Alligator Energy

ASX Announcement

7 December 2023

Successful upgrade of Indicated Mineral Resource for the Blackbush Deposit, Samphire Uranium Project, South Australia

Highlights

- **The Samphire Project 2023 resource infill drilling has been successful in conversion from Inferred to Indicated JORC Category for the Blackbush Mineral Resource:**
  - The Indicated Mineral Resource has further **increased by 21% to 12.9Mlbs** at an average grade of 754ppm U_3O_8 **– a 115% increase since commencement of AGE's resource drilling at Blackbush in 2022.**
  - 2.2Mlbs U_3O_8 were converted to Indicated Resource, with a corresponding drop in Inferred resource of 2.9Mlbs**.**
  - 74% of the metal in the total MRE is now classified as Indicated.
  - As anticipated, with no significant resource extension drilling the total MRE has reduced slightly due to additional data and revised interpretation.
- **The increased confidence in the Indicated Mineral Resource Estimate supports targeting improved project economics in an updated Scoping Study.**
  - Allows the Scoping Study update to draw on additional Indicated Resource for the proposed ISR mining schedule targeting an increased annual production rate.
  - Finalisation of an updated Samphire Project Scoping Study, including this final key input assumption, is now on track for release in the coming days.
- **Walk-up targets identified for resource extension drilling commencing late January 2024 to advance toward extending the life of mine.**
  - Drilling rig secured for year-round drilling in 2024, with all land access and approvals in place for this work.
- **AGE has identified a pipeline of targets outside the Blackbush MRE envelope which has been incorporated into an Exploration Target Range, the backbone for its sustained multi - year exploration program.**
- In summary, at 250ppm cut-off grade the Blackbush Mineral Resource Estimate now stands at a Indicated Mineral Resource of 12.9Mlbs at 754ppm and an Inferred Mineral Resource of 4.6Mlbs at 447ppm, **Totalling 17.5Mlbs at 640ppm U3O8** – Refer table page 4.

Greg Hall, Alligator CEO, said: *"The detailed work to establish a high quality and larger Indicated Resource for Samphire allows us to increase the annual uranium production rate in an updated Scoping Study being finalised now, with ASX release imminent. In conjunction to this, as outlined in our Exploration Target Range release (ASX: dated 7 Dec 2023) everything is now in place to commence drilling in January 24 to target enlarging and extending the overall Total Resource base for the Samphire Project further."*

Alligator Energy (ASX: AGE, 'Alligator' or 'the **Company')** is pleased to announce an updated Mineral Resource Estimate (MRE) resulting from AGE's 2023 resource infill drilling campaign at the Blackbush Deposit (Figure 1) within Alligator's Samphire Project, South Australia.

Background

The March 2023 Samphire Scoping Study[1] confirmed the potential to develop Blackbush as a globally competitive low-cost uranium operation using the in-situ recovery (ISR) process and identified an increase in the Indicated Mineral Resource would provide a solid opportunity to study an increased Production Target and potential project economics.

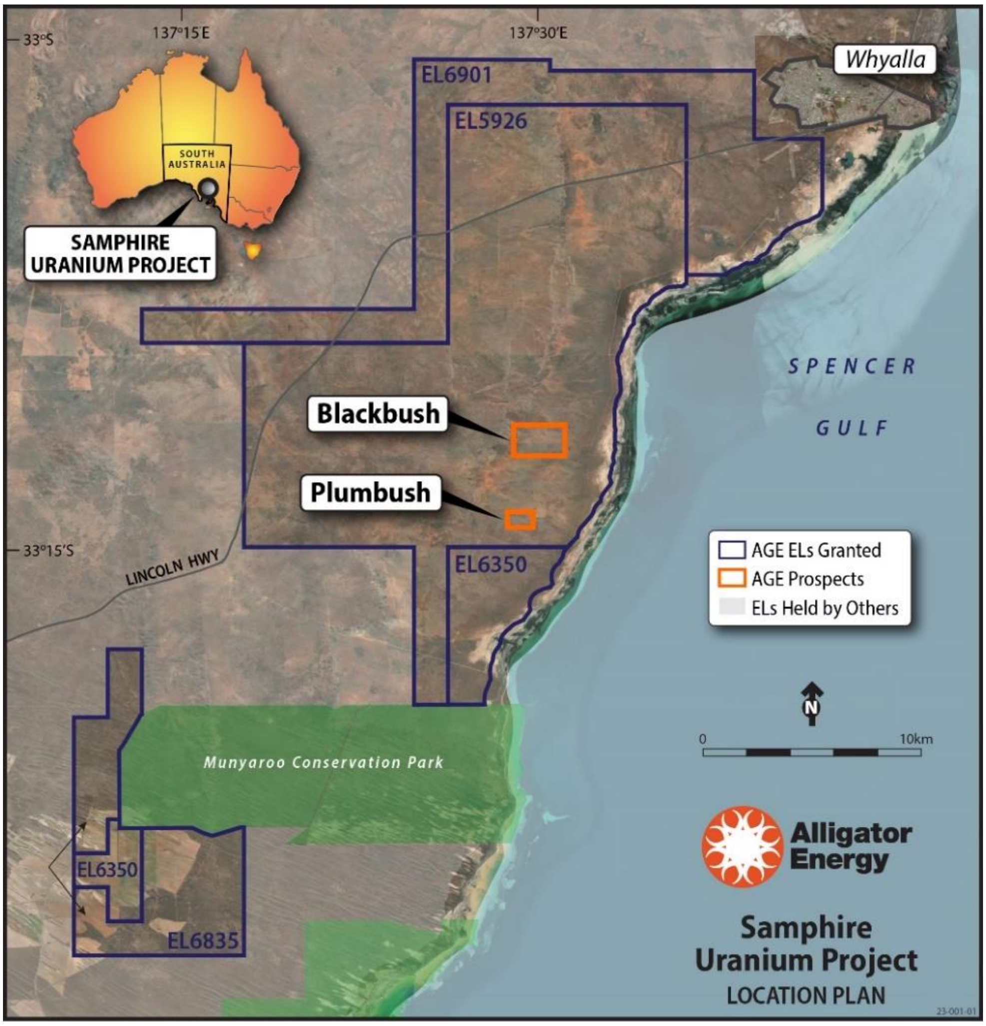

Figure 1: Samphire Project Location Map

On 8 June[2] and 25 October[3] this year AGE announced 2023 infill resource drilling results which were focussed on converting additional ISR amenable Inferred Mineral Resource to Indicated category at the palaeochannel hosted Blackbush Deposit. A total of 117 holes for 10,062m were drilled which successfully converted an additional 2.2MLbs into an Indicated Mineral Resource category, which increased from 10.7MLbs to 12.9Mlbs at an average grade of 754ppm U_3O_8. This is a 21% increase from the previous Indicated MRE[4] with no change in cut-off grade which has remained at 250ppm U_3O_8.

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1 *AGE ASX Release 14 March 2023 https://wcsecure.weblink.com.au/pdf/AGE/02643151.pdf*
2 *AGE ASX Release 8 June 2023 02674241.pdf (weblink.com.au)*
3 *AGE ASX Release 25 October 2023 02729807.pdf (weblink.com.au).*
4 *AGE ASX Release 2 March 2023; 02639068.pdf (weblink.com.au)*

Overall, 74% of the Blackbush Mineral Resource is now classified as Indicated; a notable improvement from 40% in AGEs initial MRE targeting In-Situ Recovery announced September 2022[5]. In summary at 250ppm cut-off grade the Blackbush resource now stands at Indicated Mineral Resource of 12.9Mlbs at 754ppm and an Inferred Mineral Resource of 4.6Mlbs at 447ppm, totalling 17.5Mlbs at 640ppm U_3O_8. As the 2023 infill drilling was focussed within the previous Blackbush MRE, the Inferred Mineral Resource, as expected, reduced by 2.9Mlbs (39%).

Targeting mineral resource extension from the limits of the Inferred Mineral Resource envelope is the first focus for AGE's 2024 exploration drilling program (Figure 2) among other targets identified in the recently released Exploration Target Range[6] for the Project. Currently 64km of strike length of host palaeochannel has been mapped with only 10% densely drilled (Blackbush Deposit and small portions of Plumbush Prospect). A drilling rig has been secured for year-round drilling from late January 2024 with exception of planned breaks around the pastoralists lambing season in May and June.

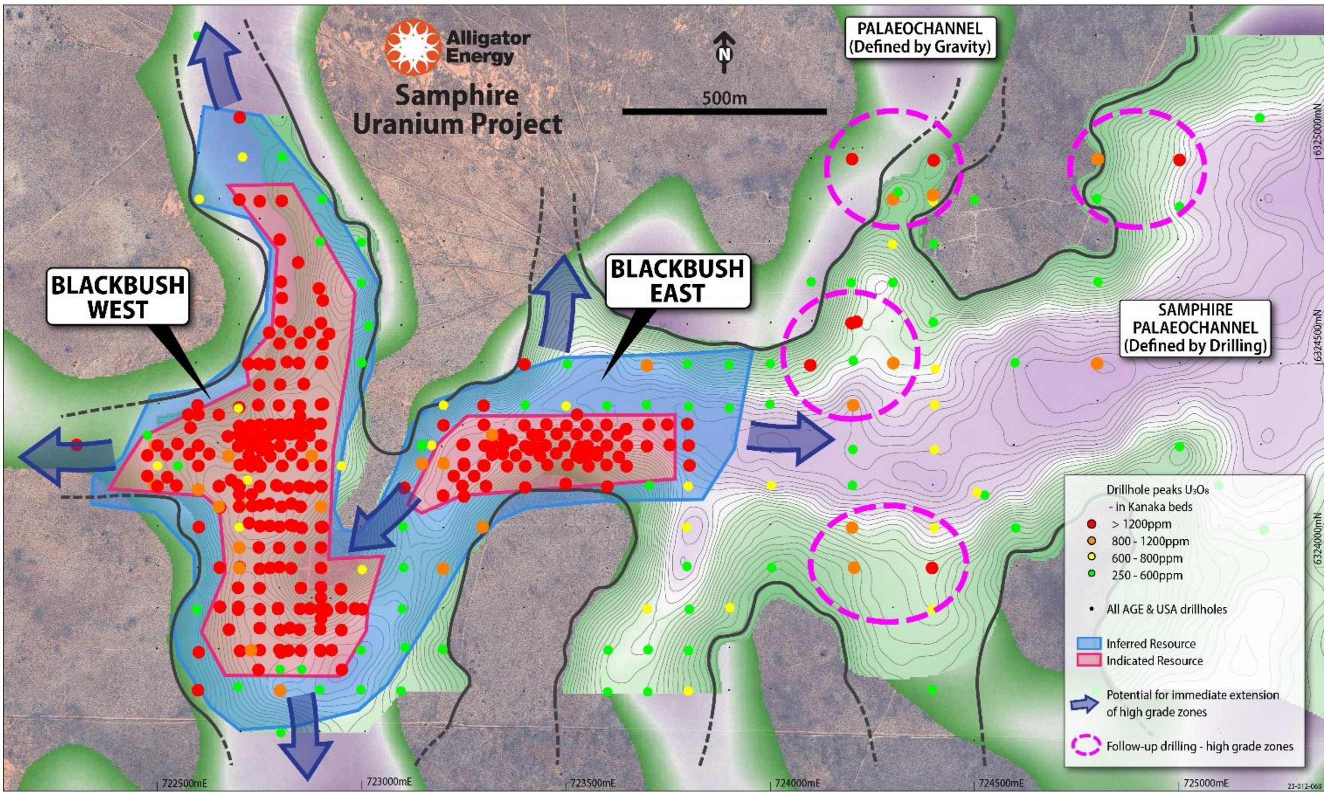

Figure 2: Updated Inferred resource area outline (blue) and Indicated Resource area outline (red) showing historical and AGE drillholes focussed within the Inferred Resource envelope. Further resource extension potential shown in arrows and pink circles.

Blackbush Mineral Resource Estimate Update Summary

This MRE was prepared by AMC Consultants (Perth) using historical UraniumSA Ltd (UraniumSA) drilling data and AGE rotary-mud/sonic drilling data[7] acquired in 2021-2023 within the Blackbush Deposit. Uranium grades have been determined by a combination of chemical assay, downhole prompt fission neutron (PFN) and downhole gamma geophysical sonde measurements.

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[5] *AGE ASX Release 1 September 2022 https://wcsecure.weblink.com.au/pdf/AGE/02562683.pdf*

[6] *AGE ASX Release 7 December 2023*

[7] *ASX Releases 31 Jan 2022 02480654.pdf (weblink.com.au) 29 March 2022 02503799.pdf (weblink.com.au); 10 May 2022 02520049.pdf (weblink.com.au); 6 July 2022 https://wcsecure.weblink.com.au/pdf/AGE/02539224.pdf; 23 November 2022 02601769.pdf (weblink.com.au); 8 June 2023 02674241.pdf (weblink.com.au); 25 October 2023 02729807.pdf (weblink.com.au).*

The updated MRE (Table 1) has been reported in accordance with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code) and reports only that portion which has been assessed by AGE as amenable to ISR within the Kanaka Beds of the Samphire Palaeochannel at Blackbush.

Prior to the addition of the 2023 drilling data, total Indicated Resources were 10.7Mlb with the remaining estimate comprising an Inferred Resources of 7.4Mlb[8].

An 11% decrease in average grade of the previously reported global MRE from 720ppm U_3O_8 to 640ppm U_3O_8 arose due to a range of factors including the influence of peripheral lower-grade mineralisation occurring at the reduced margins of the Inferred Mineral Resource envelope, changes to interpretations resulting from new data and changes to disequilibrium factors applied to some of the gamma data used.

Table 1: Blackbush Mineral Resource Estimate reported above a 250ppm U_3O_8 cut-off.

JORC Category	Mt	Grade (U_3O_8 ppm)	U_3O_8 Metal (Mlbs)
Indicated	7.8	754	12.9
Inferred	4.6	447	4.6
Total	12.4	640	17.5

The model is reported unconstrained and above a 250 ppm U_3O_8 lower cut-off grade for all zones in consideration of potential for recovery by in situ leach processes.
Estimation is by ordinary kriging for all mineralised zones.
Density is assigned as 2.05 t/m^3 based on limited test work.
The model assumes agglomeration of 12.5mE x 12.5mN x [variable]mRL panels for definition of well fields for production.
The model does not account for dilution, ore loss or recovery issues. These parameters should be considered during the mining study as being dependent on the treatment process.
Classification is according to JORC Code Mineral Resource categories.
Totals may vary due to rounded figures

[8] *ASX Release 2 March 2023. https://wcsecure.weblink.com.au/pdf/AGE/02639068.pdf. Note information was sourced in this announcement from the "Samphire Mineral Resource Estimate 2 March 2023, AMC Consultants. Competent Persons for the MRE was Mt Ingvar Kirchner (AMC) and Dr Andrea Marsland-Smith (AGE) for QAQC and geology aspects related to the project.*

ASX Additional Technical Information

The following is a summary of the material information used to estimate the Mineral Resources as required by Listing Rule 5.8.1 and JORC 2012 Reporting Guidelines.

Geology and Mineralisation

The Blackbush Deposit (Blackbush) is located within Exploration License (EL) 5926 (Figure 1). The geological setting for mineralisation has been interpreted by AGE and AMC based on the historical UraniumSA drilling and the infill rotary-mud and sonic core drilling programs completed by AGE through to Q4 2023.

The uranium mineralisation at Blackbush occurs in horizontal tabular lenses (60-85m depth) in sand-dominated basal sediments (Eocene Kanaka Beds) within a Tertiary paleochannel system. The paleochannel is incised into a Proterozoic granite (Samphire Granite) which has a variably weathered saprolite surface at its contact with the Kanaka Beds. The Kanaka Beds comprise cyclic fluvial quartz dominated sands and gravels intercalated with silts and clays with fine grained carbonaceous material towards the top of the sequence. The Kanaka Beds are overlain by the laterally continuous Miocene Melton Limestone (marl and limestone), the clay dominated Pliocene Gibbon Beds and a cover of Quaternary sediments (Figure 3).

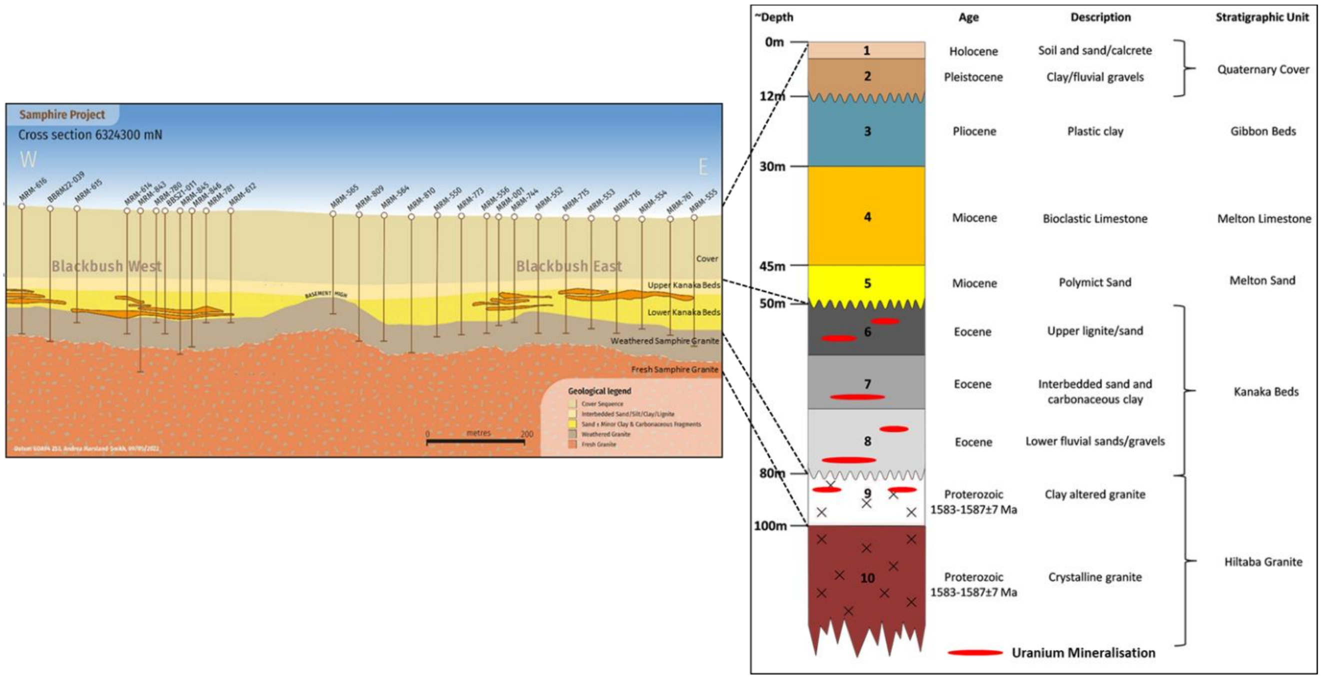

Figure 3: Cross section 6324300 mN through the Blackbush Deposit (15x vertical exaggeration, depth in RL metres) showing multi-level zones on simplified geology. Cross section constructed from pU3O8 intersections from AGE sonic core hole BBRM22-034[9] and historic drilling eU_3O_8 intersections[10]. Detailed **s**tratigraphic section (modified after USA Internal Report, 2012).

The Blackbush mineralisation is consistent with sandstone-hosted roll-front style uranium mineralisation occurring in up to 4 sub-horizontal zones[11] which are constrained within the upper, middle, and lower

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[9] *Drilling details including JORC Table 1 previously reported by Alligator Energy Ltd (ASX:AGE) in ASX release "Exceptional High-grade uranium results from Samphire Uranium Project, SA" 29 March 2022. 02503799.pdf (weblink.com.au)*

[10] *Historic drilling details including JORC Table 1 previously reported by Uranium SA (ASX:USA) in ASX release "Samphire Project Update" 27 September 2013, https://www.asx.com.au/asxpdf/20130927/pdf/42jnqgsn2cqcgq.pdf*

[11] *Note: An additional zone below the Kanaka Beds within the saprolite is present but not considered to have "reasonable prospects for eventual economic extraction".*

lithologies of the Kanaka Beds. The common uranium minerals at Blackbush are uraninite and coffinite, common for this class of uranium deposit. The cumulative strike length of the deposit is approximately 2.7 km. Width of mineralisation across strike averages ~300m, with widths of up to 450m in some areas (Figure 4).

The Mineral Resource for Blackbush has been classified as a combination of Indicated and Inferred material (Table 1) in accordance with JORC Code guidelines and assumes potential extraction by ISR. It is based on confidence levels of key criteria such as confidence in the geology, interpretations, data quality, data types (including disequilibrium factored gamma data), drilling density, apparent grade and spatial continuity of the mineralisation, estimation quality, and stratigraphic position.

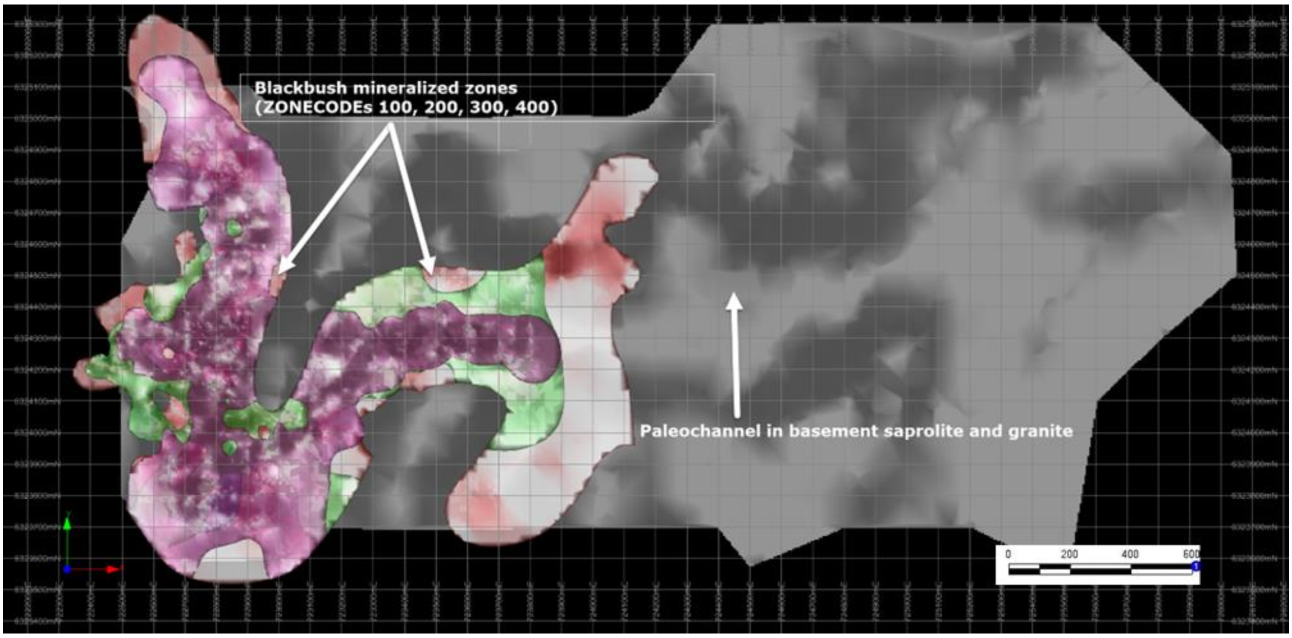

Figure 4: Plan view of Blackbush uranium mineralisation extents (coloured area) relative to palaeochannels (dark grey); *image courtesy AMC Consultants.*

Drilling Techniques

This MRE was calculated from an updated drillhole database containing UraniumSA drill data acquired between 2007 to 2012 and data from AGE's drilling undertaken Q4 2021-Q4 2023 (Figure 5). All drillholes used in the MRE were vertical and comprise a combination of rotary-mud (640), sonic core holes (14) and diamond core (6) for a total of 660 holes (53,687m).

Drill spacings are variable throughout the MRE area reflecting the different generations of drilling but generally conform to drill spacing ranging from 25m, 50m, 100m and 200m. The data set for the mineralised zones consists of intervals analysed by gamma data (98%), PFN data (32%) and chemical assay data (2%) with some overlap of both gamma data and PFN data where the PFN data exists. A similar overlap exists between the PFN data and some of the chemical assay data. Thirty-three (33) historical Uranium SA holes were twinned in the AGE drilling since 2021 for the purposes of QAQC. All holes were wireline logged for lithological interpretation and estimation of uranium (U_3O_8) grade downhole. Location of hole types is shown in Figure 6.

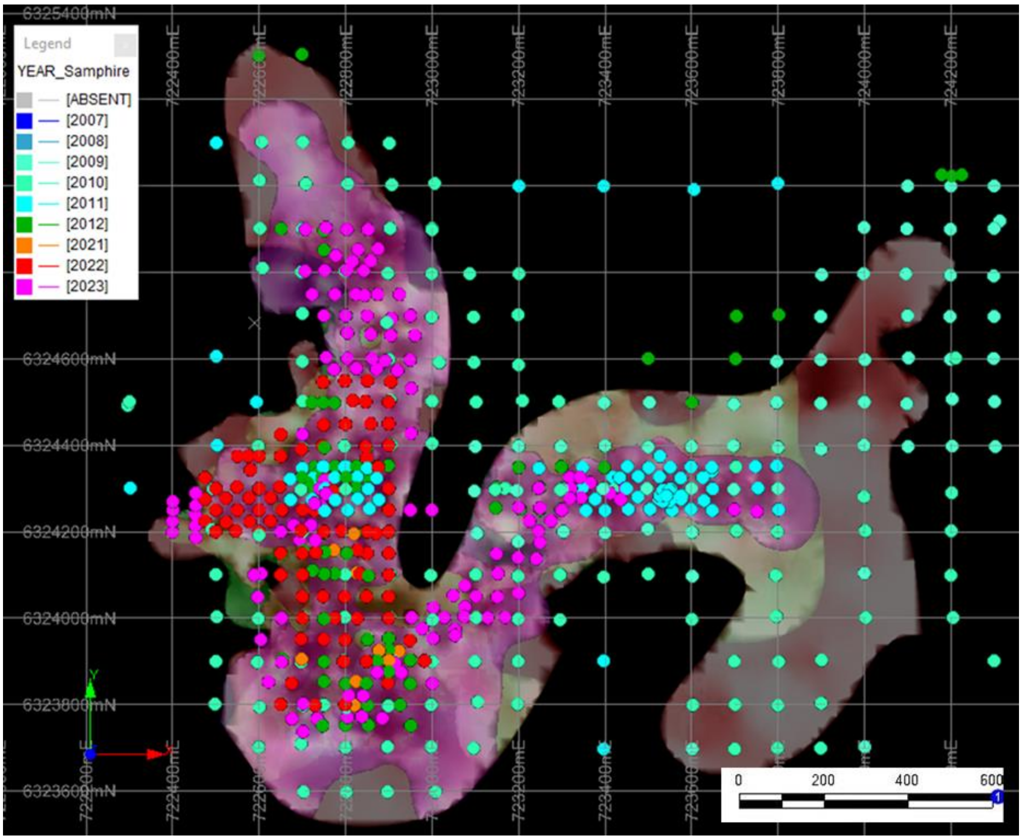

Figure 5: Plan view of drillhole locations by year drilled relative to Blackbush mineralisation (*image courtesy AMC Consultants)*.

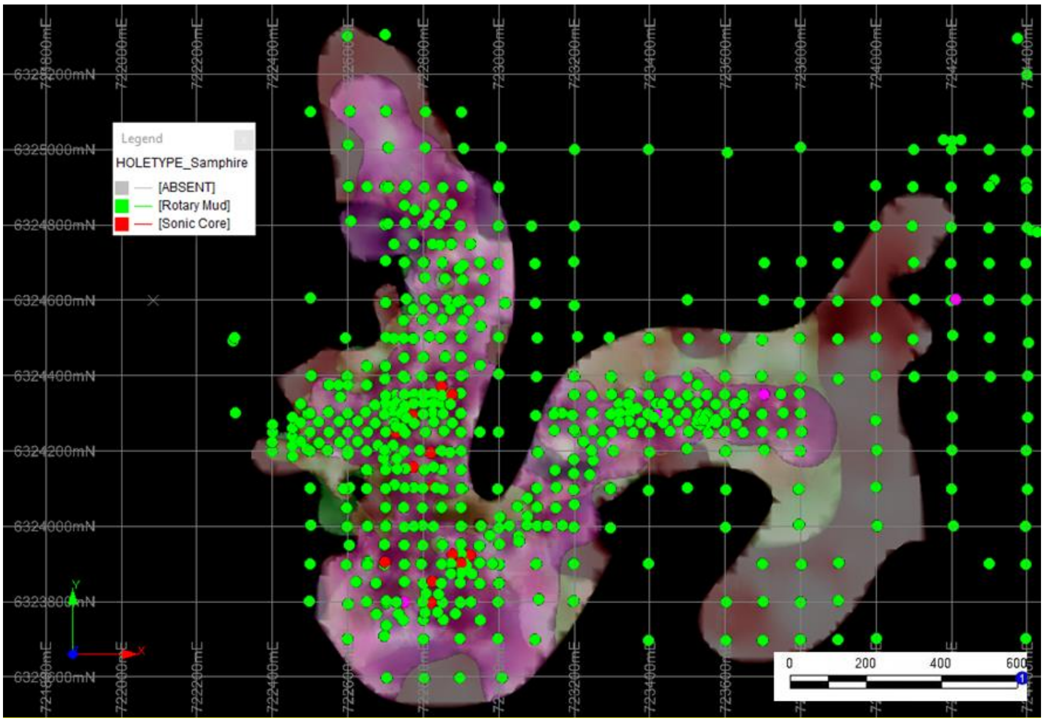

Figure 6: Plan view of drillhole locations by hole type relative to Blackbush mineralisation (*image courtesy AMC Consultants)*

Sampling and Sample Analysis

The principal sampling method to estimate uranium grade in all rotary-mud drillholes was downhole geophysical logging using standard industry procedures to estimate eU_3O_8 from gamma sondes[12] and pU_3O_8 from the Prompt Fission Neutron (PFN) sondes[13]. Gamma data was collected at variable sample intervals between 10mm and 100mm, whereas PFN logging data was collected at 10mm sample intervals. All sondes were calibrated using industry standard procedures at the Australian Mineral Development Laboratories (AMDEL) calibration facility (Adelaide). There is some overlap of both gamma data and PFN data where the PFN data exists.

Uranium grade data from both sources was composited to 20 cm intervals to aid in the geological interpretation and assignment of mineralisation to the respective zones. All sonic drillholes were sampled by geological boundaries with a maximum sample length of 0.5 m and a minimum interval of 0.1 m. Samples were assayed for a total suite of 61 elements[14]. A nominal dry bulk density of 2.05 t/m^3 was assumed for the Blackbush mineralised zones in line with the previous published MRE[15].

Resource Estimation and Methodology

The MRE was based on Ordinary Kriging with restricted search neighbourhood and limited vertical smoothing. Dynamic anisotropy was used during estimation to consider the variable and complex strike orientations of the palaeochannel and uranium distribution.

Wireframes of the mineralisation were based on the upper and lower contacts of each individual mineralisation lens using a nominal lower cut-off value of 250 ppm eU_3O_8, pU_3O_8 or cU_3O_8 (chemical assay). Four sub-horizontal mineralised zones (labelled Zone Code 100, 200, 300 and 400) were defined as shown in Figure 7. Note that some uranium metal accumulation occurs below the Kanaka Beds (i.e., in the saprolite/granitic basement) and is considered not to have "reasonable prospects for eventual economic extraction" at this stage. It is therefore not reported as part of this MRE and is categorised as unclassified in the model.

Validated PFN data against chemical assays showed that PFN data is comparable. This allowed disequilibrium factors (DEF[16]) in mineralisation to be estimated using 88,012 raw intervals from portions of 294 drillholes which contained pairs of both natural gamma and PFN grades. Criteria for pair selection was where PFN data indicated grades greater than 250ppm[17] and gamma data indicated grades greater than 50ppm to avoid potentially spurious low-level readings from the sondes. The data pairs were modelled using an inverse distance interpolation method and power of 1 into 12.5 mE by 12.5 mN by

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[12] *Downhole gamma sondes measure the daughter isotopes in the radioactive decay series, thus is not a direct reading of uranium in the host formation if the gamma-emitting daughter isotopes are not in secular equilibrium with the parent ^{238}Uranium. If the parent ^{238}Uranium is in secular equilibrium with the daughter isotopes the response of the natural gamma is directly proportional to the amount of uranium in the host formation. Note: Typically for this style of uranium mineralisation, secular disequilibrium is the common situation where the uranium and various decay daughter products move around significantly and variably over time with changes in water table, oxidation states and water chemistry.*

[13] *PFN sondes emit pulsed epithermal neutron into the host formation via a neutron generator which interact directly with the uranium isotope ^{235}U (a small and relatively stable fraction of ^{238}U) via a fission reaction which generate thermal neutrons which is proportional to the amount of uranium present. Uranium grade is thus derived from the ratio of epithermal and thermal neutrons and borehole size.*

[14] *Assays by XRF - Bureau Veritas Laboratories, Adelaide.*

[15] *AGE ASX Release 2 March 2023 "Mineral Resource Upgrade at Blackbush Deposit"; 02639068.pdf (weblink.com.au)*

[16] *DEF = pU_3O_8/eU_3O_8 if DEF>1 parent ^{238}Uranium is enriched relative to decay chain daughter isotopes, DEF <1 parent ^{238}Uranium is depleted relative to decay chain daughter isotopes. The basis for this process is that the gamma sonde measures gamma ray intensity from the decay chain daughter isotopes, whereas the PFN sonde directly measures the ^{235}U with a pulsed neutron source where the ^{235}U represents a small but relatively stable proportion of the ^{238}U mineralisation.*

[17] *PFN data (pU_3O_8) was restricted to pU_3O_8 values greater than 250 ppm reflecting the lower detection limit of the tool, some uncertainty about values below 200 ppm, and intervals that defined mineralisation.*

2 mRL blocks for each of the individual mineralised zones, with a block disequilibrium factors (DEF) calculated following estimation.

Estimated DEF's were assigned to the raw data intervals for the mineralised zone data sets occurring within the block area and applied only to the gamma data (eU_3O_8). The disequilibrium model highlighted some lateral consistency with factors showing variability with mineralised zones consistent with typical roll front disequilibrium distribution i.e., disequilibrium >1 in the "roll" and disequilibrium <1 in the "tails" of the front. The combined data types including the factored gamma data are prioritized and combined. PFN data is prioritized above other data types. The factored gamma data is only used where valid PFN data does not exist within the Kanaka Beds. Assay data from sonic core is used where no valid PFN data exists.

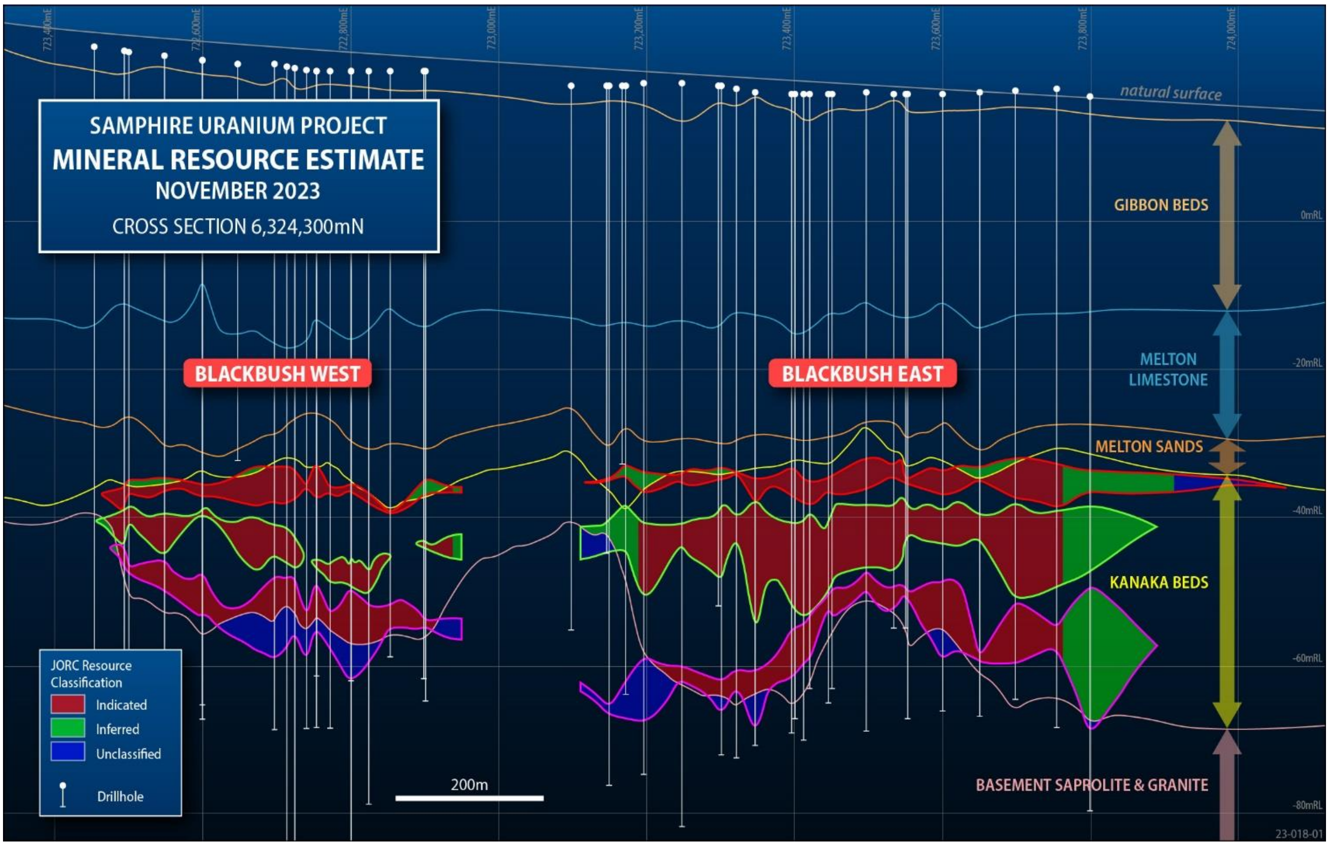

Figure 7: Mineral Resource classification, Blackbush west to east section 6,324,300mN (view looking north) showing four levels[18] of sub-horizontal uranium mineralisation. Note: the orientation of the cross-section cuts through generally perpendicular to the orientation of uranium mineralisation at Blackbush West and parallel (longitudinally) to orientation of uranium mineralisation at Blackbush East. **Vertical exaggeration x10, depth in RL metres** *(image courtesy of AMC Consultants).*

The prioritized and combined raw data was composited to 1m downhole intervals within the mineralised zones. High-grade caps of 15,000ppm U_3O_8 were applied to the data from the mineralised zones. A three-dimensional directional experimental variogram was generated for the combined mineralised zones hosted within the Kanaka Beds in well-informed areas of Blackbush West. This general variogram model was tested and used as representative of the mineralisation through the rest of the deposit. Relative nugget variance was 45% and anisotropic model ranges up to 100m for the major axis.

[18] *Note the lower zone (blue) in Figure 6 is below the Kanaka Beds (below the base of the palaeochannel) and considered not to have "reasonable prospects for eventual economic extraction" at this stage.*

Uranium (U_3O_8) grade estimation was completed using ordinary kriging into the parent blocks for the mineralised zones. Sample search parameters for the MRE considered the block size estimation method, variography and data spacing. It also considers a nominal ISR production wellfield drillhole spacing approaching 25m by 25m and vertical variability at the scale of the interpreted mineralised zones. A 12.5mE by 12.5mN by 2mRL search ellipse was used in conjunction with dynamic anisotropy and a two-pass search strategy with hard boundaries used for all zones. The dynamic anisotropy process was also used to reorient the variogram models. The constant dry bulk density value of 2.05t/m^3 was applied to all mineralisation in the block model.

Relative Changes in Mineral Resource Estimates (March 2023 vs December 2023)

Relative changes in tonnage, grade and metal between this Mineral Resource estimate and the previous March 2023 Mineral Resource Estimate (AMC, 2023) relate to:

- Ongoing rotary mud infill drilling by AGE in 2H of 2023 logged with both gamma and PFN tools has resulted in modified interpretations for mineralised zones and stratigraphy.
- The PFN data added significant confidence to some areas previously reliant on gamma data. PFN coverage remains incomplete through the areas within Kanaka Bed mineralisation.
- Slightly lower grade areas previously classified as Inferred Mineral Resource have been upgraded to Indicated Mineral Resource.
- The disequilibrium model improved by using an increased amount of data pairs where pU_3O_8>250 and eU_3O_8>50ppm. This contributed to more detailed changes (both positive and negative) dependent on lateral location and stratigraphic positions within the paleochannel.
- Increased drilling in the Blackbush West and East areas improved the classification from Inferred to Indicated in peripheral areas and the western channel area.
- A change in classification of drilled areas due to the additional drilling:
    - Improved classification of some previously Inferred Mineral Resource to Indicated Mineral Resource based on improved data, interpretations, and
    - There was minor expansion of the lateral limits of the Inferred material in some areas. The Inferred Mineral Resource was reduced as material was converted to Indicated.

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

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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

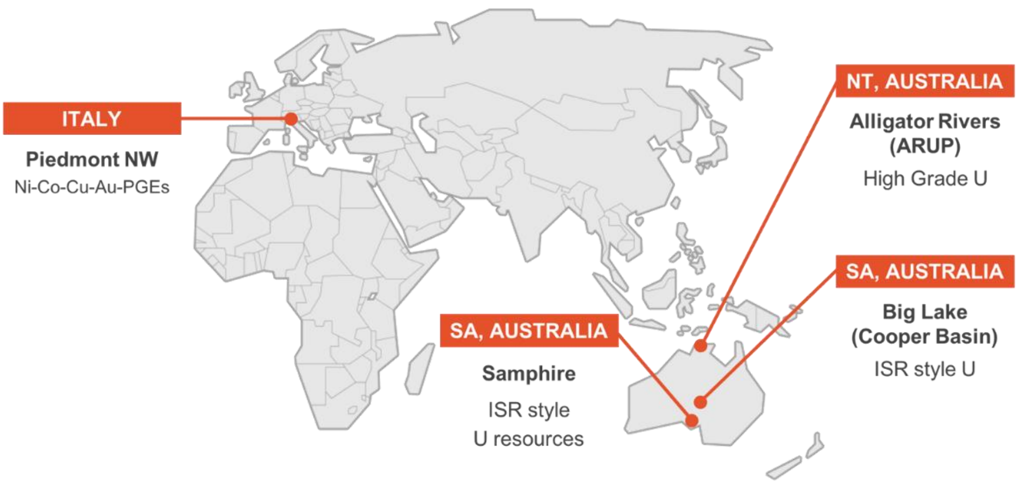
The information in this announcement that relates to the Blackbush Mineral Resource estimate (uranium) is based on and fairly represents information compiled by and generated by Mr Ingvar Kirchner, AMC Geology Manager (Perth) and a full-time employee of AMC Consultants. Mr Kirchner is a Fellow of the Australasian Institute of Mining and Metallurgy (the AusIMM) and a Member of the Australian Institute of Geoscientists (the AIG). Mr Kirchner has reviewed this Report and consents to the inclusion, form and context relevant information herein as derived from the AMC Consultants Samphire Mineral Resource estimate. Mr Kirchner has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which is being undertaken to qualify as a Competent Person as defined by the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC Code).

The information in this announcement that relates drillhole data, QAQC and geology aspects related to the project is based on and fairly represents information provided 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



JORC Code, 2012 Edition – Table 1 Sections 1, 2 & 3

Section1 – 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.*	**AGE Sampling Techniques** **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. Rotary mud samples are not suitable for assay for the determination of grade. 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** 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. 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 was undertaken by reconciliation with downhole geophysical data. Following collection and prior to sampling trays of core were transported to a coldroom for storage at 1.5 ºC. **UraniumSA Data Sampling Techniques** The work is based on rotary mud drilling and all grade determinations are from down hole geophysical logging. Sondes were appropriately calibrated.
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).*	**AGE Drilling Techniques** **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). **UraniumSA Drilling Techniques** Holes used were drilled using the rotary mud drilling technique. Mud was based on saline formation waters and very successfully facilitated hole stability and minimised collapse and wash out – all vertical

Criteria	JORC Code explanation	Commentary
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** Downhole wireline logging using a downhole PFN or natural gamma sonde was used to calculate grade for all holes as rotary mud samples are not suitable for assay for the determination of grade. For AGE holes: • 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 (AGE)** AGE used the Sonic coring method. All intervals measured for length during sonic core 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 (AGE)** 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 (AGE)** 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 and comments added where further observation is made.
Sub-sampling techniques	• *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*	**Rotary Mud Drilling (AGE)** The depth of investigation of the PFN tool approximately 25-40 cm radius around the borehole to allow for accurate measurement of

Criteria	JORC Code explanation	Commentary
and sample preparation	*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 ratio of epithermal/thermal neutrons for pU_3O_8 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. **Sonic Core Drilling (AGE)** Core was halved, photographed and geologically logged. One half core component was subsequently halved 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. 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.
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 (AGE)** 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. • GeoVista Natural Gamma Ray Sonde Serial no 5829 & 3498 • GeoVista 3-arm caliper, serial number 3612, measures the bore-hole size in millimetres for the length of the bore hole. • GeoVista Induction-Conductivity sonde serial number 3328 • GeoVista Dual Laterolog Sonde, serial number 5624

Criteria	JORC Code explanation	Commentary
		• GeoVista Spontaneous Potential, serial number 5880 **Rotary Mud Drilling (UraniumSA)** • All drill holes used in the estimation were logged with calibrated a natural gamma sonde with raw data collected and field checked using industry standard WellCad software and verified material captured to database. • 30% of drill holes were logged with PFN and density tools by independent contractors. QA/QC control has been applied by the contractor and UraniumSA; calibration certificates are retained for all tools. • Individual tool identifications were recorded at the time of use and cross checked by UraniumSA to ensure the currency of calibration certificates. **Sonic Core Drilling (AGE)** • 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.*	AGE have Standard Operating Procedures to safeguard data integrity in relation to all data capture, QAQC of geology from logging vs downhole geophysical logs, assay from commercial laboratories database import and data storage. **Rotary Mud Drilling (AGE)** ~20% of rotary mud holes drilled by AGE have twinned historical and/or sonic core holes which have been 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 (AGE)** No independent verification of significant intersections undertaken. No twinning of holes 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 entry is

Criteria	JORC Code explanation	Commentary
		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 **UraniumSA sample and assay verification** All holes used were logged by UraniumSA calibrated natural gamma tools. Duplicate runs were used to qualitatively investigate response variation with time. No material variation was identified. Approximately 37% of the holes were logged under contract by Geoscience Associates Australia. The duplication of natural gamma logging by UraniumSA was the basis for QA/QC of gamma equivalent grade and depth. Natural gamma profiles were evaluated in the field by the Site Geologist, intersections to standard assumptions calculated using certified algorithms and an in-house developed intercept calculator, then plotted against geology from cutting logging. Raw data, field estimations and plots were electronically interrogated and checked by a Senior Geologist, corrected if necessary in consultation and captured in a database.
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.*	**AGE Drill Collars** Drillholes sited using a Garmin handheld GPS Drilled holes surveyed post drilling with a 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 Downhole directional survey in sonic holes measured by magnetic deviation tool by Borehole Wireline. **UraniumSA Drill Collars** Handheld GPS was used for drill collar location. Precision is sufficient for the present estimation. Grid system AMG94 Zone 53.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications*	Drill spacing (all drillholes used in the Mineral Resource estimation) varies from 50x100m, 200x200m, 50 x 25m, 25 x 25m and 200 x 200m centres. The data spacing is consistent with the degree of geological & grade continuity for this Mineral Resource estimate and the classifications

Criteria	JORC Code explanation	Commentary
	applied. • *Whether sample compositing has been applied.*	applied for various drill spacings.
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 Blackbush 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.*	UraniumSA's and AGE rotary mud chip samples are stored at AGE's Adelaide warehouse. Sonic core is stored in a containerised lockable freezer at AGEs secure Whyalla office/yard All samples are transported by road by an Alligator Energy staff member to the Adelaide laboratory when required.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	All drilling data used in this MRE was validated by AGE prior to providing it the AMC consultants for use in the resource estimate. Any errors within the data were investigated and corrected or omitted if discrepancies could not be resolved.

Section 2 – Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	The Blackbush deposit references historical drilling and geophysics covering the SUP which are now located on Exploration Licence EL5926 originally granted 20th November 2016 for a term expiring 2018. A renewal was granted by SA Department of Energy and Mining on 28 April 2023. AGE has submitted an application for a Retention Lease over the area that contains the Blackbush deposit to progress with a Field Recovery Trial at Blackbush, approval of the lease is pending. EL5926 is 100% held by S Uranium Pty Ltd a wholly owned subsidiary of Alligator Energy Ltd. The land covering the licence area is Crown Lease; consisting of several leases over 2 pastoral stations.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	Samphire Uranium Limited (SUL), previously UraniumSA (ASX: USA) historically conducted almost all previous exploration within EL5926 defining the Plumbush (JORC2004) and Blackbush (JORC2012) resources and all relevant drilling, geophysics except ground magnetics which

Criteria	JORC Code explanation	Commentary
		was conducted by AGE in 2021. UraniumSA conducted preliminary In-Situ Recovery (ISR) hydrogeological and metallurgical testwork on the Blackbush deposit with pump testing and hydrogeological modelling.
Geology	• *Deposit type, geological setting and style of mineralisation.*	Mineralisation is dominantly sediment hosted roll-front uranium style within the Eocene Kanaka Beds (sands). Minor amounts of mineralisation are present in the overlying Miocene Melton sands (informal name) and underlying Samphire granite (informal name).
Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* ○ *easting and northing of the drill hole collar* ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* ○ *dip and azimuth of the hole* ○ *down hole length and interception depth* ○ *hole length.* • *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*	The topography in the region of the Samphire Uranium Project is predominantly flat. All holes were drilled vertically with an average hole depth of approximately 80 m. Additional images, tables and relevant cross-sections have been included in the body and appendices of this report.
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	Mineralised intervals were chosen based upon a nominal 250 ppm U_3O_8 cut-off, minimum 0.5 m interval thickness, and no fixed internal dilution. Consideration was given to mineralisation defined by a combination of PFN-derived (pU_3O_8) data, natural gamma (eU_3O_8) data, and chemical assay (cU_3O_8) data for uranium grades.
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.

Criteria	JORC Code explanation	Commentary
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.*	This announcement is for reporting of a Mineral Resource. All drill results from AGE drilling used in the Mineral Resource Estimate have been reported as part of AGE public announcements. All other historic drilling data used in the Mineral Resource estimate have previously been released to market.
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	Ground gravity data has been reprocessed by AGE over the Samphire Uranium Project including Blackbush area to provide guidance on the profile of the paleochannel. However, these surveys have not been used directly in the 2022 update (as drilling density is sufficient to override resolution of information provided by the gravity data deemed irrelevant for the purpose of this report.
Further work	• *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	The program for 2024 includes: 1) Extensional drilling program from the margin of the inferred resource 2) Exploration drilling following up other areas within the palaeochannel that have intersected uranium grade of note. 3) A 3-month Field Recovery Trial at Blackbush. 4) Additional ground geophysical surveys north and northeast of the Blackbush deposit.

Section 3 – Estimation and Reporting of Mineral Resources

Criteria	JORC Code explanation	Commentary
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* • *Data validation procedures used.*	AGE undertook a QA/QC study of all historical drilling data prior to being used in this MRE which included: • Hole collar coordinate projection inconsistencies/changes throughout the course of historical data acquisition and correction of input field errors in the UraniumSA historical database. • Review of all lithology/stratigraphy logged by UraniumSA geologists by visual inspection of the rotary-mud chips and chemical analysis using a handheld XRF. Reconciliation of UraniumSA lithology and stratigraphic codes with those used by AGE was also undertaken to ensure consistent

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		coding with historical and current geological logs. • Depth matching of geological logs (+/- 2m accuracy due to rotary-mud samples) with downhole geophysical logs (2cm accuracy). Lithology, stratigraphy, PFN and gamma grade was then exported and provided to AMC consultants for the MRE.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	Dr Andrea Marsland-Smith, COO of AGE and Competent Person for the geology and data of the project, has visited and worked on site during the 2021-2023 drilling programmes. Ingvar Kirchner, of AMC Consultants and Competent Person for the Mineral Resource Estimate. Mr Kirchner has not been able to visit site.
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on Mineral Resource estimation.* • *The use of geology in guiding and controlling Mineral Resource estimation.* • *The factors affecting continuity both of grade and geology.*	Paleochannel hosted, oxidation-controlled (roll-fronts) uranium mineralization is interpreted from the available data. The density of the drilling is sufficient for interpretation and constraining the tabular lenses of uranium mineralization. The geological setting for mineralization within the SUP Blackbush deposit has been reinterpreted based on a review of historical drilling and AGE's 2021, 2022 and 2023 infill and twin hole drilling campaign. The updated geological model consists of tabular-shaped, elongate lenses of uranium mineralization within a paleovalley-type, sandstone-hosted deposit. The uranium mineralization is hosted primarily within the Kanaka Beds – an Eocene-aged formation comprised of interbedded sands, interbedded silts, and discontinuous lenses of fine-grained organic-rich sedimentary layers in the upper sections of the Kanaka Beds. Locally, uranium grades within the mineralized zones are noted to be highly variable. Updated wireframes were based on the reinterpretation of all available geological data and assay data. The wireframes were created by constraining the upper and lower contacts of each individual mineralization lens using a nominal lower cut-off value of 250 ppm eU_3O_8 (gamma data), pU_3O_8 (PFN data) and cU_3O_8 (chemical assay data). A nominal minimum interval thickness of 0.4 m to 1 m was used with variable internal dilution allowed due to the uncertainty related to the different datatypes and apparent internal roll-front geometries. Four sub-horizontal mineralized zones have been defined. The mineralized zones are mostly grouped and constrained within the lower, middle and upper Kanaka Beds. Within the Kanaka Beds, the definition of the mineralized zones is not visually distinct, and is defined by changes in oxidation, gamma and PFN data, grade breaks between the

Criteria	JORC Code explanation	Commentary
		layers, and occasional proximity to silty sand layers or lithological contacts. Lateral variations in thickness, grade and geological continuity are noted within the mineralized zones along the complex palaeochannel and paleochannels.
Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	The Blackbush uranium deposit follows the complex paleochannel system from north to south through an oxbow-type bend to then run west to east. The cumulative strike length of the deposit is approximately 2.7 km. Width of mineralisation measured across strike averages 300 m but widens in some apparent tributary areas to widths up to 450 m. Mineralisation remains open in some areas along the paleochannel. Mineralisation generally occurs approximately 60 to 80 m below surface.
Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.* • *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* • *The assumptions made regarding recovery of by-products.* • *Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).* • *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* • *Any assumptions behind modelling of selective mining units.* • *Any assumptions about correlation between variables.* • *Description of how the geological interpretation was used to control the resource estimates.* • *Discussion of basis for using or not using the grade cutting or capping.* • *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation of data if available.*	An updated Mineral Resource for the SUP Blackbush deposit has been generated as of November 2023. The estimations used the interpreted mineralized zones as hard boundaries in all cases. AGE validated PFN data against chemical assays from a relatively small number of sonic core holes, concluding that the PFN data was comparable. A large data set of 88,012 raw intervals (mostly 1 cm intervals) in portions of 294 drillholes from the mineralized zones contained pairs of gamma data (eU_3O_8 grades) and PFN data (pU_3O_8 grades). These were studied for residual disequilibrium variability. This study noted the potential for variance within pairs related to depth matching and calibration of the different tools. The data was trimmed to eliminate pairs with PFN grades of less than 250 ppm pU_3O_8 and less than 50 ppm eU_3O_8 considering the lower detection limits of the PFN and gamma tools respectively. The gamma tool measures gamma radiation from decay daughter products of uranium such as ^{214}Pb and ^{214}Bi whereas the PFN tool measures ^{235}U, a small relatively stable fraction of ^{238}U. While being indicative of mineralization, it is possible for high eU_3O_8 values to occur in uranium-poor areas, for low eU_3O_8 values to occur in uranium-rich areas, or for the eU_3O_8 and pU_3O_8 to be relatively similar, depending on how the uranium and decay daughter products have been mobilized and reworked laterally and vertically through the palaeochannels through fluctuations in the water table. Regions of both positive and negative disequilibrium were noted along with trends both along the palaeochannels, across the palaeochannels and vertically through the mineralized zones. Further adjustment to the gamma data was required for the disequilibrium. Just using the raw interval

Criteria	JORC Code explanation	Commentary
		data pairs of eU_3O_8 and pU_3O_8, the data was modelled using an inverse distance interpolation method and power of 1 (ID1) into the model panels (12.5 mE by 12.5 mN by 2 mRL) for each of the individual mineralized zones, with a panel disequilibrium factor calculated from the estimated values (DISEQFAC=pU_3O_8/eU_3O_8). The block model confirmed the observed trends in the mineralized data pairs and incorporated adequate data (up to 800 raw interval pairs assumed to represent approximate 8 to 16 m of data) to smooth erratic data pairs generated by issues such as depth matching, calibration of tools on individual holes, and natural short-scale variability. The local estimated disequilibrium factors (DISEQFAC) were assigned to any raw interval gamma data for the mineralized zone datasets occurring within the panel area and then subsequently combined with other data (PFN and chemical assays) according to a data ranking process. The mineralized zones at Blackbush exhibit internally variable disequilibrium factors based on the available data with an apparent minor increase in factors with increasing depth. High factors were arbitrarily capped at a maximum of three to prevent over-correction of the eU_3O_8 data based on other regression analysis of the data. For sand lithologies only, the factored eU_3O_8 data were then used in conjunction with the pU_3O_8 and cU_3O_8 data with the other data types taking priority where it existed in the drillholes. For non-sand lithologies, unfactored eU_3O_8 data were used in conjunction with the pU_3O_8 and cU_3O_8 data with the other data types taking priority where it existed in the drillholes. In general, the PFN data were given priority unless pU_3O_8=0. Chemical assay data were used where both gamma data and PFN data were absent. Statistics for high-grade cuts were generated for individual mineralized zones Light high-grade cuts were applied to the combined U_3O_8 data on 1 m composite intervals. Cuts of 15,000 ppm U_3O_8 were applied to 3 of the 4 mineralized zones. Three dimensional directional experimental variograms were generated for the grade variable according to combined mineralized zones within the Kanaka Beds at Blackbush West. The experimental variograms were generally moderate to well-structured with a moderate to high nugget variance ranging from 45% and a major axis range of 100 m. Given relatively thin mineralized zones, variable grades within the zones and mining by in situ recovery (ISR) methods, U_3O_8 grade estimation was completed using an

Criteria	JORC Code explanation	Commentary
		ordinary kriging (OK) estimation process with a limited search neighbourhood. Dynamic anisotropy was used during estimation to accommodate the variable and complex orientations of the palaeovalley and palaeochannels at the different stratigraphic levels. Sample search parameters were defined based on the estimation method, variography and the data spacing. A two-pass search strategy with hard boundaries was used for all zones. Block estimates were visually and statistically compared to the input composite samples. No mining has occurred at the SUP Blackbush project. No by-products are considered or modelled for the project. The 12.5 mE by 12.5 mN by 2 mRL panel dimension considers the typical production wellfield drillhole spacing approaching 20 to 25 m and stated vertical selectivity within production bores at the scale of the interpreted mineralized zones. Mining will be by ISR. Details are currently the subject of early-stage mining studies. The November 2023 SUP Blackbush Mineral Resource has changed from the previous February 2023 Mineral Resource primarily due to the following items: • Ongoing infill drilling programme completed by AGE during the latter half of 2023 has resulted in modified interpretations for both mineralized zones and stratigraphy. • Ongoing infill drilling programme completed by AGE during the latter half of 2023 using rotary mud drillholes with both gamma and PFN tools used. The PFN data added significant confidence to some areas previously reliant on gamma data. • Additional PFN data resulted in some changes to the interpretations of the mineralized zones. • Slightly lower grade areas that were previously classified as Inferred Mineral Resource have been upgraded to Indicated Mineral Resource. • Disequilibrium factors for the gamma data changed with an increased amount of PFN and gamma data pairs. • Increased drilling in the Blackbush West and East areas improved the classification from Inferred to Indicated in peripheral areas and the western channel area. • The dynamic anisotropy orientations have been modified slightly throughout the model area to reflect the new

Criteria	JORC Code explanation	Commentary
		drillhole data results and mineralization trends. Disequilibrium modelling for gamma data based on continues to improve with additional gamma and PFN data pairs. This contributed to more detailed changes (both positive and negative) dependent on lateral location and stratigraphic positions within the palaeochannel.
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	Tonnages and metal are reported on a dry basis.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	The nominal 250 ppm U_3O_8 lower cut-off used to interpret the mineralisation wireframe domains was chosen as it represents a natural break in the data and reflects a limitation of the various tools used to generate the data. A block cut-off grade of 250 ppm U_3O_8 is currently applied for reporting of the Mineral Resource as it assumes ISR as a mining method and some selectivity limited to extraction well field design and operation. A Scoping Study on a potential mining operation at Blackbush was announced by AGE in March 2023.
Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	Uranium mineralisation at the Blackbush deposit appears to be amenable for exploitation using ISR technologies. Mineralisation is located within the aquifer where it is hosted by permeable sands and silty sands. A moderate depth of mineralisation, and good spatial continuity coupled with the tabular shapes of the mineralised zones are favourable characteristics for exploitation using ISR technologies. Field leach/recovery tests have not been conducted yet but is planned for 2024.
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	Testwork undertaken by ANSTO late 2022 have shown the following: • Mineralogical analysis (QEMSCAN) of samples used in the leaching testwork show uranium is present primarily as coffinite, with minor amounts of uraninite and uranophane. The only other minerals present in significant quantities were quartz, comprising 96.3% and pyrite (1.1%) • The highly saline groundwater at Samphire does not impact uranium leaching into solution, with diagnostic leach results of ≥ 98.6% extraction in all tests, showing a high level of leachable uranium present. • The leaching performance of the uranium ore in an In Situ Recovery (ISR) scenario was simulated in two horizontal column leaching tests over 33 days, using

Criteria	JORC Code explanation	Commentary
		Samphire ground water from the mineralised zone adjusted to a pH of 1.5. High uranium extraction into solution was again confirmed with extractions between 92.9% and 96.3%. • IX testwork undertaken at various salinity (chloride) levels showed that uranium resin loading occurred in all scenarios, but as anticipated loading efficiency of uranium is negatively impacted by higher ground water salinity. AGE is proposing that wellfield ground water pre-conditioning be utilised to lower chloride (Cl) levels from ~30g/L Cl to ~10 g/L Cl using reverse osmosis (RO) treatment of groundwater prior to ISR extraction and will be tested in the 2024 field recovery trial. This pre-conditioning is a similar technique which is permitted at the Honeymoon mine to reduce calcium and chloride in groundwater prior to ISR mining.
Environmental factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	The project is at an early stage. No mining licenses have been applied for or granted yet. AGE is in the process of applying for a Retention Lease over the Blackbush area in order to conduct the field recovery trial. AGE advise that there are no known environmental, social, or legal issues that currently pose limitations on reasonable prospects for eventual economic extraction. The commodity is uranium which has been subjected to Australian government controls and limits on mining in the past.
Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* • *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.* • *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	A dry bulk density, 2.05 t/m3 was used as a tonnage factor based on limited and clustered data. The dry bulk density is considered reasonable for the lithologies encountered in the Kanaka Beds and adjacent stratigraphy.
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).* • *Whether the result appropriately reflects the*	The Mineral Resource for the Blackbush deposit has been classified as a combination of Indicated and Inferred material in accordance with JORC Code guidelines. Resource classification is based on the confidence levels of the key criteria considered during the resource estimation process. This includes confidence in the input data, drill hole spacing, geological

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	Competent Person's view of the deposit.	interpretation, and grade estimation. The resource classification assumes exploitation by ISR mining methods. The classification reflects the Competent Persons' view of the deposit.
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	No audits or technical reviews have been completed for this most recent Mineral Resource beyond AMC's own internal peer review process.
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate* • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* • *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	The resource classification represents the relative confidence in the resource estimate as determined by the Competent Person. Issues contributing to or detracting from that confidence are discussed above. No quantitative approach has been conducted to determine the relative accuracy of the resource estimate. The OK estimation method model is considered to reflect potential recovery on a typical wellfield selectivity maintaining some internal vertical variability where appropriate within the interpreted mineralized zones. The Mineral Resource model cannot anticipate wellfield design, continuity issues (either grade or geological) that might impact on the wellfield design, or variable recoveries related to the ISR mining process (including geochemical and/or permeability constraints). Accurate ISR scenarios are yet to be determined by a mining study, including the extent to which marginal grade mineralized zones might be targeted and recovered. Accurate ISR scenarios are yet to be determined by a full mining study, a field recovery trial and the extent to which marginal grade mineralized zones might be targeted and recovered. Determination of actual wellfield recoveries via an ISR mining method is currently uncertain for the project. Metallurgical assumptions are discussed above. Field hydrogeological pump testing show the targeted Kanaka Beds are hydrologically isolated from the surficial environments. The local accuracy of the Mineral Resource model is considered fit-for-purpose for the expected use of the model in early-stage mining studies. Due to the nature of the uranium mineralization, the degree of radiochemical disequilibrium is likely to vary laterally between drillholes and vertically within each drillhole. Disequilibrium factoring applied for the November 2023 resource estimate is considered to have resulted in satisfactory global results, but local variations are still expected particularly for areas requiring additional drilling and close-spaced PFN data. Quality of the PFN data also needs to be continually monitored for comprehensive coverage and correct calibration of the tools. Additional drilling by AGE over the last few years has continued to improve confidence in the continuity and consistency of uranium mineralization within the project area. Further infill drilling, investigation into dry bulk density determination, radioactive disequilibrium (both vertical and lateral), metallurgical characteristics, and hydrogeological testing to understand potential recoveries from the ISR

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		mining process will be required to improve the level of resource classification.