Alligator Energy

ASX Announcement

13 August 2024

Significant New Uranium Discovery at Big Lake Uranium Project, South Australia

Alligator Energy Limited **ASX: AGE** (**Alligator** or the **Company**) is very pleased to advise that its inaugural drilling program at the **Big Lake Uranium Project (Big Lake)**, South Australia has resulted in a **significant new uranium discovery**.

Highlights

- **Alligator's drilling program has intersected significant thicknesses of anomalous uranium mineralisation within interbedded palaeochannel sand units in the Namba Formation.**
- **The discovery is the first proof of concept that significant uranium is present within the Lake Eyre basin sediments that lie above the hydrocarbon-rich Cooper Basin and within potentially In-Situ Recovery (ISR) amenable host and depths.**
- **So far 4 air-core drillholes have intersected palaeochannel sand units hosting anomalous uranium mineralisation located between 90 m to 130 m below surface.**
- **Using a calibrated portable X-ray fluorescence analyser (pXRF) on drill samples, initial preliminary[1] estimates of the tenor of uranium grades include:**
    - **AC24-021 20m @ 110 ppm U from 106m (inc. 1 m @ 241 ppm U from 123m)**
      1 m @ 185 ppm U from 129 m
    - **AC24-022 5 m @ 130 ppm U from 107 m**
    - **AC24-023 5 m @ 45 ppm U from 104 m**
    - **AC24-025 10 m @ 120 ppm U from 180 m**
- **The indicative grade-thickness of two intersections is at or near the economic cut off used at the Company's Samphire ISR uranium project near Whyalla, SA.**
- **Indicative uranium grades found in these holes are approximately 10 to 50 times background levels.**

Cautionary Statement

The Company uses an Olympus DP-4050 portable X-ray Fluorescence (pXRF) analyser to screen aircore drilling samples for mineralisation before submitting samples to a commercial laboratory for assay. This allows for some understanding of the distribution of mineralisation prior to sampling to better ensure that samples submitted for analysis are representative of the type and style of mineralisation sought. The pXRF provides confirmation that mineralisation is present however it is not an accurate determination of the elemental concentration within the sample analysed. Limitations include, very small analysis window, possible inhomogeneous distribution of mineralisation, analytical penetration depth and possible effects from irregular surfaces. The results obtained from the pXRF are indicative only and may not be representative of elemental concentration within the material sampled. The pXRF readings are subject to confirmation by chemical analysis

[1] All samples to be assayed for QA/QC purposes by and independent commercial laboratory post completion of the drill program.

from an independent laboratory. The Olympus DP- 4050 (S/N 550191) pXRF was calibrated on 7 February 2024 by Evident Australia using Alloy Certified Reference Material produced by Analytical Reference Material International (ARMI).

Next Steps

- **Two further holes are currently being drilled within the limited heritage cleared area of discovery. At the end of the program, all samples will be transported to Adelaide for detailed laboratory assaying and analysis.**
- **Following full analysis of data, including refinement of the geological model, Alligator will commence approvals and initiate heritage clearances for follow-up drilling.**

Alligator's CEO Greg Hall stated: *"This is the first significant greenfields discovery of uranium in South Australia since the Samphire Uranium Project in 2007 by the company UraniumSA Ltd. The thickness extent of mineralisation layers ranging up to 20m in these discovery holes is impressive for this style of mineralisation. While estimated grades are still on the lower side, to have grade-thickness intersections close to the cut-off used at our Samphire Project from the initial discovery area is very encouraging.*

The discovery appears to validate the uranium formation model developed by the previous Big Lake geologists from whom Alligator acquired the initial tenement, and we acknowledge their work. The sediments above the Cooper Basin cover are an extensive area, and we hope this has the potential to develop into a new ISR amenable uranium field, similar to the Curnamona Province which hosts the Beverley, Four Mile and Honeymoon deposits.

I would like to congratulate our exploration team: for their initial EM interpretation work on the project back in 2019, the detailed seismic interpretation work carried out during 2022/23, and the planning, logistics and safe drilling operations carried out to date. We are also very appreciative to the Traditional Owners, pastoralists and other stakeholders in the region that have facilitated access for our work."

As documented in our ASX Release 17 July 2024[2], Big Lake's inaugural drill program on Alligator's 100% owned EL6367 reported evidence of potential paleochannel sands at drill-target "Site 10" (Figure 1). Drilling resumed on 8 August 2024 in this area after a 3 week break due to rain affecting access.

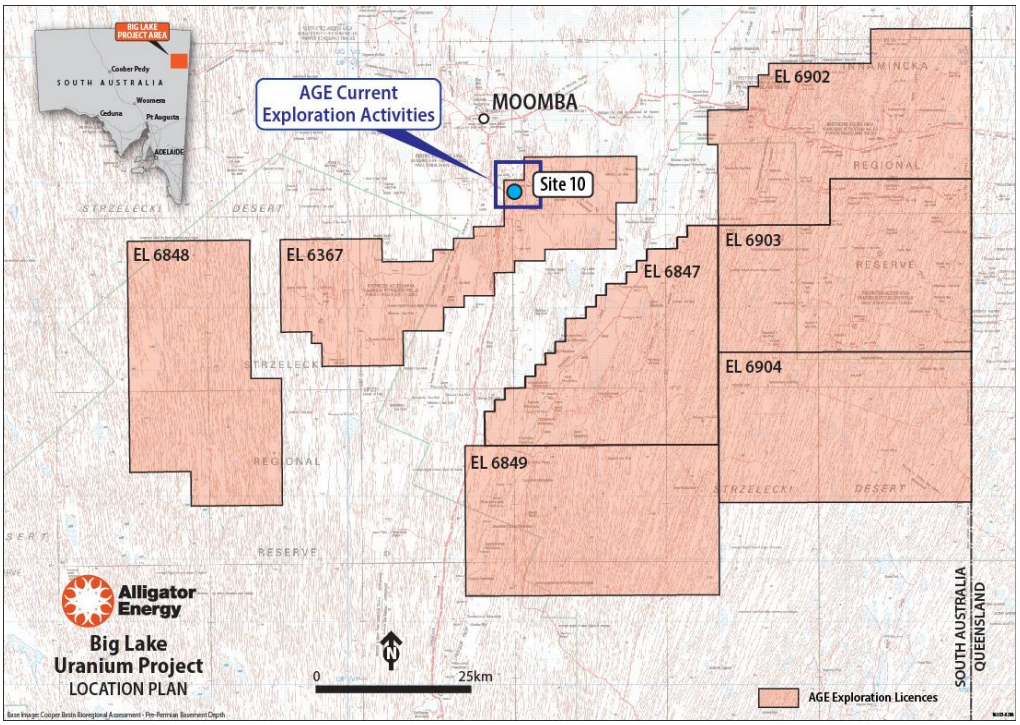

Figure 1: Alligator's significant tenement holding over the southern Cooper Basin which comprise the Big Lake Project. Area of current AGE drilling activities and location Site 10 denoted.

The objective of the inaugural program was to investigate the regions stratigraphy and the potential for uranium mineralisation in the shallow basin sediments that lie above the hydrocarbon-rich Cooper Basin; this setting having many attributes seen in other global hydrocarbon-related ISR uranium fields around the world (refer Figure 2). A historical drilling program in the region by a previous company (TC Developments) ~15 years ago indicated traces of uranium in thin clay bands in and around existing oil and gas wells. None of these holes were drilled in palaeochannel features within the upper (<300m) sedimentary sequence of the basin.

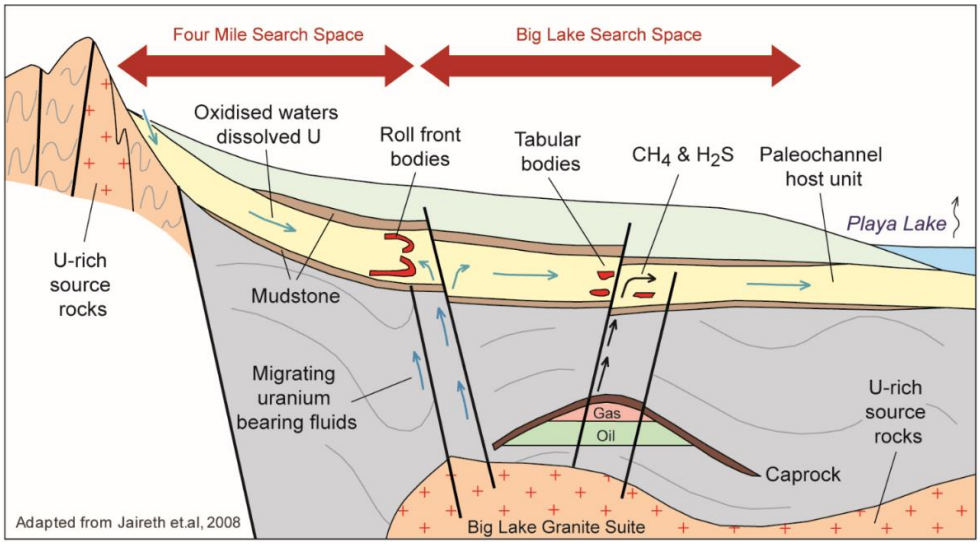

Figure 2: Basic conceptual model for the Big Lake Project.

[2] AGE ASX Release 17 July 2024: Alligator Energy – Projects Update, 02828751.pdf (weblink.com.au)

AGE's strategy is to specifically target the northern extensions of the same Tertiary Namba and Eyre sedimentary formations which host the Beverley, Four Mile and Honeymoon In-Situ Recovery (ISR) uranium mining operations in South Australia, south of the Big Lake project (Figure 2, ASX Release 17 May, 2024[3]). The aim of this initial drilling program has been to target the shallower Namba formation, with the objective of corroborating our seismic / airborne electromagnetic survey interpretations of potential mineralisation-bearing palaeochannels. Site 10 was specifically targeted to confirm the presence of an inferred palaoechannel and assess if this channel contained the key ingredients of the model shown below.

Requirements	AGE interpretation	Status
Source rock	Granite Suite present on edge of Cooper Basin	✓
Permeable sedimentary sequences	Targeting Eyre and Namba Formations	✓
Hydrocarbon reductants (Kazak, Wyoming, Texas)	Cooper Basin - known oil and gas field	✓
Migration of uranium bearing fluids	Seismic interpretation of paleochannels	AGE currently drill-testing (program commenced May 2024)
Presence of uranium observed	TC Development / Oil and Gas Operators	U occurrences - 'sniffs' noted to date

Drilling at Site 10 has confirmed the presence of a paleochannel intersected in aircore holes AC24-016, 017, 018, 021, 022, 023, 024 & 025 (Figure 3). Holes AC24-021 to 025, drilled since August 8, encountered sizeable and correlatable interbedded oxidised and reduced palaeochannel sand units in the Namba Formation between 90 m to 130 m depth. **These units are commensurate with significant thicknesses of anomalous uranium mineralisation in holes AC24-021, 022, 023 and 025 and cover an area over 7000 m²** (Figure 4).

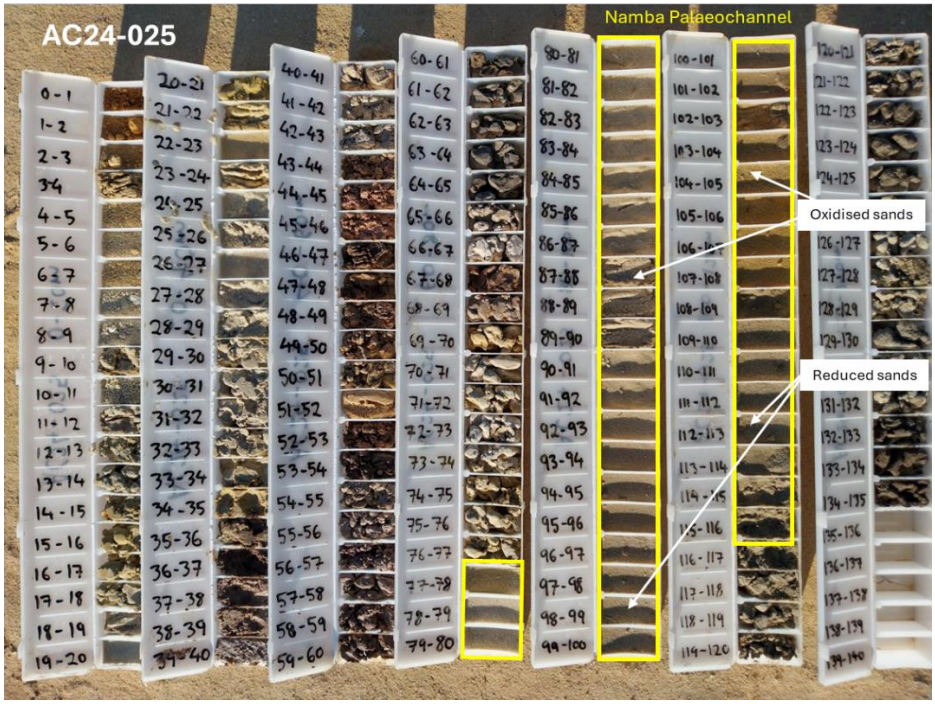

Figure 3: Chip tray samples from AC24-025 showing 39m thick oxidised and reduced Namba palaeochannel sands.

[3] AGE ASX Release 17 May 2024: Drilling Program Commences at the Big Lake Uranium Project, 02807913.pdf (weblink.com.au)

Using a calibrated[4] portable X-ray fluorescence analyser on the aircore drill samples, initial preliminary indicative uranium grades include:

- AC24-021 20 m @ 110 ppm U from 106 m
  (inc. 1 m @ 241 ppm U from 12 3m)
  1 m @ 185 ppm U from 129 m
- AC24-022 5 m @ 130 ppm U from 107 m
- AC24-023 5 m @ 45 ppm U from 104 m
- AC24-025 10 m @ 120 ppm U from 108 m

Of significance is the presence of oxidised and reduced sands in all holes drilled in this area which is synonymous with roll-front uranium mineralising systems. This discovery is the first proof of concept that significant uranium is present within the shallow basin sediments that lie above the hydrocarbon-rich Cooper Basin and are within In-Situ Recovery (ISR) amenable host environment and depths.

Two additional holes are currently being drilled from the limited existing heritage cleared area of discovery and post this, samples will be transported to Adelaide for confirmatory laboratory assay and geological analysis. Following full analysis of the data, including refinement of the geological model, Alligator will commence approvals and heritage clearances for additional follow-up drilling.

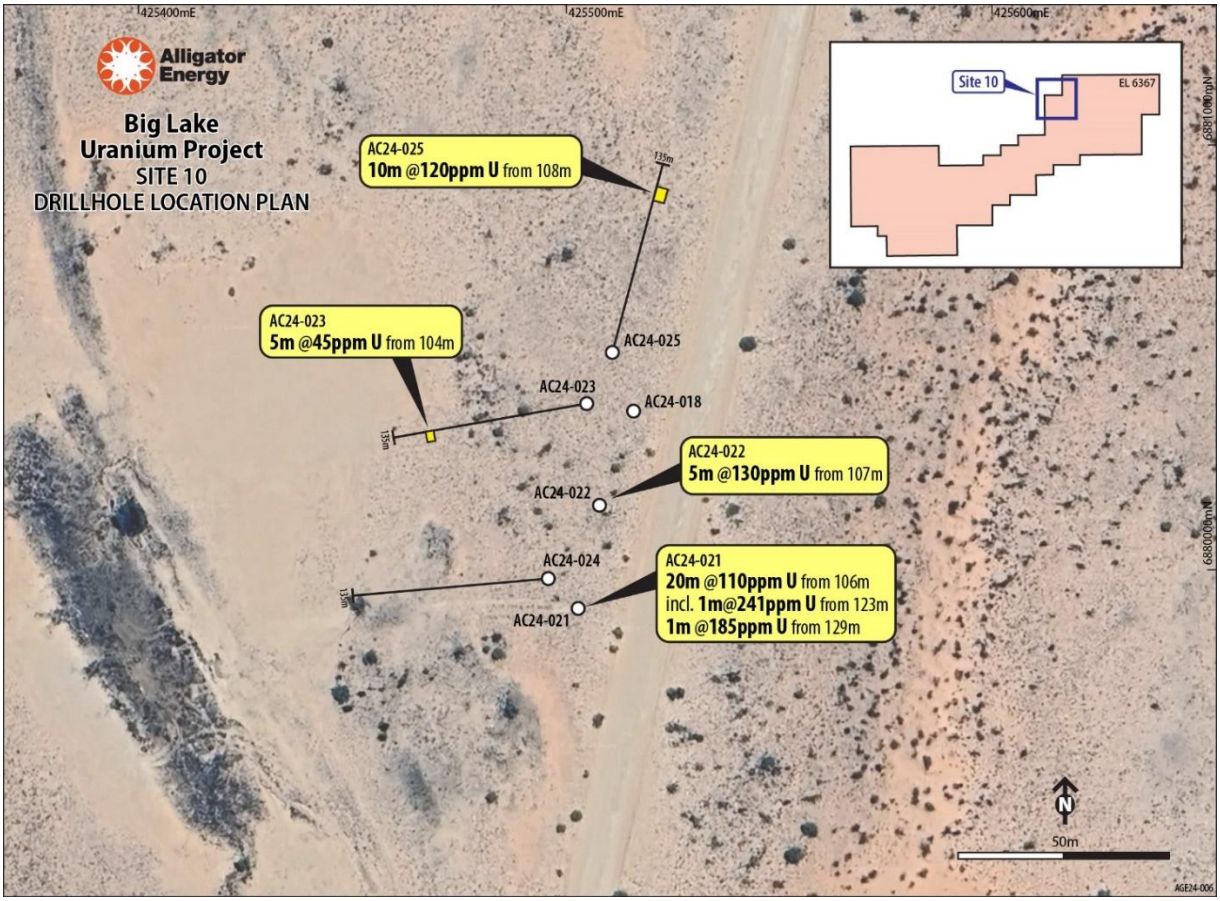

Figure 4: Drillhole location map (Site 10) showing uranium grades (ppm) encountered in AGE's drilling since August 8, 2024.

[4] The Olympus DP- 4050 (S/N 550191) pXRF was calibrated on 7 February 2024 by Evident Australia using Alloy Certified Reference Material produced by Analytical Reference Material International (ARMI).

Note: *References above to XRF results relate to analysis using a portable hand-held device. This portable device provides immediate analysis of modal mineralogy of drill samples. Unless otherwise stated, values determined by XRF analysis are based on one spot reading per one metre of drill sample. As such, results from XRF analysis are stated as estimates only and are preliminary to subsequent confirmation (or otherwise) by geochemical laboratory analysis.*

This released was authorised by Greg Hall, CEO and Managing Director.

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Forward Looking Statement

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

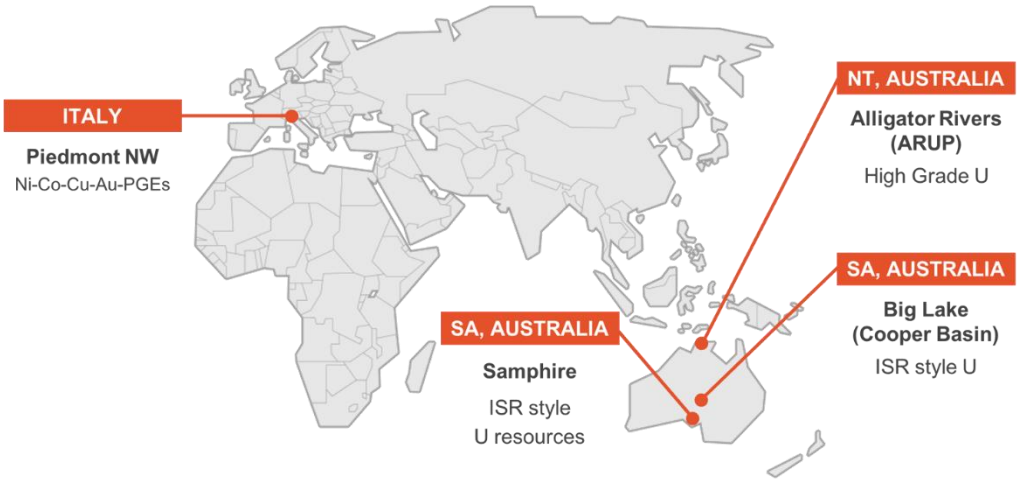
Competent Person's Statement

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

About Alligator Energy

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

Projects



APPENDIX 1

JORC Code, 2012 Edition – Table 1 (Sections 1 & 2)

Section 1 – Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary

Sampling techniques	• *Nature and quality of sampling (e.g. 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 (e.g. '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 (e.g. submarine nodules) may warrant disclosure of detailed information.*
		• Results reported in this announcement relate to aircore (AC) drilling during the 2024 exploration program on EL6367 at the Big Lake Uranium Project in the Lake Eyre/Cooper Basin Province, South Australia.
		• Sampling of the aircore drilling program involved the following components:
		  ○ Drilling sample return is taken off the rig at 1 m intervals without any splitting. They are laid out in numerically ordered labelled bags to avoid any confusion over intervals.
		  ○ Following geological inspection, representative and non-composited 0.5-1 kg portions are taken from the1 m samples (above) where there is: a change in geological horizon, mineralisation, alteration assemblages or any other zone of interest.
		  ○ Sampling is done over potential host sequences, with focus on the Namba Formation.
		  ○ All samples are geologically logged, and natural gamma radioactivity level is measured with a RS-230 BGO Super SPEC Gamma-Ray Spectrometer (May 2023)
		• Samples for assaying across the entire AC drilling program will be shipped to the same laboratory under one batch. Laboratory sample preparation is described in the 'quality of assay data' section.

Drilling techniques	• *Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. 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).*	• Drilling was contracted to Wallis Drilling of Western Australia. Using a Mantis 200 Automated Aircore (AC), up to 40 holes were planned on 5 – 10-hole fences (cross-sectional lines of drillholes placed 50 – 200 m apart), with an average depth of 150 m. • Drill hole collar locations were positioned using a Garmin GPS with an approximate X-Y tolerance of 3 to 5 m.
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.*	• Sample recovery from the AC drilling is monitored during drilling with an assessment made on the volume and weight of material recovered relative to the drill interval. If AC sample recovery is poor, it is logged as such. This is systematically recorded in the logging database. • Cross-interval contamination is assessed regularly but it is not possible to eliminate from AC drilling process. However, no significant contamination issues have been encountered in this program. • For this program no apparent relationship was observed between sample recovery and grade. No sample bias is expected.
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.*	• Standard sample logging procedures are utilised, including logging codes for lithology, minerals, colour, weathering etc. • A chip tray sample is taken for all 1 m intervals. • All chip trays are photographed for digital archiving. • Average natural gamma ray activity is measured for each sample. The instrument was purchased in 2023, pre-calibrated from counts to instrument-independent decay rate (µSv/hr). The conversion accounts for specific instrument crystal volume, sensitivity, and dead-time.

Criteria	JORC Code explanation	Commentary
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality, and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• The AC drilling process does not generate core but chips and sediments of samples as returns • The chips are recovered at one-meter intervals via the cyclone – wet or dry • As per sampling section, ~ 0.5-1 kg samples are extracted from the one-meter interval bulk drill-return by random scoops. • Samples for laboratory analysis are subsequently taken by hand picking random samples from the respective bulk drill-return interval. • To ensure laboratory reliability, duplicates are taken at a minimum of every 25 samples.

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 (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.*
		• As per announcement, estimates of uranium concentrations are based upon portable XRay fluorescence (pXRF) spectroscopy measurements using an Olympus DP- 4050 (S/N 550191) previously calibrated on 7 February 2024 by Evident Australia. As part of the calibration, the instrument was verified using Alloy Certified Reference Material produced by Analytical Reference Material International (ARMI), including Uranium-bearing Standard OREAS 100a (135 ppm uranium from Mt Gee uranium prospect), with which a pass was achieved (Certificate # 20166415, certified to 0.01%).
		• Upon completion of the current drilling program, samples will be sent under a single batch for complete geochemical and elemental analyses by Bureau Veritas (BV), South Australia. This will follow BV's standard processing sequence:
		  ○ Samples are pulverized to a maximum 3 mm grain size and then split to obtain separate aliquots
		  ○ One aliquot with a minimum of 0.2 g for mixed acid digest with a mixture of nitric, perchloric and hydrofluoric acids. Induction Coupled Plasma Mass Spectrometry (ICP- MS) is then employed to detect concentrations of 42 elements (detection limits vary depending on the element).
		  ○ Another aliquot is prepared and fused with lithium metaborate at high temperature. ICP – MS is then employed to detect another ~ 30 elements, including rare earths (detection limits vary depending on the element).
		• Bureau Veritas employs procedures in accordance with ISO 9001 Quality Management, including one in twenty samples analysed in duplicate.

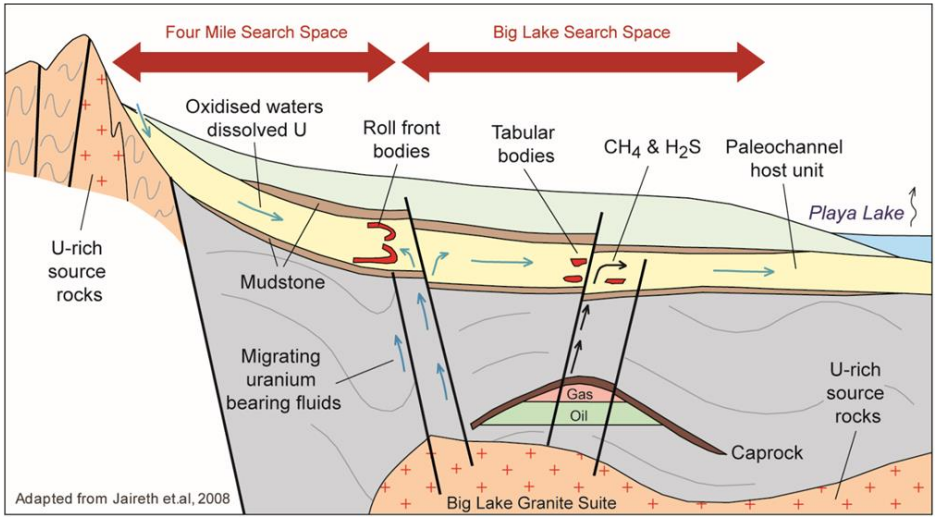
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• Alligator's field geologists are supervised by the Project Lead / Senior Geologist • All field data is entered into excel spreadsheets (supported by look-up tables) at site and subsequently validated on import into the centralized Access database. • Hard copies of logging and sampling data are stored in the local office and electronic data is stored on the company server. • As an early exploration / part stratigraphic drilling program, twinning of results is not required. However, all new data will be compared against legacy drill datasets, Alligator's previous aircore drill data, geophysical coverage etc, to check for a consistent picture, possible discrepancies in new and old data and anomalies – leading to an enhanced picture of local prospectivity. • .
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.*	• All coordinate information was collected using handheld GPS utilizing GDA 1994, Zone 54. While spatial location is expected to be recovered within 3 – 5 m, it is possible that the elevation can be as much as 10 m out with respect to the currently established geoid.

Criteria	JORC Code explanation	Commentary
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	• The AC drill lines (or fences) of three to ten drillholes were strategically placed within the Big Lake Project to: ○ Corroborate seismic/airborne electromagnetic (AEM) interpretations of potential mineralisation bearing channels and host sequences (in this case, primarily the Namba Formation) ○ Test the quality and variability of potential host formation ○ Potentially make intercepts into host formations with indicators of uranium, uranium transport or uranium deposition.
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.*	• Drill traverses were generally designed to be orthogonal to the predicted course of interpreted palaeochannels. However, this was impractical in many cases owing to: ○ Access restrictions due to oil and gas infrastructure or to minimise environmental disturbance. ○ Uncertainty of palaeochannel geometry at this early stage of exploration ○ Inherent ambiguity of datasets due to spatial resolution or penetration limitations (particularly for AEM data in conductive cover terrain).
Sample security	• *The measures taken to ensure sample security.*	• Company geologists supervise all sampling and subsequent storage in field and transport to point of dispatch to the assay laboratory.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• As an inaugural drilling program audits or reviews of the sampling techniques were not undertaken.

Section 2 – Reporting of Exploration Results

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 Big Lake Project (Tenement Holder - Big Lake Uranium Pty Ltd, project operated by Alligator Energy Ltd) is comprised of 7 exploration licences (EL 6367, EL 6847, EL 6848, EL 6849, EL 6902, EL 6903 and EL 6904) covering 6,422km^2. The initial licence - EL 6367 was granted on 22nd July 2019 for a two-year period and covers an area of 818 km^2. This licence was renewed for an additional three-years, expiring July 2024. A further 6 licences were added to the project in 2022 and 2023. EL6367 covers part of the Strzelecki regional reserve on its western side and parts of the Cooper Creek flood plain. The licence also covered parts of 6 historical exploration leases, ELs 4068, 4069, 4071, 4072, 4073 and 4076 previously held by TC Development Corporation Pty Ltd between 2008 and 2013. • A Native Title Agreement for Mineral Exploration (NTMA) for Exploration between Big Lake Uranium Pty Ltd and Yandruwandha Yawarrawarrka Traditional Landowners (Aboriginal Corporation) RNTBC (INC 3840) has been instrumented and endorsed (RI 53024) on 2 August 2023.The agreement covers EL 6367, EL 6847, EL 6849, EL 6902, EL 6903 and EL 6904.Hertitage sites in the area take the form of registered sites, which the company has full understanding of the location, and are excluded from exploration. Like any other jurisdiction, Alligator is required to protect heritage and archaeological sites via work area clearances on an as-needs basis. • Alligator operates under an approved authorisation (Exploration Program for Environmental Protection and Rehabilitation) with the SA Government.

Criteria	JORC Code explanation	Commentary
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Historic work across the tenement area (EL 6367) has predominantly focused on petroleum exploration which actively commenced on-ground exploration in the mid-1960s. To date 424 petroleum wells have been recorded within the licence boundary and active production is ongoing with processing taking place at SANTOS' nearby Moomba facility. Petroleum drilling across the tenement has provided valuable uranium exploration data through gamma logs which are valuable for the construction of simplified stratigraphic logging, however the primary focus of these holes lies much deeper than economic uranium exploration targets. Petroleum drilling in the district typically targets stratigraphic horizons of the Eromanga Basin approximately 1300m deep and Cooper Basin approximately 3000m deep. • Four 3D seismic surveys overlap parts of the licence giving almost total coverage. Seismic Survey (Year conducted) Moomba Big Lake 3D (1997 Barina-Farina 3D (1998) Caladan-Daralingie 3D (2001) Greater Strzelecki 3D (2001) Over 1000 2D seismic profiles have been conducted across the exploration licence over the past 50 years. Quality of the 2D data varies with vintage, with those being shot from the mid 90's onwards generally the best datasets for geological interpretation. Since 2019 the SA government began reprocessing open-file 2D seismic to generate pre-stack time and depth migrated datasets for the Cooper Basin 2D cubed programme. 3855 lines have currently been reprocessed, 205 of which are located within the Big Lake Project. This reprocessed data provides a filtered full-offset final migration that enhances the data lower in the seismic profile, providing insights to possible fluid migration paths beneath, and into, the stratigraphy targeted by AGE. • Aside from Petroleum exploration only modest mineral exploration has been conducted within the licence. Uranium exploration was conducted by TC Development Corporation Pty Ltd who held 6 licences (EL4068, EL4069, EL4071, EL4072, EL4073 & EL4076) overlapping EL6367 amongst others in the region. TC Development Corporation Pty Ltd held the licences between 2008 and 2013, with active on-ground exploration conducted during 2008 and 2009. • On-ground exploration by TC Development consisted primarily of rotary mud drilling of 148 holes totalling 20,584 m. These holes concentrated around historic gamma anomalies identified in petroleum well logs. Hole depths range from 60 to 290 m depth and average 140 m targeting the Eyre Formation proximal to hydrocarbon domes. Gamma logs and lithology was recorded for all holes with 3687 interval samples analysed for geochemistry through XRF by Genalysis Labs WA.

Criteria	JORC Code explanation	Commentary
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The Big Lake exploration project lies on the eastern edge of the Cooper – Eromanga Basins between the Patchawarra and Tenappera Troughs. The basins have a long history of oil and gas extraction and the uranium occurrence model follows analogues of occurrences above hydrocarbon fields in New Mexico and Texas in the United States of America and those of Kazakhstan. • REDOX-controlled 'roll front' uranium mineralisation is being targeted by Alligator within the sedimentary Tertiary Namba and Eyre Formations and Cretaceous Winton Formation. The potential uranium source for the BLU Project is interpreted to be from weathering/leaching of the underlying uranium enriched Big Lake Granite Suite. The suite was recognised initially from regional heat flow maps of Australia and elevated geothermal gradients in the Cooper Basin petroleum wells. They were subsequently recognised in seismic data and later intersected in petroleum wells. • Uranium from this potential source is interpreted to migrate via oxidised groundwater into permeable units and paleochannels within the basin. Hydrocarbons generated in the lower part of the basin are known to have transgressed stratigraphy and leaked into the upper parts providing the reductant for uranium to precipitate from the groundwater (**see Figure below**). Numerous regional petroleum wells show traces of uranium throughout the sedimentary sequences of the basin, confirming the potential for the mineralisation model described above, with recently acquired airborne electromagnetics and reprocessed seismic data demonstrating continuity and volume potential. 
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*	• Refer Table 1 Appendix 2 of this release.

Criteria	JORC Code explanation	Commentary
	○ *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.*	
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. 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.*	• An average of the uranium grade is reported (determined by handheld/portable XRF) over the specific intervals reported in the text which was deemed significantly anomalous.
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 (e.g. 'down hole length, true width not known').*	• Uranium mineralisation was intersected over tens of metres in several holes at Site 10. The intercepts have not been corrected for apparent dip. It is anticipated that with near-vertical drilling into basinal flat-lying sequences, the intercepts are within 10% of true thicknesses. • While the holes show similarities in host sequence (including oxidation state), uranium concentrations and target depth, it cannot be assumed that the intercepts are continuous nor make up a single mineralised system.
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.*	• See figures in release. • Appropriate scales and orientations are applied to all diagrams.
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.*	• Exploration results are discussed in the report and shown in figures.

Criteria	JORC Code explanation	Commentary
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.*	• See release details. • All meaningful and material data reported.
Further work	• *The nature and scale of planned further work (e.g. 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.*	• Current samples to be submitted for detailed geochemistry analyses at the end of the drilling program. • Assess and incorporate 2024 results into current exploration model • Integration of new drilling results across the entire program into the existing basin model interpretation. Further investigation on the application of 2D and 3D seismic for the definition of paleo-channels in other regions of AGE's Big Lake exploration licences. • Mapping the distribution and thickness of 'granite wash plays' from historic and reprocessed seismic data. • Isopach mapping of historic oil and gas logs across the licence to define variations in Namba and Eyre Formation thicknesses. • Further investigation on the application of passive seismic for the definition of paleo-channels. • Continue capturing the relevant data from historic petroleum wells and mineral exploration drillholes. • Continued data amalgamation and historical research to define new targets in near surface horizons. • Follow-up drilling in the area 10 to gain better understanding on the direction and magnitude of the intercepts. This will also require additional environmental and heritage clearances to expand the drilling footprint.

APPENDIX 2

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

Table 1: Estimated grades (reported as an average U ppm over an interval) were determined by portable X-Ray Fluorescence (pXRF) spectroscopy measurements using an Olympus DP- 4050 (S/N 550191) calibrated on 7 February 2024 by Evident Australia. Grades reported here will be further verified by Bureau Veritas laboratories.

Note mineralised intercepts reported for angled holes are for apparent thickness. The uranium mineralisation is stratiform and therefore assumed to be horizontal.

HoleID	Easting (GDA94, Z54)	Northing (GDA94, Z54)	RL	Azimuth	Dip	Hole Depth (m)	Depth From (m)	Depth To (m)	Thickness (m)	Av. U (ppm)
AC24-016	425351	6879415	35	0	-90	138	No significant anomalous intersections			
AC24-017	425456	6879765	32	0	-90	132	No significant anomalous intersections			
AC24-018	425516	6880037	34	0	-90	138	No significant anomalous intersections			
AC24-021	425503	6879991	32	0	-90	132	106	126	20m	110
AC24-021	425503	6879991	32	0	-90	132	129	130	1	185
AC24-022	425508	6880015	33	0	-90	140	107	112	5	130
AC24-023	425505	6880039	34	260	-70	135	104	109	5	45
AC24-024	425496	6879998	31	265	-70	135	No significant anomalous intersections			
AC24-025	425511	6880051	34	15	-70	135	108	117	10	120