explanation	Commentary
	data storage (physical and electronic) protocols. • *Discuss any adjustment to assay data.*	• Natural gamma (on the caliper tool) was used for depth matching the PFN. • No wireline stretch was observed during the program.
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.*	• Drillholes are sited using a Garmin handheld GPS • Drilled holes are surveyed Leica iCON GPS 60 which uses the 4G network to obtain corrections from SmartNet base stations (Continuously Operating Reference Stations (CORS)) located around Whyalla. The SmartNet corrections result in RTK RMS accuracy of 10-20mm in XY and 20-30mm in Z. • Grid system GDA94 Projection 53H
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.*	• Drill spacing varies from 50x100m, 200x200m, 50 x 25m and 200 x 200m centres as program was designed to validate historical drilling and infill where there is sparse historical information. • pU3O8 intercepts calculated above 0.5m minimum thickness, >0.025% pU_3O_8 (250ppm pU3O8) with internal dilution 0.25m • No compositing was applied.
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 Samphire mineralisation is interpreted to be contained in horizontal to sub-horizontal sequence of sediments and underlying weathered granite. This interpretation is derived from the significant historic drilling and geological interpretation of the area. All drillholes are vertical which is appropriate for the orientation of the mineralisation
Sample security	• *The measures taken to ensure sample security.*	• Rotary mud/chip samples are stored in AGE's secured storage facility in Whyalla.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	No audits or reviews undertaken of sampling techniques to date.

Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
Mineral tenement	• *Type, reference name/number, location and ownership including*	• The JORC2012 compliant Blackbush deposit, referenced historical drilling and

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Criteria	JORC Code explanation	Commentary
and land tenure status	*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.*	geophysics covering the Samphire project are located on Exploration Licence EL5926 originally granted 20th November 2016 for a term expiring 2018. The licence was subsequently renewed for a further 3 years expiring in November 2021. A further renewal has been lodged with DEM and 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. • USA conducted preliminary Insitu Recovery (ISR) hydrogeological testwork on the Blackbush deposit with pump testing and hydrogeological modelling. • Third party drilling is confined to one rotary mud hole for lignite exploration located in the southeast of the licence area.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• Mineralisation is dominantly sediment hosted uranium within the Eocene Kanaka Beds. 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*	• Drillhole information that relates to historic drilling was previously reported by Uranium SA (ASX: USA) in ASX release "Samphire Project Update" 27 September 2013. • Drillhole information relating to post 2021 are summarised in Table 1 Appendix 1 of the following releases: ○ ASX release "Exceptional High Grade Uranium Results – Samphire Project" March 29, 2022 ○ ASX release "Resource Drilling complete with highest grades found so far at Samphire Uranium Project" November 23, 2022 ○ ASX release "Samphire Drilling Update" June 8, 2023. ○ Table 1 Appendix 1 of this release.

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Criteria	JORC Code explanation	Commentary
	Competent Person should clearly explain why this is the case.	
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.*	**Rotary Mud** pU3O8 intercepts for both rotary mud holes are calculated above 0.5m minimum thickness, >0.025% pU_3O_8 (250ppm pU3O8) with internal dilution 0.25m
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').*	• Mineralised widths are considered true widths or close to true widths due to the generally flat lying orientation of the mineralisation and use of 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 to avoid misleading reporting of Exploration Results.*	• All mineralised intercepts using a cut-off >250ppm U_3O_8, minimum thickness of 0.5m with internal dilution of 0.25 metres measured by PFN have been reported. • All relevant PFN grade data presented in Table 1.
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.*	• Geological observations have been reported in context of reported intersections.

Criteria	JORC Code explanation	Commentary
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.*	Program for 2024 includes: • Further exploration drilling outside of the Blackbush Mineral Resource,

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