



# Alligator announces High Grade assay results from Samphire Uranium Project, SA

## Key Highlights

- Assay results from the first sonic drill hole core confirm high grade uranium over anticipated intervals within the Blackbush resource.
- Hole BBS21-001 results include best intersection of 9.50 metres at 2,353 ppm (0.24%)  $U_3O_8$  above a cut-off of 250ppm  $U_3O_8$ . This includes an interval of 2.0 metres @ 6,839 ppm (0.68%)  $U_3O_8$ .
- Best intersection hosted in sequences of coarse to fine grained sands, with minor clay zones directly overlying granite basement, supportive of ISR amenability from historical test-work.
- Core logging and supporting multi-element analysis, including carbon analysis, show minimal organic derived material in sand hosted mineralised intersection.
- A further five sonic core holes have been sampled and are progressing through laboratory analysis.
- Accumulation of representative samples of mineralised core continues for the ANSTO leach and extraction testwork.
- Logging and sampling of remaining sonic core continues, and planning for a rotary mud drilling program with downhole logging is underway.

Alligator Energy (ASX: AGE, 'Alligator' or 'the Company') is pleased to announce assay results from the first sonic core drill hole BBS21-001 in the Blackbush deposit, part of the Samphire Uranium Project, 20kms south of Whyalla in SA.

This is the first drilling on the project since 2012. The aim of the sonic drilling, in conjunction with a planned rotary mud infill drilling program, is to increase the confidence on the higher grade portion of the Blackbush resource and obtain detailed geological and hydrogeological characteristics of the host sequence. This information will be used in a re-estimation of the Blackbush resource.

**Greg Hall, Alligator CEO, said:** *"Alligator is pleased to announce these high grade assay results, which provide the initial confirmation of the previous gamma derived mineralised zones within the Blackbush deposit. The core has provided the first detailed geological information within the higher grade portion of the deposit and confirms the opportunity to pursue this mineralisation for application to ISR uranium production."*

## Blackbush Deposit Drilling Program

On 19<sup>th</sup> November 2021, Alligator announced the commencement of its sonic core drilling program at the Blackbush Deposit, part of the Sapphire Uranium Project located some 20 kms south of Whyalla, South Australia.

The sonic core drilling program of 14 holes is targeting a higher grade zone of the Blackbush deposit (Figure 1) where historic drilling has shown mineralisation to be located in a sand dominant zone at the base of the host Kanaka Bed sediments. These new holes are the first cored holes in the western, higher-grade portion of the Blackbush deposit.

The program is designed to acquire uranium assay data to enable correlation with historical, downhole gamma probe / calculated uranium grade estimates ( $eU_3O_8$ ). In addition, the program is providing detailed geological and hydrogeological information which will further inform ISR amenability for uranium extraction.

The core is being geologically logged, sampled and assayed with a multi-element analysis suite selected to help define host material types and any potential deleterious elements. In addition to assay, a suite of down hole geophysical surveys including gamma, Prompt Fission Neutron (PFN providing  $pU_3O_8$ ), conductivity and porosity will be completed in the cored holes during Q1 2022.

The various cores are also providing samples that will be used for hydrogeological and leach test work at the ANSTO laboratory in Sydney.

Drilling of all 14 holes has been completed with samples from six (6) holes sent to the assay laboratory with results received from the first hole, BBS21-001.

Following the sonic drilling and evaluation of the resulting data a program of 40 infill rotary mud drill holes will be completed. These holes will be surveyed with a suite of downhole geophysical tools including gamma and PFN to acquire further data for the resource re-estimation.

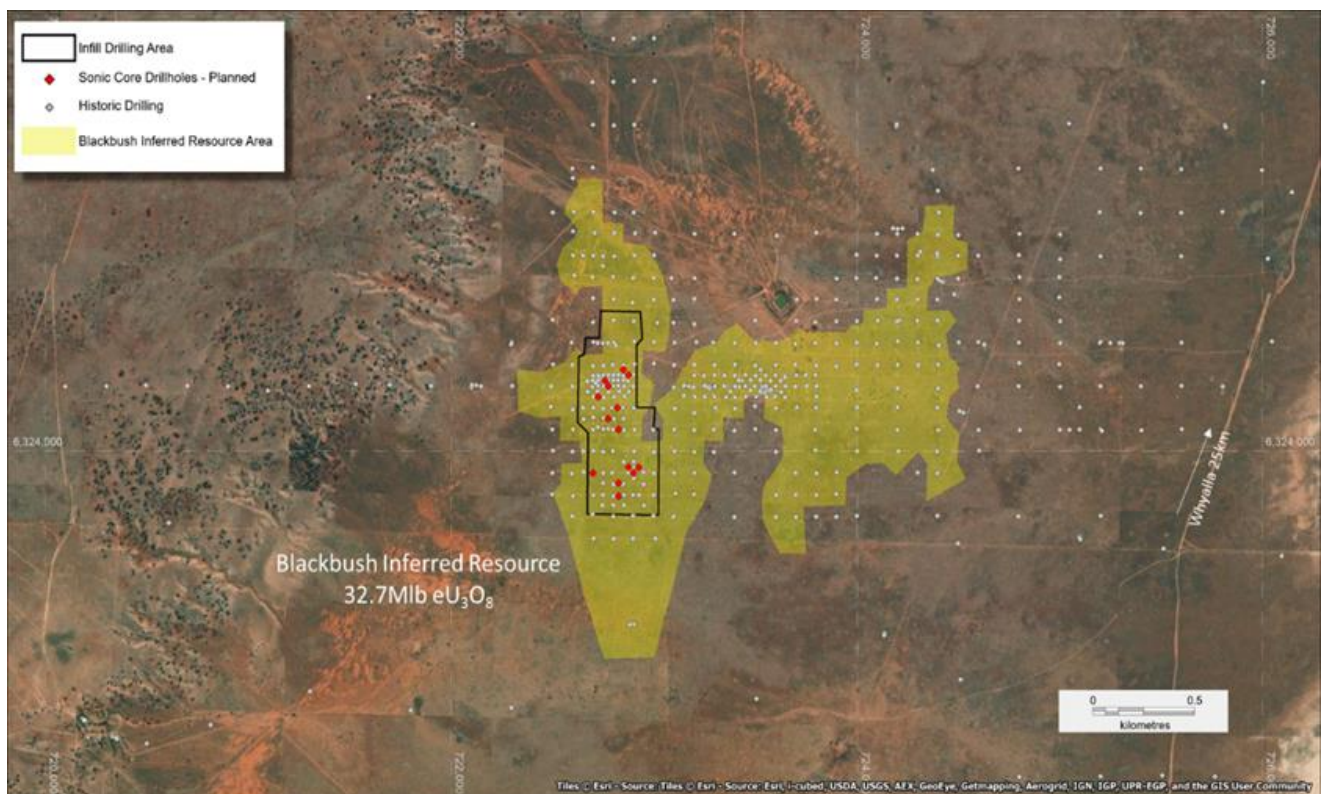
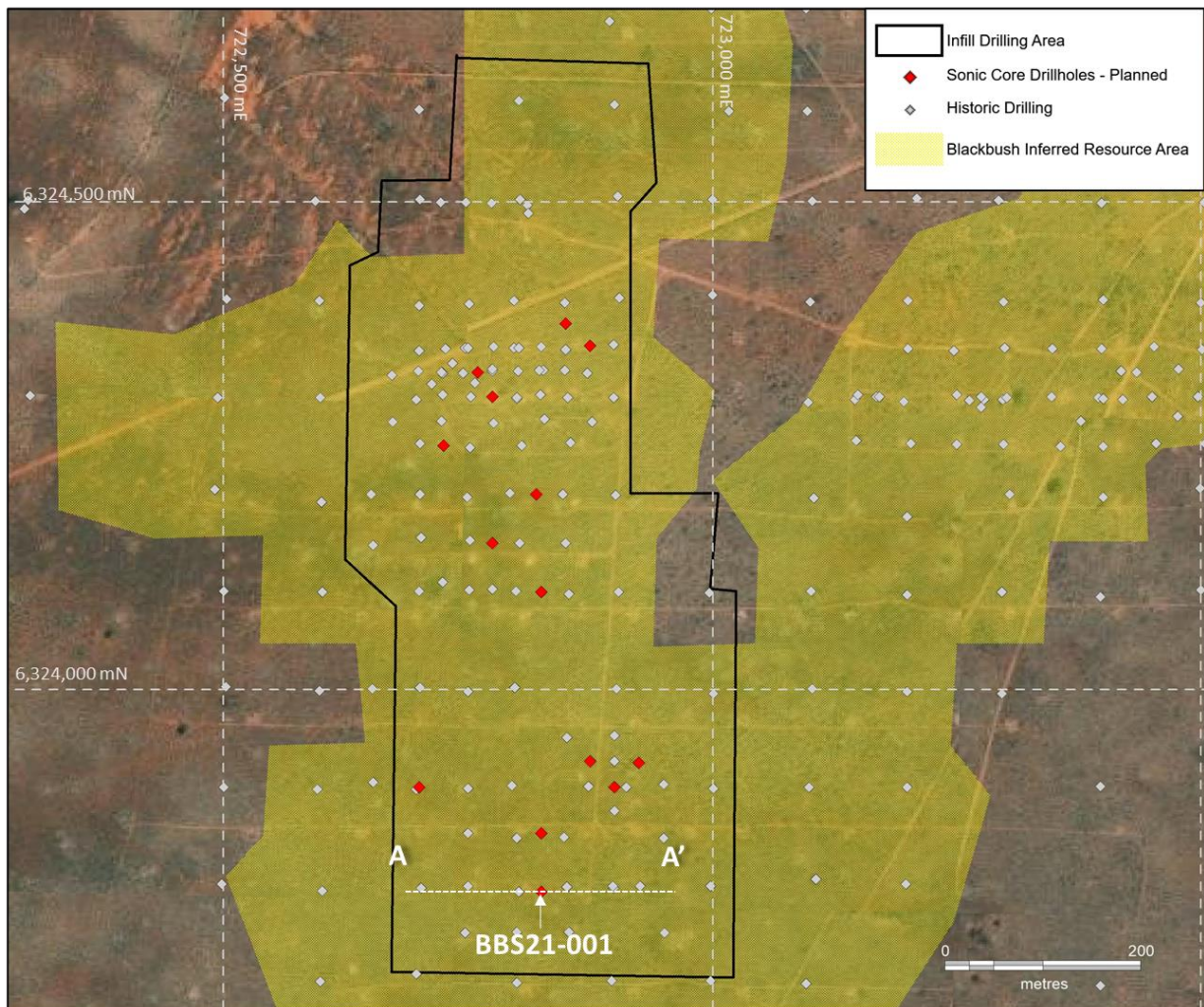


Figure 1: Blackbush resource with infill drilling area highlighted showing historic drill locations (grey) and the 14 sonic core hole locations (red).

## Results BBS21-001

Hole BBS21-001 is the southernmost sonic core hole to be drilled at Blackbush in this phase of drilling (*Figure 2*).



*Figure 2: Blackbush infill drilling area over resource area with hole BBS21-001 location.*

From surface to 55.3 metres BBS21-001 intersected an unmineralised cover sequence of sand, clay, limestone and marl. Directly underlying the cover is a four (4) metre thick lignite unit with interbedded clay and minor sand. This unit hosts a 2.45 metre interval of uranium mineralisation with an average grade of 818 ppm  $U_3O_8$  (0.08%). The lignite unit averages 42.8% carbon.

Beneath the lignite is a 10-metre sequence of interbedded clay and sand that is commonly carbonaceous including fossilised plant material. Uranium grades generally increase with depth ranging from 10ppm  $U_3O_8$  to 180 ppm  $U_3O_8$ . Carbon averages 10% and is evenly distributed through this sequence.

The target sand hosted mineralisation was intersected from 71.0 to 80.5 metres and comprised upward fining sequences of coarse to fine sand with occasional narrow clay bands and fragments. Average uranium content of this intersection is 2,353 ppm (0.24%)  $U_3O_8$ , which appears consistent with the historic adjacent gamma derived  $eU_3O_8$  intersections (refer Figure 3). Carbonaceous material decreases with depth and is seen as irregular discrete fragments and staining within the sand or on clay margins. The carbon content of this interval ranges from 0.04% to 3.58% with an average of 0.6%.

The mineralised sand unconformably overlies weathered to fresh, Hiltaba granite. The weathered granite is dominantly clay and contains uranium averaging 90ppm  $U_3O_8$  over 5 metres directly beneath the unconformity contact.

The intersections above a 250 ppm  $U_3O_8$  cut-off are listed in **Table 1** with average  $U_3O_8$  and carbon content (C%) with a summary description of the host rock type.

Figure 3 is a north facing cross section (A – A<sup>1</sup> on Figure 2) showing the simplified geology, location and  $U_3O_8$  intersections of BBS21-001 and historic drill holes with e $U_3O_8$  intersections.

**Table 1: BBS21-001 Significant Intersections >250ppm  $U_3O_8$**

From (metres)	Interval (metres)	$U_3O_8$ ppm	$U_3O_8$ %	C %	Rock Type
55.30	2.45	818	0.08	42.8	Lignite interbedded with clay and sand
71.00	9.50	2,353	0.24	0.6	Predominantly sand, minor clay with occasional carbonaceous fragments and staining.

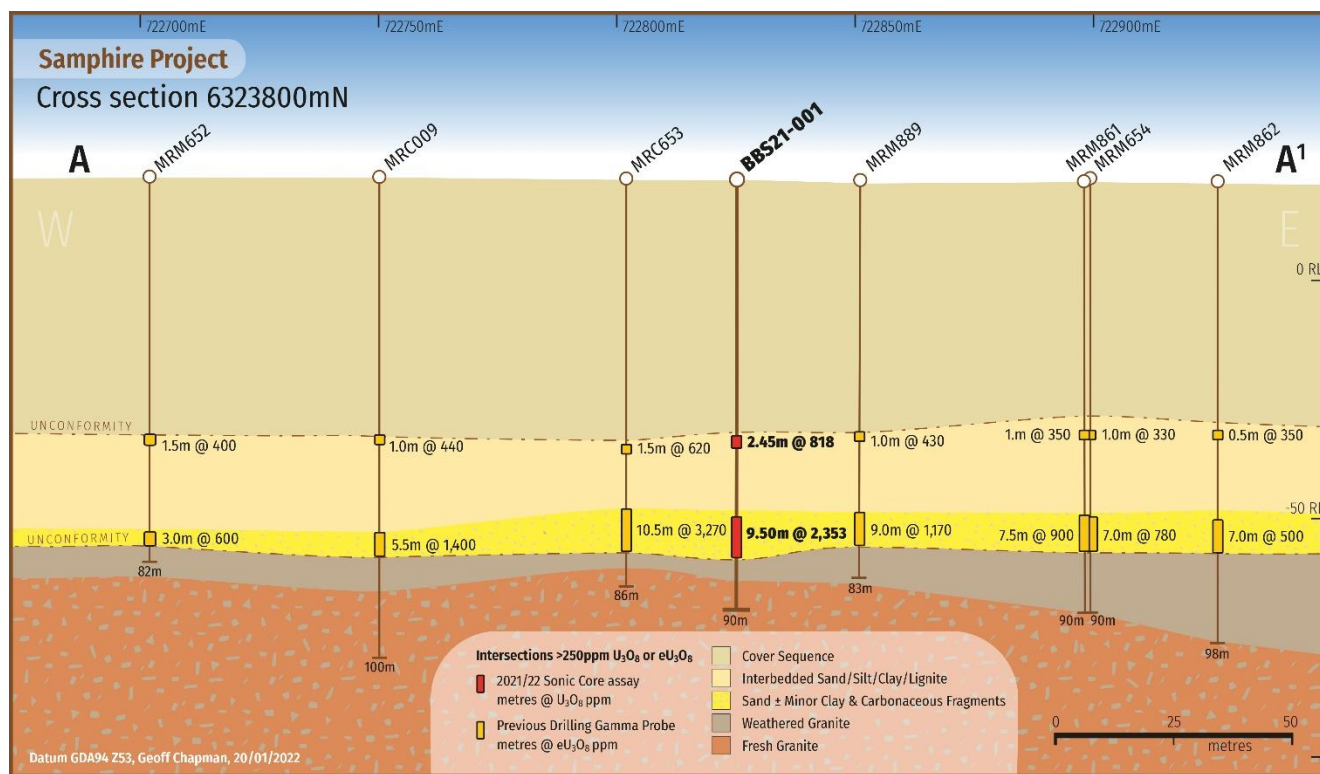


Figure 3: Cross section 6323800mN with BBS21-001  $U_3O_8$  highlighted on simplified geology and historic drilling e $U_3O_8$  intersections<sup>1</sup>

As further assay results from sonic cored holes are received, they will be evaluated along with core logs and adjacent historical drilling and results announced to the market.

<sup>1</sup> Historic drilling details including JORC Table 1 previously reported by Uranium SA (ASX:USA) in ASX release “Sapphire Project Update” 27 September 2013

Assay results for U<sub>3</sub>O<sub>8</sub> and carbon for all BBS21-001 samples are listed in Table 3.

This announcement has been authorised for release by Greg Hall, CEO and Managing Director.

## Contacts

For more information, please contact:

**Mr Greg Hall**

*CEO & Managing Director*

[gh@alligatorenergy.com.au](mailto:gh@alligatorenergy.com.au)

**Mr Mike Meintjes**

*Company Secretary*

[mm@alligatorenergy.com.au](mailto:mm@alligatorenergy.com.au)

For media enquiries, please contact:

**Alex Cowie**

*Media & Investor Relations*

[alexc@nwrcommunications.com.au](mailto:alexc@nwrcommunications.com.au)

### 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

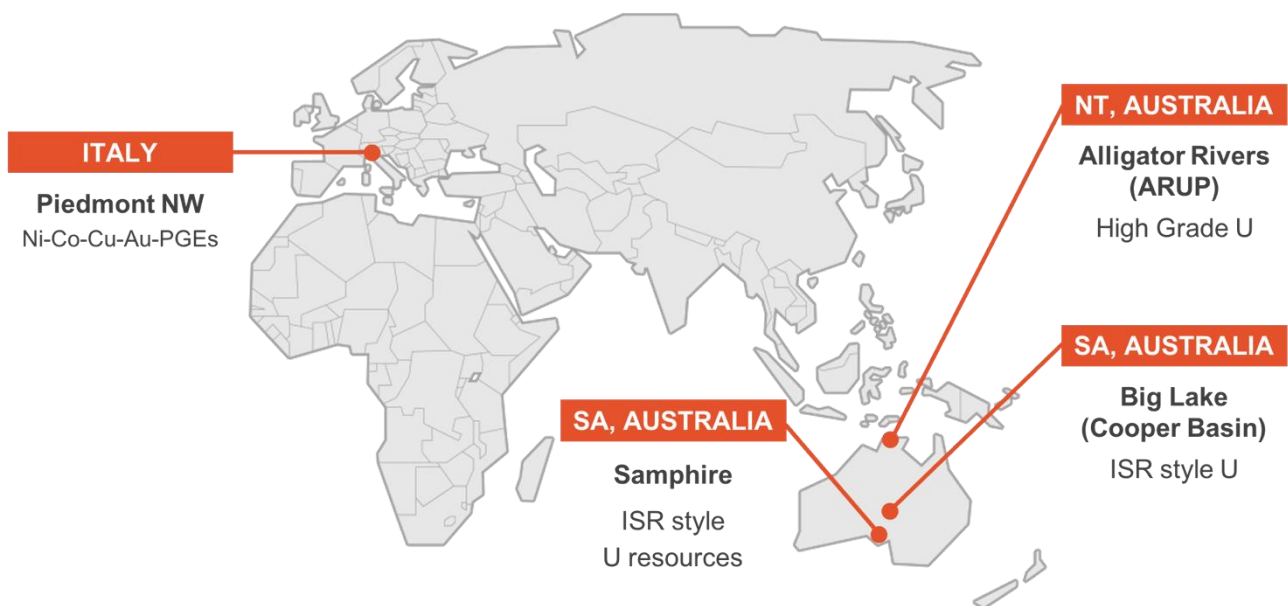
### Competent Person's Statement

Information in this report is based on current and historic Exploration and Resource Drilling Results compiled by Mr Geoffrey John Chapman who is a Fellow of the AusIMM (111889). Mr Chapman is a senior consultant with Alligator Energy Limited and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity he 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. Mr Chapman consents to the inclusion in this release of the matters based on his 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



In accordance with ASX Listing Rule 5.7.2 the Company provides the following information

**Table 2: Hole and details this announcement; Datum GDA94 Z53**

Hole ID	East	North	Elevation	EOH (m)	Dip	Az
<b>BBS21-001</b>	722,825	6,323,793	20	90	-90	000

**Table 3: BBS21- 001 Assay results U3O8 ppm and C % with intersections highlighted U3O8 >250ppm**

Sample From (m)	Sample To (m)	Sample Length (m)	Carbon (%)	U <sub>3</sub> O <sub>8</sub> ppm	Intersection Length (m)	Intersection U <sub>3</sub> O <sub>8</sub> ppm	Intersection U <sub>3</sub> O <sub>8</sub> %	Intersection C %
54.00	54.40	0.40	4.0	81				
54.40	54.90	0.50	1.1	35				
54.90	55.30	0.40	1.8	46				
55.30	55.50	0.20	37.5	1981				
55.50	56.00	0.50	42.3	1392				
56.00	56.25	0.25	34.0	706				
56.25	56.50	0.25	36.4	712				
56.50	56.75	0.25	42.9	488				
56.75	57.00	0.25	46.2	542				
57.00	57.25	0.25	48.3	467				
57.25	57.75	0.50	48.4	367	<b>2.45</b>	<b>818</b>	<b>0.08</b>	<b>43</b>
57.75	58.25	0.50	43.0	169				
58.25	58.75	0.50	47.2	164				
58.75	59.14	0.39	55.1	230				
59.14	59.60	0.46	2.3	111				
59.60	60.00	0.40	1.2	43				
60.00	60.50	0.50	6.4	41				
60.50	61.00	0.50	7.4	32				
61.00	61.50	0.50	9.9	25				
61.50	62.00	0.50	5.3	10				
62.00	62.50	0.50	10.5	17				
62.50	63.00	0.50	14.7	25				
63.00	63.50	0.50	17.3	27				
63.50	64.00	0.50	15.9	30				
64.00	64.50	0.50	9.3	26				
64.50	65.00	0.50	9.7	32				
65.00	65.50	0.50	8.0	28				
65.50	65.75	0.25	8.9	37				
65.75	66.00	0.25	7.3	38				
66.00	66.25	0.25	6.0	43				
66.25	66.50	0.25	9.6	64				
66.50	66.75	0.25	11.2	68				
66.75	67.00	0.25	9.3	52				
67.00	67.25	0.25	13.4	94				
67.25	67.50	0.25	14.5	107				
67.50	67.75	0.25	12.5	110				
67.75	68.00	0.25	12.7	120				

Sample From (m)	Sample To (m)	Sample Length (m)	Carbon (%)	U <sub>3</sub> O <sub>8</sub> ppm	Intersection Length (m)	Intersection U <sub>3</sub> O <sub>8</sub> ppm	Intersection U <sub>3</sub> O <sub>8</sub> %	Intersection C %
68.00	68.25	0.25	10.4	119				
68.25	68.50	0.25	7.7	111				
68.50	68.75	0.25	10.8	137				
68.75	69.00	0.25	11.2	182				
69.00	69.20	0.20	3.7	107				
69.20	69.40	0.20	2.3	60				
69.40	69.70	0.30	1.0	170				
69.70	70.00	0.30	1.3	165				
70.00	70.20	0.20	1.5	127				
70.20	70.45	0.25	0.8	151				
70.45	70.65	0.20	1.8	165				
70.65	71.00	0.35	1.2	137				
71.00	71.18	0.18	2.40	257				
71.18	71.60	0.42	0.56	157				
71.60	71.85	0.25	2.28	2972				
71.85	72.10	0.25	1.58	594				
72.10	72.30	0.20	0.46	1863				
72.30	72.55	0.25	0.22	8644				
72.55	72.65	0.10	1.68	6651				
72.65	72.85	0.20	0.24	8573				
72.85	73.10	0.25	0.10	12618				
73.10	73.20	0.10	3.42	18514				
73.20	73.30	0.10	0.14	2252				
73.30	73.51	0.21	0.92	10000				
73.51	73.75	0.24	0.20	3231				
73.75	74.00	0.25	1.54	2217				
74.00	74.10	0.10	0.88	1037				
74.10	74.20	0.10	0.98	810				
74.20	74.30	0.10	0.72	507				
74.30	74.42	0.12	1.34	1427				
74.42	74.60	0.18	1.42	4446				
74.60	74.75	0.15	1.42	4387				
74.75	75.00	0.25	0.12	3656				
75.00	75.30	0.30	0.26	2594				
75.30	75.45	0.15	0.20	1710				
75.45	75.80	0.35	0.20	1627				
75.80	76.20	0.40	0.24	1863				
76.20	76.50	0.30	0.40	2712				
76.50	76.60	0.10	0.22	388				
76.60	76.71	0.11	0.14	204				
76.71	77.00	0.29	0.12	252				
77.00	77.32	0.32	0.12	204				
77.32	77.45	0.13	0.18	107				
77.45	77.60	0.15	3.06	564				
77.60	77.72	0.12	0.56	151				
77.72	77.85	0.13	1.34	222				
77.85	78.00	0.15	3.58	437				
78.00	78.37	0.37	0.06	125				
78.37	78.60	0.23	0.06	78				





Sample From (m)	Sample To (m)	Sample Length (m)	Carbon (%)	U <sub>3</sub> O <sub>8</sub> ppm	Intersection Length (m)	Intersection U <sub>3</sub> O <sub>8</sub> ppm	Intersection U <sub>3</sub> O <sub>8</sub> %	Intersection C %
78.60	78.85	0.25	0.06	97	<b>9.50</b>	<b>2,353</b>	<b>0.24</b>	<b>0.6</b>
78.85	79.00	0.15	0.06	169				
79.00	79.39	0.39	0.04	367				
79.39	79.66	0.27	0.04	657				
79.66	79.90	0.24	0.04	1427				
79.90	80.26	0.36	0.06	1415				
80.26	80.40	0.14	0.06	733				
80.40	80.50	0.10	0.08	383				
80.50	80.80	0.30	0.0	169				
80.80	81.20	0.40	0.1	99				
81.20	81.50	0.30	0.1	105				
81.50	82.00	0.50	0.1	94				
82.00	82.50	0.50	0.1	86				
82.50	83.00	0.50	0.1	77				
83.00	83.50	0.50	0.1	89				
83.50	84.00	0.50	0.1	95				
84.00	84.40	0.40	0.1	118				
84.40	85.00	0.60	0.1	53				
85.00	90	5.00	Not sampled	Not sampled				

# JORC Code, 2012 Edition – Table 1

## Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> <li>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.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Sonic drilling maximises core recovery in soft sediments compared to other coring techniques.</li> <li>Drill core was extracted direct from the drill rod and placed into a 1-metre-long plastic sleeve to contain the core. The sleeved core was then sealed and placed in 1 metre intervals in core trays.</li> <li>Down hole core run depths were marked on the core trays.</li> <li>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.</li> <li>Following collection and prior to sampling trays of core were transported to a coldroom for storage at 1.5 °C.</li> </ul>
Drilling techniques	<ul style="list-style-type: none"> <li>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).</li> </ul>	<ul style="list-style-type: none"> <li>All holes were drilled by Star Drilling using sonic drilling</li> <li>Hole diameter was 100cm within 150cm steel cased</li> <li>Core was not oriented (vertical)</li> </ul>
Drill sample recovery	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Sonic drilling maximises core recovery in soft sediments compared to other coring techniques.</li> <li>All intervals measured for length during logging and sampling.</li> <li>Sample lost in the sample cutting process was collected and weighed for each metre. This was minimal in relation to the core interval.</li> <li>No analysis conducted on sample recovery and grade</li> </ul>
Logging	<ul style="list-style-type: none"> <li>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.</li> <li>Whether logging is qualitative or quantitative</li> </ul>	<ul style="list-style-type: none"> <li>All (100%) drill core has been geologically logged and core photographs taken.</li> <li>Logging is qualitative with description of colour, weathering status, major and minor rock types, texture, sedimentary features grain size, regolith zone, presence of organic</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>in nature. Core (or costean, channel, etc) photography.</i></p> <ul style="list-style-type: none"> <li><i>The total length and percentage of the relevant intersections logged.</i></li> </ul>	<p>material, veining, alteration and comments added where further observation is made.</p>
<p><i>Sub-sampling techniques and sample preparation</i></p>	<ul style="list-style-type: none"> <li><i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></li> <li><i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i></li> <li><i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></li> <li><i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></li> <li><i>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.</i></li> <li><i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></li> </ul>	<ul style="list-style-type: none"> <li>Core was halved, photographed and geologically logged.</li> <li>Due to the core being generally soft material comprising sand and clay zones it was cut using carving knife or box cutter.</li> <li>Initial halving of core was undertaken in a contained guide designed to minimise disruption to the core and core loss.</li> <li>One half core component was subsequently halved by knife or boxcutter within core trays to create quarter core increments for chemical assay samples.</li> <li>Sample intervals were determined by geological boundaries with a maximum sample length of 0.5 metres and a minimum interval of 0.1 metres.</li> <li>Full quarter core sample increments were selected directly from the core tray using a modified scoop or plaster knife.</li> <li>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.</li> <li>Each individual sample was weighed following collection.</li> <li>The sample mass ranged from 0.15 kg to 2.4 kg with average mass of 0.88kg.</li> <li>Duplicate quarter core samples were analysed at a frequency of 1:20 primary samples.</li> <li>Contamination was minimised in the cutting and sampling process by regular washing of cutting equipment in fresh water.</li> <li>Sampling areas were routinely vacuum cleaned and wiped down to remove loose dust and fragments and checked with hand held scintillometer, to check for and eliminate potential radiation contamination in the cutting and sampling process.</li> </ul>
<p><i>Quality of assay data and laboratory tests</i></p>	<ul style="list-style-type: none"> <li><i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></li> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>Laboratory techniques are industry standard</li> <li>Analysis is considered total for all elements</li> <li>Commercial analytical standards inserted in sample submission at a rate of a minimum of 1: 20 primary samples.</li> <li>Analytical blank samples submitted at a rate of 1:20 primary samples and following suspected high grade samples.</li> <li>Duplicate ¼ core samples submitted at a rate of 1:20 primary samples.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>QAQC results indicate no bias in analysis.</li> </ul>
Verification of sampling and assaying	<ul style="list-style-type: none"> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul style="list-style-type: none"> <li>No independent verification of significant intersections undertaken</li> <li>No twinning of holes</li> <li>No procedures for data storage and management have not been compiled as yet.</li> <li>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.</li> <li>Data validation of assay data and sampling data have been conducted to ensure data entry is correct.</li> <li>All assay data is received from the laboratory in element form is unadjusted for data entry.</li> <li>Elemental uranium has been converted to U<sub>3</sub>O<sub>8</sub> by applying a conversion factor of: U ppm x 1.179243 = U<sub>3</sub>O<sub>8</sub> ppm</li> <li>Percentage (%) U<sub>3</sub>O<sub>8</sub> = U<sub>3</sub>O<sub>8</sub> ppm/10,000</li> </ul>
Location of data points	<ul style="list-style-type: none"> <li>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.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul style="list-style-type: none"> <li>Hole collar locations measured by handheld GPS. General accuracy estimated as ± 2 metres</li> <li>Downhole directional survey measured by magnetic deviation tool by Borehole Wireline.</li> <li>Grid system GDA94 Projection 53H</li> </ul>
Data spacing and distribution	<ul style="list-style-type: none"> <li>Data spacing for reporting of Exploration Results.</li> <li>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.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul style="list-style-type: none"> <li>Single drill hole.</li> <li>No sample compositing</li> </ul>
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>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</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> <li>All drillholes are vertical which is appropriate for the orientation of the mineralisation.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>assessed and reported if material.</i>	
Sample security	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> </ul>
Audits or reviews	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>No audits or reviews undertaken of sampling techniques to date.</li> </ul>

## 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	<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>The JORC2012 compliant Blackbush deposit, referenced historical drilling and geophysics covering the Samphire project are located on Exploration Licence EL5926 originally granted 20<sup>th</sup> 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.</li> <li>EL5926 is 100% held by S Uranium Pty Ltd a wholly owned subsidiary of Alligator Energy Ltd.</li> <li>The land covering the licence area is Crown Lease; consisting of several leases over 2 pastoral stations.</li> </ul>
Exploration done by other parties	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> <li>USA conducted preliminary Insitu Recovery (ISR) hydrogeological testwork on the Blackbush deposit with pump testing and hydrogeological modelling.</li> <li>Third party drilling is confined to one rotary mud hole for lignite exploration located in the southeast of the licence area.</li> </ul>
Geology	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>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)</li> </ul>
Drill hole Information	<ul style="list-style-type: none"> <li>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: <ul style="list-style-type: none"> <li>easting and northing of the drill hole collar</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Drillhole information relating to 2021 sonic drilling is contained in Table 2 and Table 3 of this announcement.</li> <li>Drillhole information that relates to historic drilling was previously reported by Uranium</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li>○ elevation or RL (<i>Reduced Level – elevation above sea level in metres</i>) of the drill hole collar</li> <li>○ dip and azimuth of the hole</li> <li>○ down hole length and interception depth</li> <li>○ hole length.</li> </ul> <ul style="list-style-type: none"> <li>● <i>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.</i></li> </ul>	<p>SA (ASX: USA) in ASX release “Sapphire Project Update” 27 September 2013.</p>
<i>Data aggregation methods</i>	<ul style="list-style-type: none"> <li>● <i>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.</i></li> <li>● <i>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.</i></li> <li>● <i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></li> </ul>	<ul style="list-style-type: none"> <li>● Average grades have been calculated using length weighted average.</li> <li>● No grade cutting has been applied</li> <li>● Intersections have been aggregated on sample intervals exceeding a nominal 250ppm U<sub>3</sub>O<sub>8</sub> cut off with a maximum length of 1 metre internal material below this cut-off.</li> <li>● Historic eU<sub>3</sub>O<sub>8</sub> intersections have been aggregated from historical drillhole data (released 2013) composited to 0.5 metres then averaged using a 250ppm eU<sub>3</sub>O<sub>8</sub> lower cut-off and maximum of 1 metre internal material below cut-off.</li> </ul>
<i>Relationship between mineralisation widths and intercept lengths</i>	<ul style="list-style-type: none"> <li>● <i>These relationships are particularly important in the reporting of Exploration Results.</i></li> <li>● <i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></li> <li>● <i>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’).</i></li> </ul>	<ul style="list-style-type: none"> <li>● 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.</li> </ul>
<i>Diagrams</i>	<ul style="list-style-type: none"> <li>● <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>● Results are reported in appropriate diagrams and tables within this release.</li> </ul>
<i>Balanced reporting</i>	<ul style="list-style-type: none"> <li>● <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>● All mineralised intercepts using a cut-off &gt;250ppm U<sub>3</sub>O<sub>8</sub> with internal dilution not exceeding 1 metre have been reported.</li> <li>● All relevant assay data presented in Table 3</li> </ul>
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> <li>● <i>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,</i></li> </ul>	<ul style="list-style-type: none"> <li>● Geological observations have been reported in context of reported intersections. This includes results of carbon analysis.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>geotechnical and rock characteristics; potential deleterious or contaminating substances.</i>	
<i>Further work</i>	<ul style="list-style-type: none"> <li><i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li> <li><i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></li> </ul>	<p>Program for 2022 includes:</p> <ul style="list-style-type: none"> <li>Completion of 14 sonic core holes with associated geological logging, sampling, assay and downhole geophysics surveys</li> <li>40 rotary mud infill drill holes with downhole geophysics surveys.</li> <li>Extraction test work on sonic core samples</li> <li>Re-estimation and classification of the Blackbush mineral resource.</li> <li>Ground geophysical surveys and follow-up exploration drilling to test for extensions to the Blackbush deposit</li> </ul>