Alligator Energy

ASX Announcement

29 March 2022

Exceptional High-grade uranium results from Samphire Uranium Project, SA

Key Highlights

Alligator Energy Limited **ASX: AGE** (**Alligator** or the **Company**) is pleased to advise and report on resource infill drilling results and downhole Prompt Fission Neutron (PFN) logging program, plus further sonic core assay results (see first ASX Announcement on 31 January 2022). Key highlights of these include:

- The rotary mud (infill) drilling program in the high-grade area of the Blackbush deposit has concluded ahead of schedule with all holes successfully logged with PFN, 3-arm caliper, resistivity, neutron porosity and natural gamma. **Some of the outstanding pU_3O_8[1] grades and grade thicknesses (GT's[2])** intersected are reported below* and in Figure 1:

0.5m minimum thickness, >0.025% pU_3O_8 (250ppm pU3O8), internal dilution 0.25m

Hole ID: BBRM22-	Metres @ pU_3O_8 %	pU_3O_8 ppm	Depth from (m):	GT [2]
021	**3.44m @ 0.854%**	8,540	56.68	29,068
026	**4.00m @ 0.706%**	7,060	63.00	28,240
020	**4.24m @ 0.414%**	4,140	61.23	17,554
034	**4.35m @ 0.313%**	3,130	69.10	13,616
025	**1.45m @ 0.851%**	8,510	64.50	12,340
017	**1.40m @ 0.954%**	9,540	54.00	13,356
and	**2.35m @ 0.313%**	3,130	72.50	7,335
038	**5.50m @ 0.210%**	2,100	59.50	11,550
003	**2.40m @ 0.391%**	3,910	54.00	9,384
029	**1.25m @ 0.674%**	6,740	68.40	8,425
039	**1.70m @ 0.428%**	4,280	67.80	7,276
010	**1.90m @ 0.336%**	3,360	69.70	6,384
and	**1.65m @ 0.426%**	4,260	73.25	7,029
033	**5.75m @ 0.109%**	1,090	69.90	6,268
008	**2.05m @ 0.280%**	2,800	61.10	5,740
014	**2.70m @ 0.182%**	1,182	55.25	4,914
011	**0.95m @ 0.480%**	4,800	73.25	4,560

[1] *Note: pU3O8 denotes that the grade has been determined by PFN downhole logging*
[2] *GT= grade(ppm) x thickness(m) – divide by 10,000 for m% GT*

Table 1 (Appendix 1) lists all significant uranium intersections from PFN logging of the rotary mud drilling program.

Note: Key highlighted results above are a selection within a 250ppm cut-off and GT above 4,000 – We currently estimate a minimum GT 2,000 would be targeted for future project studies, however this will be reviewed as part of the planned Scoping Study targeted for late Q2 / early Q3 and may be lower due to the shallow nature of the deposit.

- **Further exceptional assay results[3] from the next three sonic cored holes** have been reported with U_3O_8 and GT highlights including:

0.5m minimum thickness, >0.025% U_3O_8 (250ppm U3O8), internal dilution 1.0m

Hole ID: BBS21-	Metres @ U_3O_8 %	U_3O_8 ppm	Depth from (m):	GT
002	**6.60m @ 0.204%**	2,130ppm	65.00	14,058
003	**4.32m @ 0.165%**	1,651ppm	72.45	7,132
004	**8.00m @ 0.134%**	1,182ppm	62.00	9,456

- Table 2 (Appendix 1) below provides a summary of assay intersections received from the sonic cored holes to date – we are still awaiting further results for the remaining 10 holes.

- PFN logging for uranium grade (pU_3O_8) in sonic cored holes has been undertaken and comparison with assays is ongoing as results are received. So far PFN data for all core holes correlate well with assays with exception of BBS21-003 which is currently under review. Table 3 (Appendix 1) provides the full list of significant intersections from PFN logging of the sonic cored holes. Figure 1 shows all the GT's as determined by PFN.

- The QAQC of the PFN data has been overseen by internal and external independent expertise to ensure accurate conversion of the direct downhole readings (epithermal & thermal neutron counts) to pU_3O_8 grades.

- **88% of completed[4] rotary mud holes provided pU_3O_8 results greater than the cut-off grade of 250ppm.** The rotary mud drilling and PFN results in particular have highlighted the presence of a consistent north-south high-grade zone trending to the west where historical drilling is relatively sparse (Figure 1).

- Work is continuing to correlate these results with historical drilling, both PFN and gamma, and Alligator will release these comparative results when completed. Our overall aim remains an increased confidence level in the re-estimation of a JORC compliant resource at Blackbush.

- In the target sequence within the Eocene Kanaka Beds we are observing consistent thicknesses of 5 to 20 metre permeable horizons. This comprises an upper sequence of fine-medium grained sands interbedded with silt and clay in addition to similar thicknesses of fine-coarse grained sands both of which host the high-grade uranium mineralisation (Figures 2 & 3).

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[3] *Assay results from reported core holes above are incomplete as they exclude intervals taken for metallurgical test work (these assays are pending).*

[4] *Of the 39 holes completed, 3 holes (BBRM22-009, BBRM22-028m BBRM22-032 & BBRM22-035) were abandoned due to lost circulation within the overlying cover sequence (Melton limestone).*

- Initial observations are that 1 to 3 horizons of higher-grade mineralisation occur within the permeable horizons with thicknesses between 0.5 to 6 metres depending on their location within Samphire paleochannel (Figure 1), all of which are potentially amenable to ISR extraction.

- Depth of these sands is consistently from ~55 to ~80 m below surface, a very shallow depth for potential In-Situ Recovery (ISR) extraction, which AGE believes could result in relatively lower wellfield installation costs (production wells).

Greg Hall, Alligator CEO, said: *"These exceptional PFN and further assay results are expanding the known high-grade area within the Blackbush deposit. The visual inspection of core, combined with the downhole geophysical data from PFN holes, is showing that Blackbush mineralisation is hosted in lithologies with permeability amenable to ISR, and with an apparent consistency of mineralisation that Alligator believes bodes well for our planned resource confidence update and Scoping Study.*

I thank our COO and team for their ongoing rapid advance of drilling, and the very diligent QAQC work to ensure the calibration and PFN calculations for grade conversion are accurate and of the right quality for upcoming resource re-estimation work. These results combined with the ongoing correlations with historical information are aimed to achieve our objective of increasing confidence levels in our Blackbush JORC resource."

Next Steps

Initial observations from the sonic core and the rotary-mud programs show that Blackbush mineralisation is hosted within lithologies with permeability amenable to ISR, and potentially economic grades of mineralisation that are laterally consistent with some predictability in orientation. There have been up to 3 horizons of mineralisation observed depending on the location within the Samphire channel (Figure 1).

Detailed interpretation and well-log correlations of the downhole wireline geophysics between rotary-mud, sonic core and historical drilling results is now being undertaken to map the mineralisation and permeable host rocks in detail. A series of plans and cross sections will be produced from this work. This will form the basis for the constraints used in the re-estimation of a JORC compliant resource in the high-grade area of the Blackbush deposit.

In addition, the above work will form the basis for targeting extensions to known mineralisation and wider exploration targeting. The latter will also be supported by review of the existing regional geophysics to assess if further surveys are required.

Alligator is still awaiting results from the remaining assays for sonic core holes BBS21-005 through to 014.

NOTE: Only results from current Alligator infill drilling program are shown on this diagram. Many historic holes (black dots) have mineralisation – we are currently correlating this data.

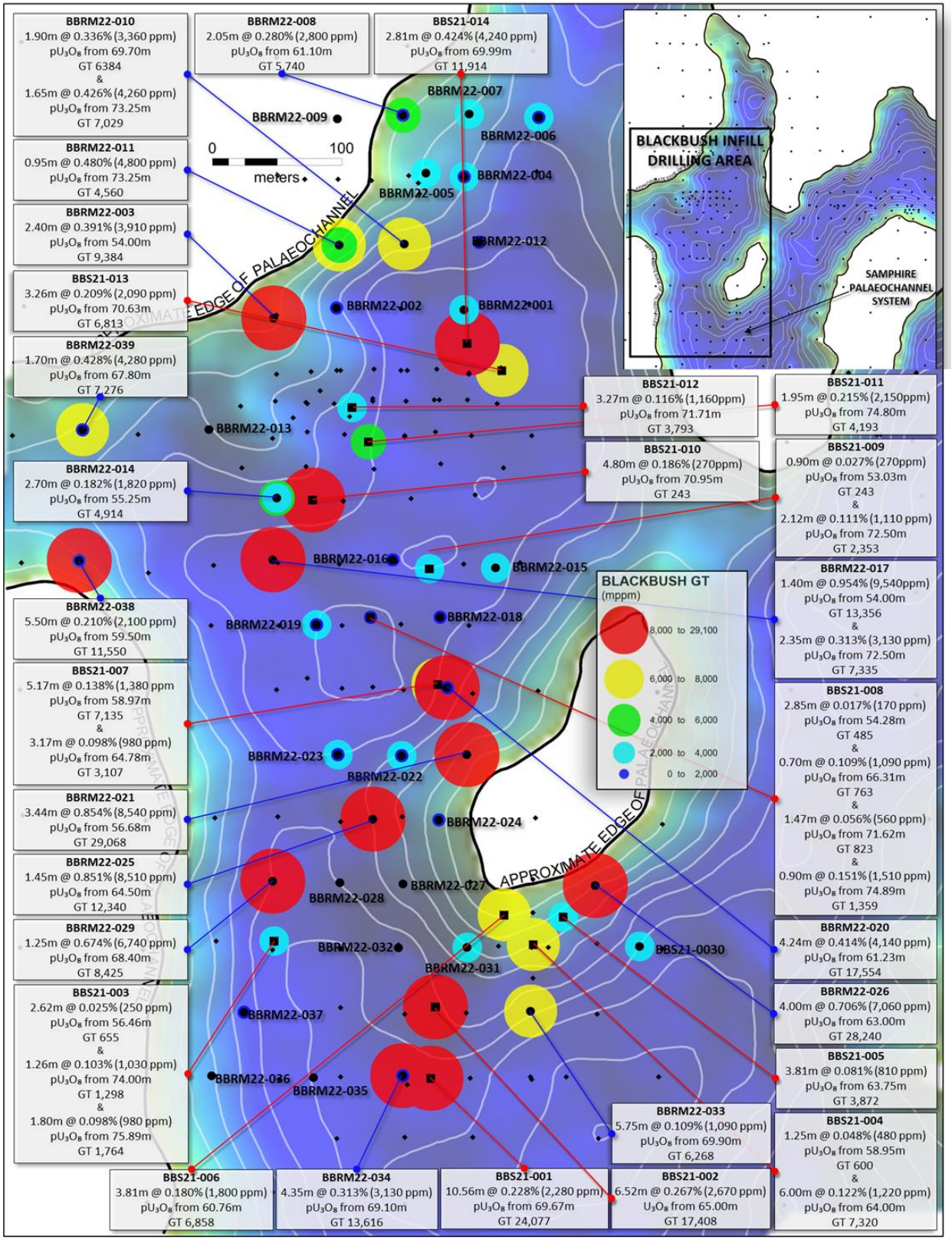

Figure 1: Blackbush resource area with sonic (red) & rotary mud holes (blue) with key intersections determined by PFN. Location of historic drillholes are also shown (black dots). PFN is reported for the purposes of uniformity for the AGE infill holes. Significant uranium intersections determined by assay of core holes BBS21-001, 002, 003 & 004 is provided in Table 1, Appendix 1.

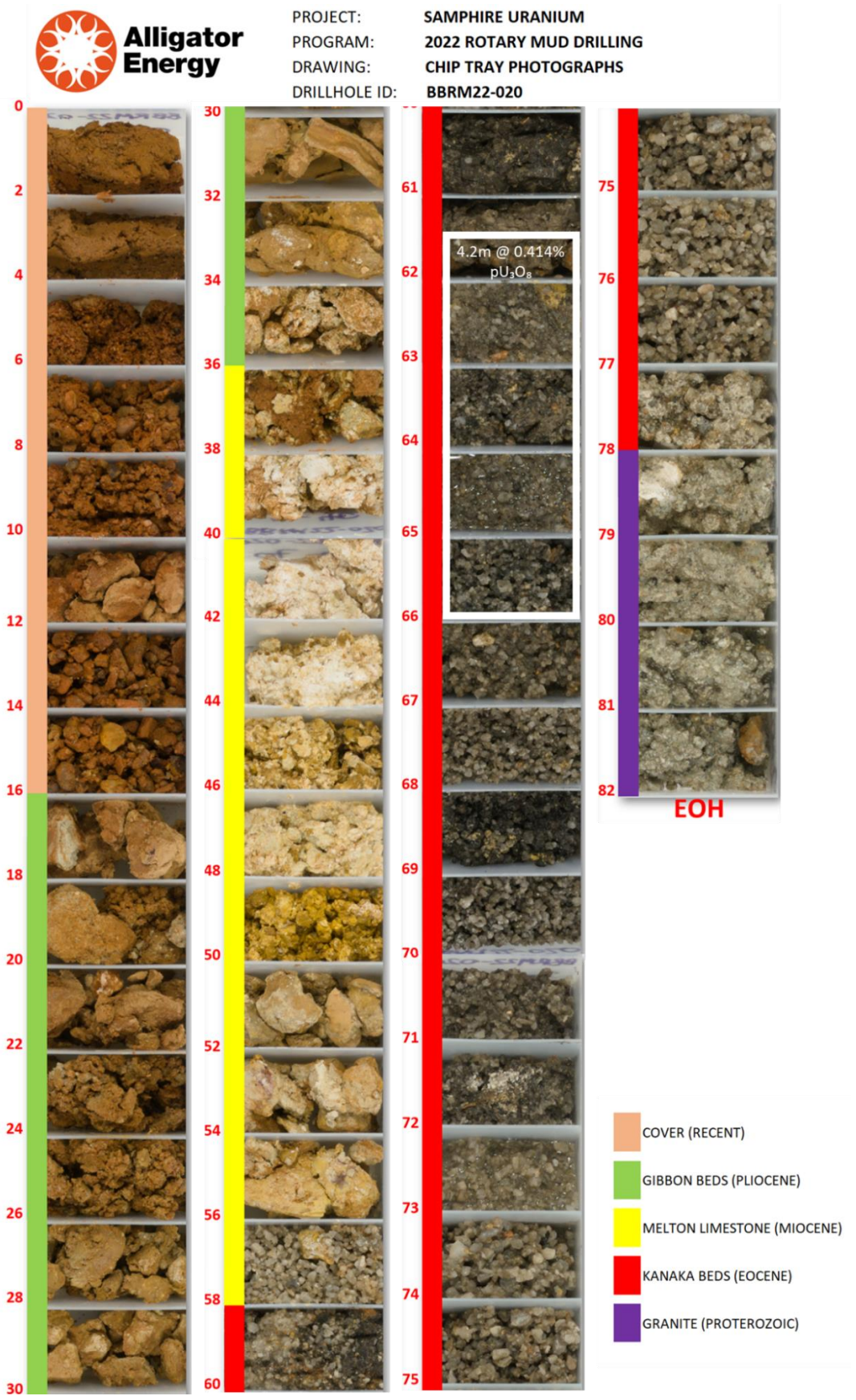

Figure 2: Typical geology as seen in the rotary-mud samples and location of uranium mineralisation (BBRM22-020).

Figure 3: Example of mineralised permeable lithologies (Kanaka Beds) observed in sonic core hole BBS21-002, depth 67m-69m (U_3O_8 ppm reported from assay).

Figure 4: Rotary mud drilling rig at Blackbush deposit, Samphire Uranium Project

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 above 0.5m minimum thickness, >0.025% pU_3O_8 (250ppm pU3O8) with internal dilution 0.25m

Holeid	Easting (GDA94, Z53)	Northing (GDA94, Z53)	RL	Azimuth	Dip	Hole Depth (m)	Depth From (m)	Depth To (m)	Thickness (m)	pU3O8%	ppm pU3O8
BBRM22-001	722849	6324399	20	000	-90	86	70.19	70.54	0.35	0.134	1340
BBRM22-001	722849	6324399	20	000	-90	86	71.74	72.84	1.1	0.340	3400
BBRM22-002	722749	6324399	20	000	-90	84	70.17	70.72	0.55	0.120	1200
BBRM22-003	722699	6324399	20	000	-90	84	54.00	56.40	2.4	0.391	3910
BBRM22-004	722649	6324399	20	000	-90	90	62.85	63.55	0.7	0.099	990
BBRM22-004	722649	6324399	20	000	-90	90	68.75	70.60	1.85	0.152	1520
BBRM22-004	722649	6324399	20	000	-90	90	72.10	72.85	0.75	0.099	990
BBRM22-005	722809	6324498	20	000	-90	91	62.40	64.25	1.85	0.193	1930
BBRM22-005	722809	6324498	20	000	-90	91	65.05	66.55	1.5	0.201	2010
BBRM22-005	722809	6324498	20	000	-90	91	71.35	72.30	0.95	0.358	3580
BBRM22-006	722900	6324548	20	000	-90	96	75.95	77.50	1.55	0.132	1320
BBRM22-006	722900	6324548	20	000	-90	96	78.10	80.65	2.55	0.065	650
BBRM22-007	722848	6324548	20	000	-90	83	60.25	62.05	1.8	0.210	2100
BBRM22-008	722799	6324548	20	000	-90	84	61.10	63.15	2.05	0.280	2800
BBRM22-008	722799	6324548	20	000	-90	84	66.40	67.10	0.7	0.246	2460
BBRM22-009	722746	6324548	20	000	-90	68	0.00	0.00	0	0.000	0
BBRM22-010	722798	6324449	20	000	-90	84	68.05	68.65	0.6	0.178	1780
BBRM22-010	722798	6324449	20	000	-90	84	69.70	71.60	1.9	0.336	3360
BBRM22-010	722798	6324449	20	000	-90	84	73.25	74.90	1.65	0.426	4260
BBRM22-011	722748	6324449	20	000	-90	82	68.05	68.65	0.6	0.178	1780
BBRM22-011	722748	6324449	20	000	-90	82	69.70	71.60	1.9	0.336	3360
BBRM22-011	722748	6324449	20	000	-90	82	73.25	74.20	0.95	0.480	4800
BBRM22-012	722848	6324449	20	000	-90	84	71.60	72.40	0.8	0.139	1390
BBRM22-013	722648	6324299	20	000	-90	54	No results - abandoned at 54m due to lost circulation in limestone				
BBRM22-014	722700	6324249	20	000	-90	90	55.25	57.95	2.7	0.182	1820
BBRM22-014	722700	6324249	20	000	-90	90	75.00	76.05	1.05	0.236	2360
BBRM22-015	722873	6324199	20	000	-90	84	74.05	75.35	1.3	0.132	1320
BBRM22-015	722873	6324199	20	000	-90	84	76.40	77.65	1.25	0.179	1790
BBRM22-016	722789	6324199	20	000	-90	92	75.90	76.55	0.65	0.106	1060
BBRM22-017	722699	6324199	20	000	-90	89	72.50	74.85	2.35	0.313	3130
BBRM22-017	722699	6324199	20	000	-90	89	76.60	78.00	1.4	0.954	9540
BBRM22-018	722827	6324149	20	000	-90	87	53.20	53.70	0.5	0.102	1020
BBRM22-019	722731	6324149	20	000	-90	89	54.00	55.70	1.7	0.136	1360
BBRM22-019	722731	6324149	20	000	-90	89	56.60	58.15	1.55	0.094	938
BBRM22-019	722731	6324149	20	000	-90	89	69.05	69.55	0.5	0.105	1050
BBRM22-019	722731	6324149	20	000	-90	89	77.95	78.85	0.9	0.170	1700
BBRM22-020	722837	6324099	20	000	-90	82	61.23	65.47	4.24	0.414	4140
BBRM22-020	722837	6324099	20	000	-90	82	66.54	67.30	0.76	0.204	2040
BBRM22-021	722850	6324049	20	000	-90	89	56.68	60.12	3.44	0.845	8450
BBRM22-022	722799	6324049	20	000	-90	82	57.30	58.90	1.6	0.097	967
BBRM22-022	722799	6324049	20	000	-90	82	66.50	67.65	1.15	0.253	2530
BBRM22-022	722799	6324049	20	000	-90	82	70.50	71.75	1.25	0.083	826
BBRM22-023	722748	6324049	20	000	-90	87	58.95	60.20	1.25	0.268	2680
BBRM22-023	722748	6324049	20	000	-90	87	67.50	68.60	1.1	0.246	2460
BBRM22-023	722748	6324049	20	000	-90	87	72.75	74.15	1.4	0.049	490
BBRM22-024	722826	6323999	20	000	-90	80	56.80	57.40	0.6	0.058	580
BBRM22-024	722826	6323999	20	000	-90	80	59.35	60.25	0.9	0.068	680
BBRM22-025	722775	6323999	20	000	-90	81	57.3	58.3	1	0.083	830
BBRM22-025	722775	6323999	20	000	-90	81	64.5	65.95	1.45	0.851	8510
BBRM22-026	722949	6323949	20	000	-90	83	52.9	53.55	0.65	0.180	1800
BBRM22-026	722949	6323949	20	000	-90	83	63	67	4	0.706	7060
BBRM22-027	722800	6323949	20	000	-90	50	No results - abandoned at 50m due to lost circulation in limestone				
BBRM22-028	722749	6323949	20	000	-90	86	0	0	0	0.000	0
BBRM22-029	722699	6323949	20	000	-90	91	68.4	69.65	1.25	0.674	6740
BBRM22-030	722982	6323899	20	000	-90	87	74.75	77.5	2.75	0.105	1050
BBRM22-031	722848	6323899	20	000	-90	82	61.4	63.2	1.8	0.171	1710
BBRM22-032	722795	6323899	20	000	-90	88	0	0	0	0.000	0
BBRM22-033	722899	6323849	20	000	-90	87	69.9	75.65	5.75	0.109	1090
BBRM22-034	722801	6323799	20	000	-90	84	69.1	73.45	4.35	0.313	3130
BBRM22-034	722801	6323799	20	000	-90	84	74.7	76.3	1.6	0.110	1100
BBRM22-034	722801	6323799	20	000	-90	84	78.2	78.95	0.75	0.162	1620
BBRM22-035	722730	6323799	20	000	-90	84	0	0	0	0.000	0
BBRM22-036	722651	6323799	20	000	-90	42	No results - abandoned at 42m due to lost circulation in limestone				
BBRM22-037	722674	6323849	20	000	-90	87	77.37	79.02	1.65	0.119	1190
BBRM22-038	722548	6324199	20	000	-90	90	59.5	65	5.5	0.210	2100
BBRM22-038	722548	6324199	20	000	-90	90	67.85	68.85	1	0.125	1250
BBRM22-039	722549	6324299	20	000	-90	96	67.8	69.5	1.7	0.428	4280
BBRM22-039	722549	6324299	20	000	-90	96	70	72.5	2.5	0.051	510
BBRM22-039	722549	6324299	20	000	-90	96	73.05	74	0.95	0.035	346

pU3O8 grades have been aquired 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 claculated and corrected for borehole size from caliper 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}*

Table 2: All significant uranium intersections assay of the sonic core holes (BBS21-001, 002, 003 & 004). above 0.5m minimum thickness, >0.025% U3O8 (250ppm U_3O_8) with internal dilution 1.0m.

Holeid	Easting (GDA94, Z53)	Northing (GDA94, Z53)	RL	Azimuth	Dip	Sample From (m)	Sample To (m)	Thickness (m)	U ppm	GT
BBS21-001*	722822	6323799	20	000	-90	71	80.5	9.5	2353	22,354
BBS21-002	722823	6323855	20	000	-90	54.10	56.00	1.9	291	553
						65.00	71.60	6.6	2130	14,058
				Note: BBS21-002, 69-70m, 1m of missing assay - sampled for metallurgical testwork						
										0
BBS21-003	722697	6323904	20	000	-90	58.00	61.50	3.5	390	1,365
						72.45	76.77	4.32	1651	7,132
				Note: BBS21-003, 74-76m, 2m of missing assay - sampled for metallurgical testwork						
BBS21-004	722902	6323901	20	000	-90	58.95	59.92	0.97	268	260
						62.00	70.00	8	1182	9,456
				Note: BBS21-004, 63-64m and 67-68m, 2m of missing assay - sampled for metallurgical testwork						

*(*see first ASX Announcement on 31 January 2022)*

Table 3: All significant uranium intersections from PFN logging (pU_3O_8) of the sonic core hole drilling program above 0.5m minimum thickness, >0.025% pU3O8 (250ppm pU_3O_8) with internal dilution 0.25m.

Holeid	Easting (GDA94, Z53)	Northing (GDA94, Z53)	RL	Azimuth	Dip	Core Length (m)	Depth From (m)	Depth To (m)	Thickness (m)	pU3O8%	ppm pU3O8	GT
BBS21-001	722822	6323799	20	000	-90	44	69.67	80.23	10.56	0.228	2280	24,077
BBS21-002	722823	6323855	20	000	-90	40	65.00	71.52	6.52	0.267	2670	17,408
BBS21-003	722697	6323904	20	000	-90	45	56.46	59.08	2.62	0.025	250	655
BBS21-003	722697	6323904	20	000	-90	45	74.00	75.26	1.26	0.103	1030	1,298
BBS21-003	722697	6323904	20	000	-90	45	75.89	77.69	1.80	0.098	980	1,764
BBS21-004	722902	6323901	20	000	-90	29	58.95	60.20	1.25	0.048	480	600
BBS21-004	722902	6323901	20	000	-90	29	64.00	70.00	6.00	0.122	1220	7,320
BBS21-005	722925	6323923	20	000	-90	30	63.75	68.53	4.78	0.081	810	3,872
BBS21-006	722881	6323924	20	000	-90	30	60.76	64.57	3.81	0.180	1800	6,858
BBS21-007	722826	6324105	20	000	-90	39	58.97	64.14	5.17	0.138	1380	7,135
BBS21-007	722826	6324105	20	000	-90	39	64.78	67.95	3.17	0.098	980	3,107
BBS21-008	722775	6324157	20	000	-90	32	54.28	57.13	2.85	0.017	170	485
BBS21-008	722775	6324157	20	000	-90	32	66.31	67.01	0.7	0.109	1090	763
BBS21-008	722775	6324157	20	000	-90	32	71.62	73.09	1.47	0.056	560	823
BBS21-008	722775	6324157	20	000	-90	32	74.89	75.79	0.9	0.151	1510	1,359
BBS21-009	722821	6324195	20	000	-90	39	53.03	53.93	0.9	0.027	270	243
BBS21-009	722821	6324195	20	000	-90	39	77.21	79.33	2.12	0.111	1110	2,353
BBS21-010	722729	6324249	20	000	-90	36	70.95	75.75	4.8	0.186	1860	8,928
BBS21-011	722772	6324294	20	000	-90	45	74.80	76.75	1.95	0.215	2150	4,193
BBS21-012	722760	6324322	20	000	-90	48	71.71	74.98	3.27	0.116	1160	3,793
BBS21-013	722875	6324348	20	000	-90	38	70.63	73.89	3.26	0.209	2090	6,813
BBS21-014	722850	6324372	20	000	-90	37	69.99	72.80	2.81	0.424	4240	11,914

pU3O8 grades have been aquired 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, 23703E, 6324350N (GDA94), depth 84.5m). All pU3O8 grades were calculated and corrected for 6" casing borehole size and using the equation 2.737*({EPITHERM}/{THERMAL}-0.02)}*0.94

APPENDIX 2

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** • 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). **Sonic Core Drilling** • Sonic drilling maximises core recovery in soft sediments compared to other coring techniques. • Drill core was extracted direct from the drill rod and placed into a 1-metre-long plastic sleave to contain the core. The sleaved core was then sealed and placed in 1 metre intervals in core trays. • Down hole core run depths were marked on the core trays. • Due to the nature of the sonic drilling technique some redistribution of unconsolidated material can take place. Adjustment of core downhole depths and sampling intervals may be required following review of measured core depths and downhole geophysical data. This adjustment has not been undertaken on the data in this announcement. • Following collection and prior to sampling trays of core were transported to a coldroom for storage at 1.5 ^oC.
Drilling techniques	• *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	**Rotary Mud Drilling** • All holes were drilled by Watson Drilling with typical hole diameter being 6" (152.4mm). • All holes were vertical. **Sonic Core Drilling** • All holes were drilled by Star Drilling using sonic drilling • Hole diameter was 100cm within 150cm steel cased • Core was not oriented (vertical)

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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.*	**Rotary Mud Drilling** • 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} • For sonic core holes PFN grade calculations this equation was 2.737*({EPITHERM}/{THERMAL}-0.02)}*0.94 **Sonic Core Drilling** • Sonic drilling maximises core recovery in soft sediments compared to other coring techniques. • All intervals measured for length during logging and sampling. • Sample lost in the sample cutting process was collected and weighed for each metre. This was minimal in relation to the core interval. • No analysis conducted on sample recovery and grade
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.*	**Rotary Mud Drilling** • 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. **Sonic Core Drilling** • All (100%) drill core has been geologically logged and core photographs taken. • Logging is qualitative with description of colour, weathering status, major and minor rock types, texture, sedimentary features grain size, regolith zone, presence of organic material, veining, alteration and comments added where further observation is made.
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.*	**Rotary Mud Drilling** • 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

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	• *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.*	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. **Sonic Core Drilling** • Core was halved, photographed and geologically logged. • Due to the core being generally soft material comprising sand and clay zones it was cut using carving knife or box cutter. • Initial halving of core was undertaken in a contained guide designed to minimise disruption to the core and core loss. • One half core component was subsequently halved by knife or boxcutter within core trays to create quarter core increments for chemical assay samples. • Sample intervals were determined by geological boundaries with a maximum sample length of 0.5 metres and a minimum interval of 0.1 metres. • Full quarter core sample increments were selected directly from the core tray using a modified scoop or plaster knife. • Samples were placed directly in uniquely numbered calico sample bags with a waxed paper sample ticket showing the same sample number placed inside the bag with the sample. • Each individual sample was weighed following collection. • The sample mass ranged from 0.15 kg to 2.4 kg with average mass of 0.88kg. • Duplicate quarter core samples were analysed at a frequency of 1:20 primary samples. • Contamination was minimised in the cutting and sampling process by regular washing of cutting equipment in fresh water. • Sampling areas were routinely vacuum cleaned and wiped down to remove loose dust and fragments and checked with handheld scintillometer, to check for and eliminate potential radiation contamination in the cutting and sampling process.

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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.*	**Rotary Mud Drilling** Three geophysical tools were used: • Prompt Fission Neutron Tool (PFN) serial number 22 manufactured by Geonstruments 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. **Sonic Core Drilling** • Laboratory techniques are industry standard • Analysis is considered total for all elements • Commercial analytical standards inserted in sample submission at a rate of a minimum of 1: 20 primary samples. • Analytical blank samples submitted at a rate of 1:20 primary samples and following suspected high-grade samples. • Duplicate ¼ core samples submitted at a rate of 1:20 primary samples. • QAQC results indicate no bias in analysis.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	**Rotary Mud Drilling** • ~20% of rotary mud holes twinned historical and/or sonic core holes which were used as a calibration check on the pU_3O_8 grades being acquired in this program. • Natural gamma (on the caliper tool) was used for depth matching the PFN. • No wireline stretch was observed during the program. **Sonic Core Drilling** • No independent verification of significant intersections undertaken • No twinning of holes • No procedures for data storage and management have not been compiled as yet. • Assay data was received in digital format from the laboratory and merged with sampling data into an Excel spreadsheet format for QAQC analysis and review against field data. • Data validation of assay data and sampling data have been conducted to ensure data

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		entry is correct. • All assay data is received from the laboratory in element form is unadjusted for data entry. • Elemental uranium has been converted to U_3O_8 by applying a conversion factor of: U ppm x 1.179243 = U_3O_8 ppm • Percentage (%) U_3O_8 =U3O8 ppm/10,000
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.*	**Rotary Mud Drilling** • 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 **Sonic Core Drilling** • Hole collar locations measured by handheld GPS. General accuracy estimated as ± 2 metres • Downhole directional survey measured by magnetic deviation tool by Borehole Wireline. • 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.*	**Rotary Mud Drilling** • 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. **Sonic Core Drilling** • Single drill hole. • No sample compositing
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.*	**Rotary Mud Drilling** • 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

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		Sonic Core Drilling • 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 Drilling** • Rotary mud/chip samples are stored in AGE's secured storage facility in Whyalla. **Sonic Core Drilling** • Chemical assay samples were stored in a secured storage facility in Whyalla then transported by road by an Alligator Energy staff member to the Adelaide laboratory.
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 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 JORC2012 compliant Blackbush deposit, referenced historical drilling and 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.

Criteria	JORC Code explanation	Commentary
		• 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 Competent Person should clearly explain why this is the case.*
		• Drillhole information core hole BBS21-001 is contained in Table 2 and Table 3 of this announcement and ASX release "High-grade Assay Results – Samphire Uranium Project", January 31, 2022.
		• Drillhole information that relates to historic drilling was previously reported by Uranium SA (ASX: USA) in ASX release "Samphire Project Update" 27 September 2013.

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 and Sonic Core Drilling** • pU3O8 intercepts for both rotary mud and holes and sonic core holes are calculated above 0.5m minimum thickness, >0.025% pU_3O_8 (250ppm pU3O8) with internal dilution 0.25m **Sonic Core Drilling (assay)** • Average grades have been calculated using length weighted average. • No grade cutting has been applied • Intersections have been aggregated on sample intervals exceeding a nominal 250ppm U_3O_8 cut off with a maximum length of 1 metre internal material below this cut-off. • Historic eU_3O_8 intersections have been aggregated from historical drillhole data (released 2013) composited to 0.5 metres then averaged using a 250ppm eU_3O_8 lower cut-off and maximum of 1 metre internal material below cut-off.
Relationship between mineralisation widths and	• *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*	• 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.

Criteria	JORC Code explanation	Commentary
intercept lengths	*lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').*	
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 with internal dilution not exceeding 1 metre (for sonic core using assay) and 0.25 metre when measures by PFN) have been reported. • All relevant assay and PFN data presented in Tables 1- 3
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.
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 2022 includes: • Detailed geological interpretation/well log correlations of sonic and rotary mud holes, integrating these observations with historical drilling. • Extraction test work on sonic core samples • Re-estimation and classification of the Blackbush mineral resource. • Ground geophysical surveys and follow-up exploration drilling to test for extensions to the Blackbush deposit.

This announcement has been authorised for release by Greg Hall, 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 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 over 15 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