Alligator Completes Geophysics at Samphire and Big Lake Uranium Project – 4 June 2021

Alligator Energy (ASX: AGE, 'Alligator' or 'the Company') provides the following update on its South Australian uranium resource and exploration work:

Blackbush Deposit Geophysics, Samphire Uranium Project, SA:

- High-resolution ground magnetics survey covering the Blackbush resource successfully completed during April 2021;
- Passive seismic surveys conducted over peripheral Blackbush airborne electromagnetic (AEM) features targeting palaeochannel refinement and continuations;
- Improved geophysical detail provides solid data and insights into basement features and structural controls of the Blackbush resource and **will assist with targeting of further high-grade mineralisation**;
- Resource specialist being commissioned to review previous Blackbush resource and provide **drilling requirements for JORC resource upgrade**;
- Drill planning underway for infill and extensional rotary mud drilling for targeting JORC resource enhancement;
- Engagement with local indigenous group under the existing NTMA agreement around planned program is commencing;
- Initial procedures established with ANSTO for updated uranium recovery testwork; and
- Sonic drilling being planned to provide core for ANSTO testwork.

Big Lake Uranium (BLU) Project, Cooper Basin, SA:

- Data acquisition through a SkyTEM airborne electromagnetic survey has been completed, designed as first phase exploration for the BLU Project;
- Processed interpretation and results are expected in late Q2 / early Q3; and
- Depending on successful identification of potential paleochannel targets, drilling planning will then proceed.

Greg Hall, Alligator CEO said *"Our geological team has made excellent progress to enhance the existing historical geophysical data set by acquiring high resolution magnetic data and completing additional passive seismic surveys at the Blackbush deposit which will help to refine targets for future drilling. We are also very pleased to commence our exploration of the Big Lake Uranium greenfields ISR opportunity with the planned airborne EM program. The positive market support for uranium is continuing, which reinforces our strategy of multi-project resource and exploration work, as well as a continued evaluation of further external uranium resource opportunities."*

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Number of Shares:
2,364.3 M Ordinary Shares
123.7 M Listed options
60M Perform Shares
19.2 M Unlisted Options

Samphire Uranium Project, near Whyalla, South Australia

Alligator is pleased to announce the completion of a ground magnetic and passive seismic survey at the Samphire Uranium Project. The surveys were completed over the majority of the Blackbush uranium JORC compliant resource through mid-late April 2021. The results show a marked improvement on existing magnetic data resolution *(refer Figure 1)* and provide additional insight and clarity into basement geological features and potential controlling factors of mineralisation within the Blackbush resource.

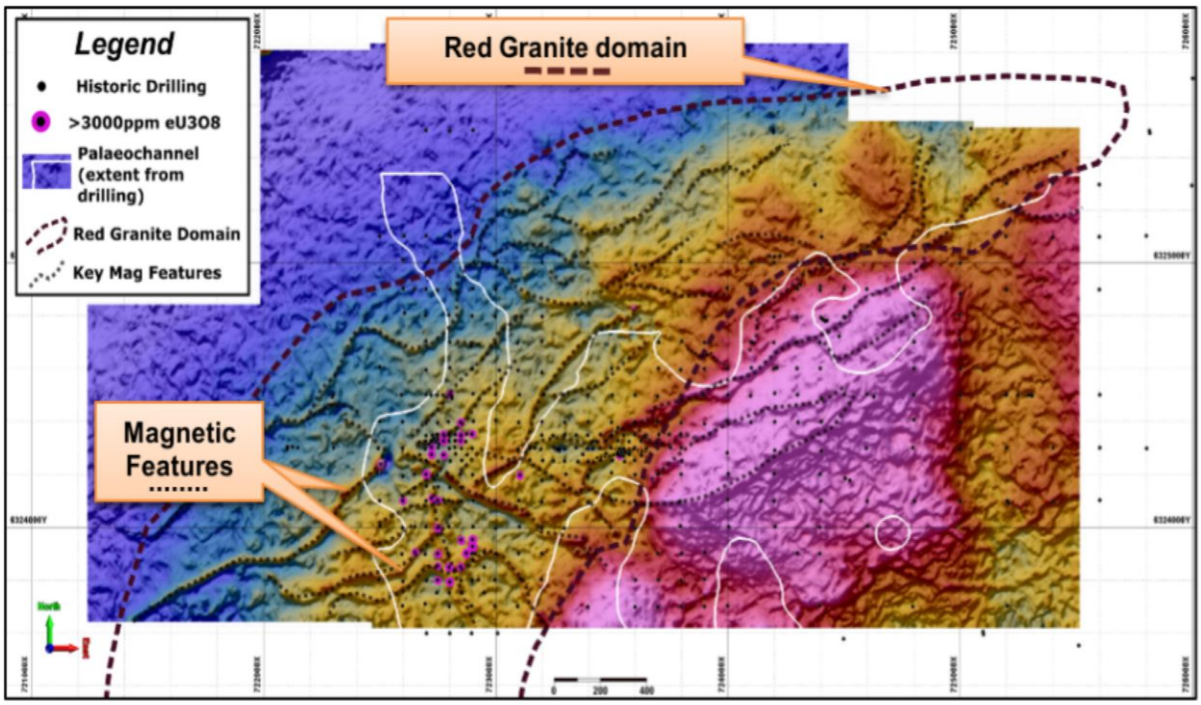


Figure 1: New high-resolution ground TMI Magnetics with hole intersects >3000ppm eU3O8 highlighted and northeast-southwest Mag zone.

Historically the Samphire granite (below the sediments containing the uranium resources) has been segregated into 5 distinct domains with the highest grades of mineralisation at Blackbush sitting predominantly within the Kanaka palaeochannels located directly above the Red Granite domain. This domain is typified by coherent northeast striking low-moderate amplitude/frequency magnetic features (refer to *Figure 1* - Key Mag Features).

The new improved magnetic resolution in *Figure 1* provides additional insight into understanding the interaction between these granite domains, and the mineralisation encountered so far at Samphire. **Early interpretations show peak uranium mineralisation (*pink circles with black dots*) typically occurring within the main north-south palaeochannel (*white outline*) where coincident low-moderate amplitude magnetic features are intersected *(lines of black dots*).** This data is now being utilised as an additional targeting vector to investigate the potential for further high-grade mineralisation within the known deposit, in addition to further mineralisation proximal to the current resource boundary.

In conjunction with ground magnetic surveys a complimentary passive seismic program was conducted over four lines, with an emphasis on increasing the footprint of the current deposit. Passive seismic lines were located targeting palaeochannel margins predominantly outside of the

existing Blackbush resource where drilling has adequately defined existing palaeochannels. Location of these survey lines can be seen below in *Figure 2* orientated across modest AEM features indicating potential existing palaeochannel morphology. Data was processed by Resource Potentials (WA) who have significant experience of passive seismic data in similar settings, including direct experience from the Blackbush deposit. Resource Potentials provided modelled sections, one of which is shown below in *Figure 3*.

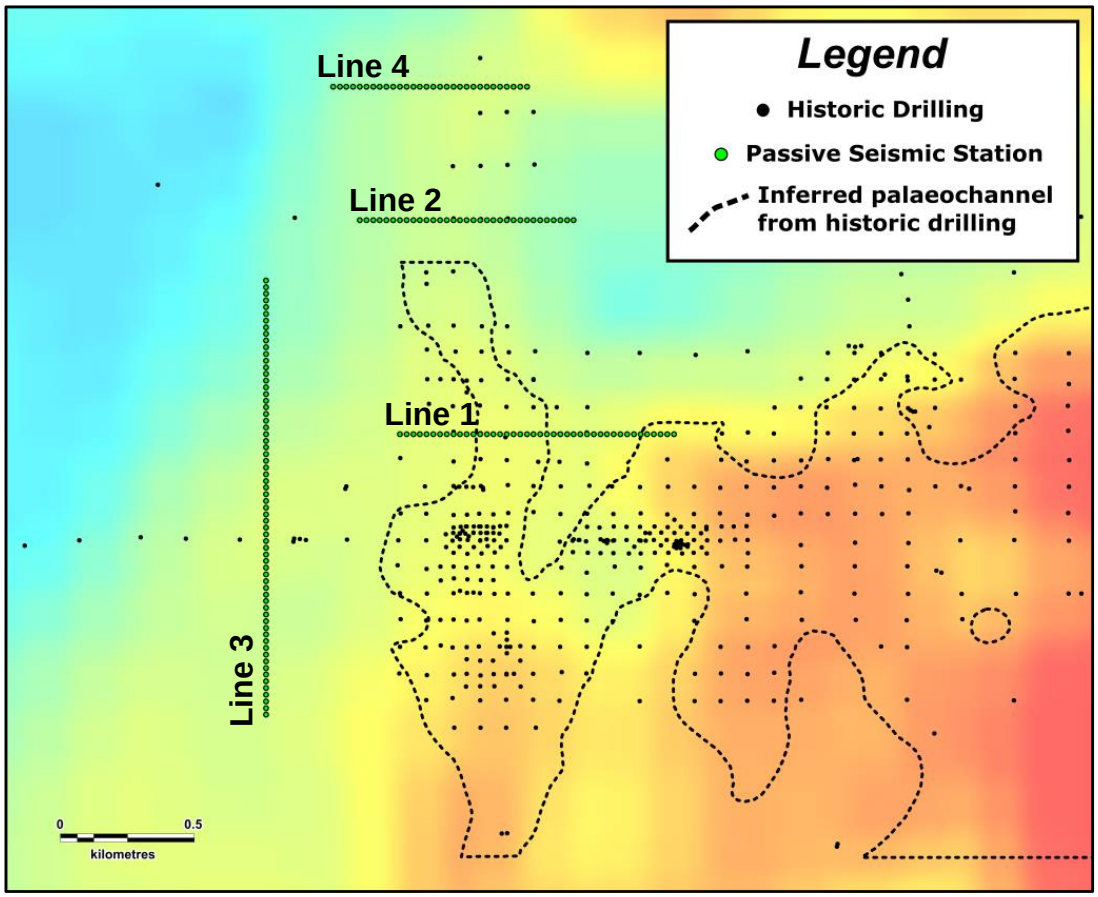


Figure 2: Location of Passive Seismic stations on -60m AEM

On all modelled sections the inferred base of sediments and plotted sections correlate closely with existing drilling (where it exists). Line 1 was conducted across historic drilling within known extents of the Blackbush resource to model correlations with existing drilling and geological models. Lines 2, 3 and 4 targeted more regional channel extensions with only modest historic drill testing. These passive seismic sections in combination with this modest historic drilling reveal the potential for untested palaeochannel sections shown below within the highlighted section of Line 2 in *Figure 3*, west of existing drilling.

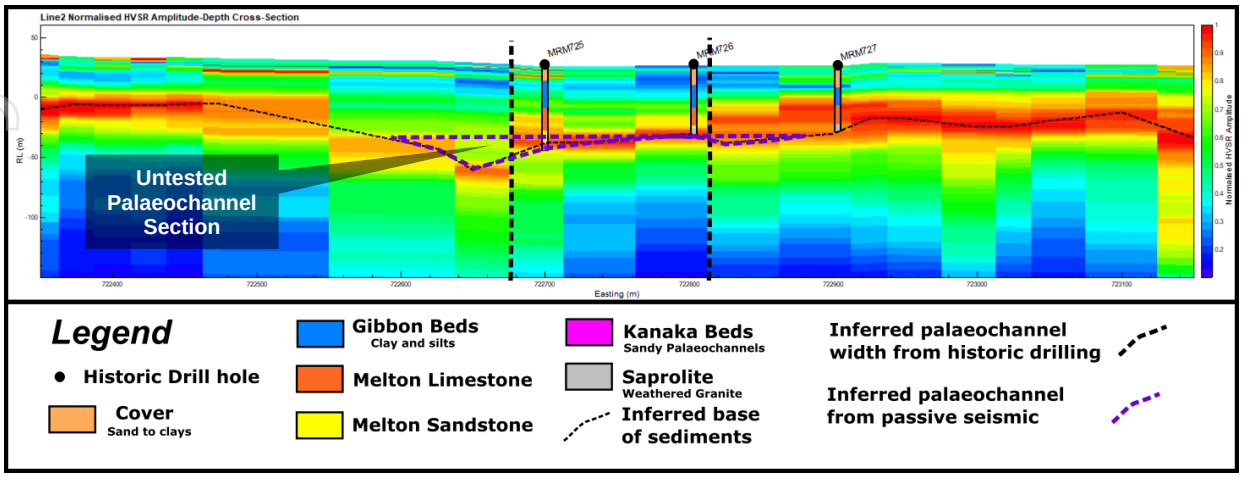


Figure 3: Line 2 modelled passive seismic HSVR section with interpretations.

Samphire Project Next Steps

Alligator is finalising the exploration PEPR for the planned drilling program which will be submitted to the SA Department for Energy and Mining (DEM). The geophysics programs and the likely planned drilling which will occur have been discussed with the local landowner, and a formal notice is being prepared.

Presentations and engagement with the local indigenous group under the existing NTMA agreement are also currently being planned.

Additionally, the Company has developed a shortlist of suitable ISR experienced resource modelling professionals and has commenced the engagement process to ensure the program is suitably designed and supported ensuring optimal outcomes. Drill tenders are also being prepared with the emphasis on securing suitably experienced and equipped groups to ensure the highest quality work is achieved.

The Alligator team are excited to commence the next significant JORC compliant resource enhancement and exploration steps on the Samphire Uranium Project during the second half of this year.

Big Lake Project, Cooper Basin, South Australia

Alligator announced the commencement of an airborne electromagnetic (AEM) survey on 7 May 2021 to be conducted over the Big Lake Uranium Project located in the Cooper Basin, northern South Australia. The Company is pleased to announce the completion of this survey. The data is currently being finalised allowing interpretation to commence shortly.

The Project was granted funding under the South Australian Governments Advanced Discovery Initiative (ADI) scheme. Following a stage 2 application to the scheme in March 2020, the Company was awarded $152,400 towards its “Greenfields exploration for ISR uranium deposits in the Cooper Basin”. The purpose of the survey is to delineate interpreted palaeochannels within the Eyre formation of the Tertiary sediments that would form a favourable environment for uranium deposition. SkyTEM Australia were selected to complete the survey utilising the SkyTEM 304 system which is proven to deliver accurate data from the top few metres to depths of up to 350 metres.

Approved for release by the Alligator Energy Board.

FOR FURTHER INFORMATION, PLEASE CONTACT

Mr Greg Hall CEO & Managing Director Alligator Energy Ltd Email: gh@alligatorenergy.com.au	Mr Mike Meintjes CFO & Company Secretary Alligator Energy Ltd Email: mm@alligatorenergy.com.au

Competent Person's Statements

Information in this report is based on current and historic Exploration Results compiled by Mr Andrew Peter Moorhouse who is a member of the Australasian Institute of Geoscientists. Mr Moorhouse is the Exploration Manager for Alligator Energy Ltd and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Moorhouse consents to the inclusion in this release of the matters based on his information in the form and context in which it appears.

Forward Looking Statements

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.

About Alligator Energy

Alligator Energy Ltd (Alligator or the Company) 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)

Uranium

Alligator is exploring for uranium in West Arnhem, utilising modern exploration techniques, combined with the best geological knowledge acquired by Alligator and consultant geologists, in search for uranium deposits of similar mineralisation style and tenure to that of the world class Alligator Rivers Uranium deposits of Jabiluka and Ranger, concealed beneath the covering sandstone. The Company has been researching and developing novel uranium decay isotope geochemical techniques and has modified and is applying airborne geophysical techniques with the objective of detecting such concealed targets. The previously drilled Caramal and Beatrice deposits represent eroded remnants of once much larger deposits.

The Company also has in excess of 1000km2 of Exploration Licence applications awaiting grant within the Alligator Rivers Uranium Province.

Alligator also has exploration ground in South Australia (SA) having entered into a Share Purchase Agreement to obtain up to 100% of the BLU project. This project represents an exploration opportunity for ISR shallow sandstone hosted style deposits in the Cooper Basin of SA, similar to those of the Beverley, Four Mile and Honeymoon resources of the Frome basin in SA.

In early October 2020 Alligator acquired the Samphire Project within the shallow Kanaka Beds of the Pirie Basin at Samphire, a location approximately 20 kilometres southwest of Whyalla within the South Australian Gawler Craton. Over several years two uranium deposits were identified, Blackbush and Plumbush, with

multiple other uranium targets established.

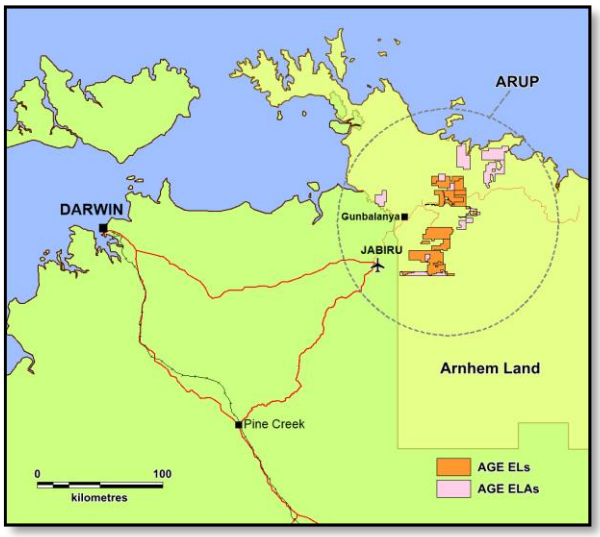
Cobalt- Nickel

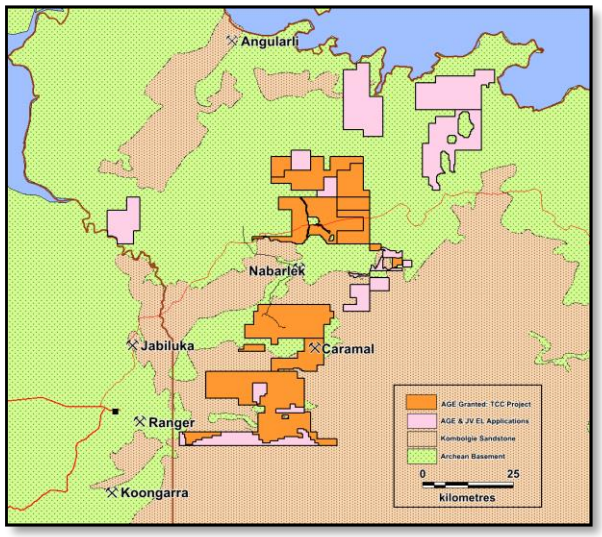
Alligator signed a binding Heads of Agreement with Chris Reindler and Partners (CRP) in January 2018 to earn up to 70% interest in the Piedmont sulphide cobalt – nickel project in Northern Italy.

The project covers four titles containing ultramafic-hosted cobalt-nickel sulphide deposits that were mined between the 1860's and the end of World War II. Sulphides in pipe-like intrusive bodies and massive sulphide accumulations at the base of large, layered ultramafic intrusions were mined. The cobalt to nickel ratio was high in these deposits.

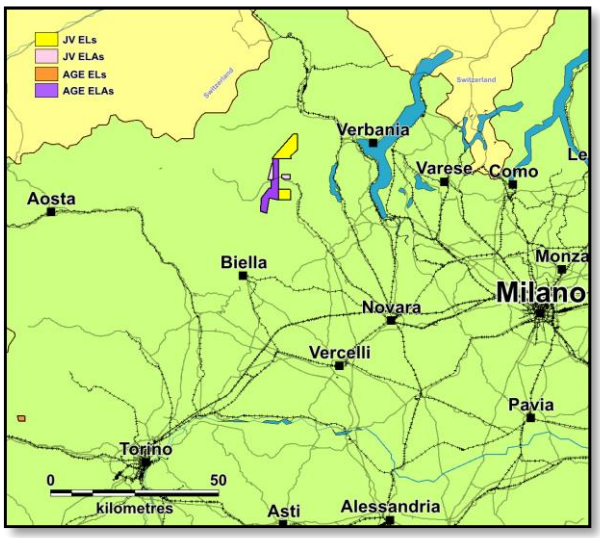
Airborne surveys obtained by CRP have defined a number of conductors potentially indicative of massive sulphides as well as a number of magnetic features which may represent the responses from intrusive bodies hosting disseminated sulphides. These represent very attractive targets in an area with clear cobalt-nickel pedigree untouched by modern exploration techniques.

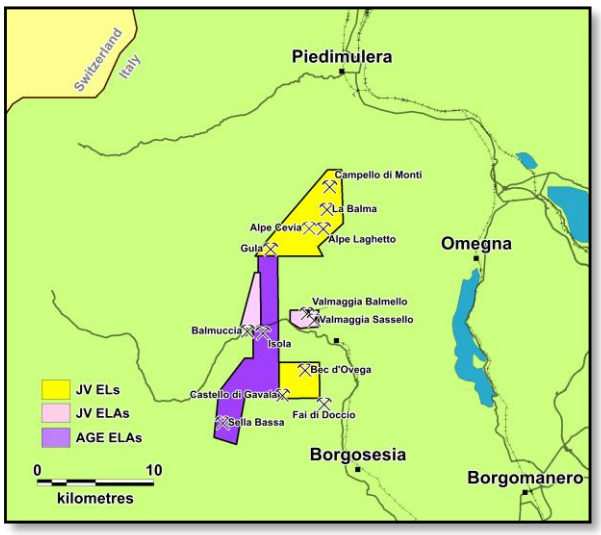
NT Australia – ARUP U:



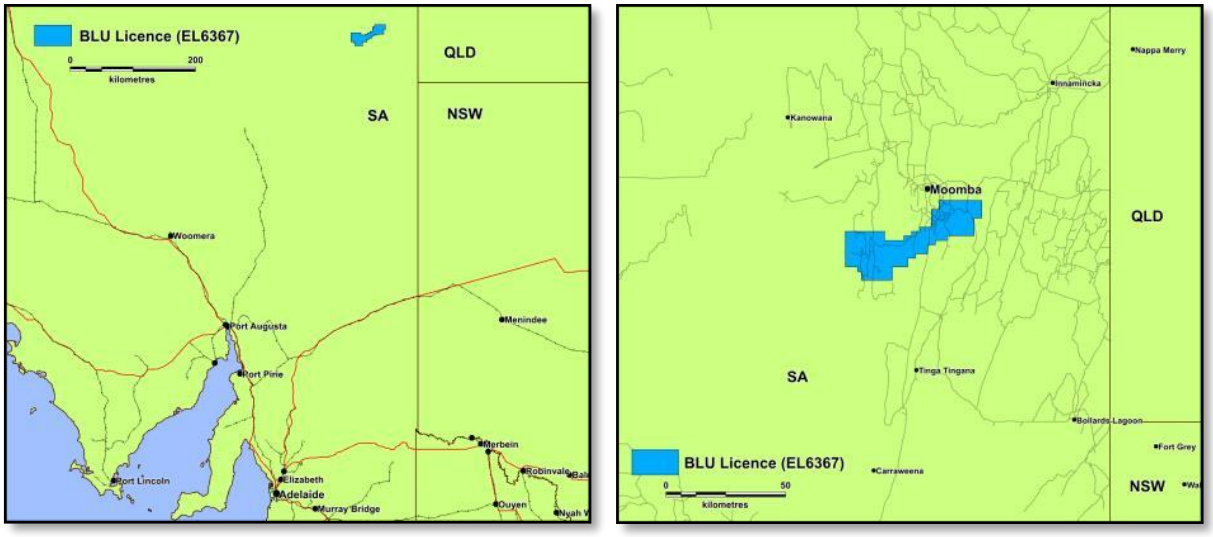


Northwest Italy – Piedmont Ni-Co:



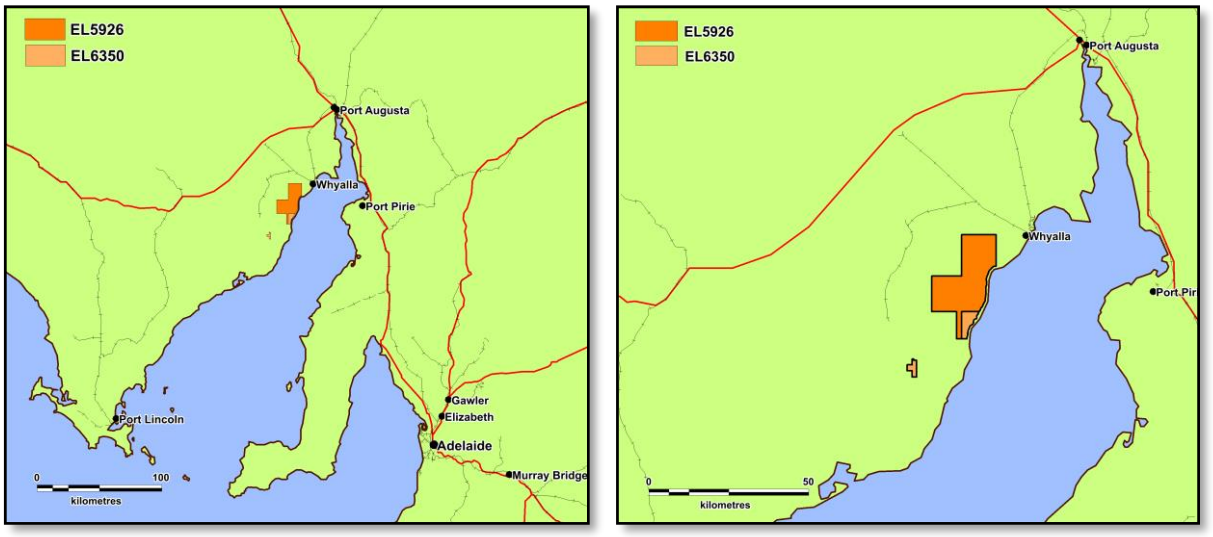


SA Australia – Big Lake U:



Project Location Diagrams.

SA Australia – Samphire U:



Project Location Diagrams cont.

JORC Code, 2012 Edition – Table 1

Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *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.*	***Ground Magnetics:*** • *Sampling of Geophysical data referenced within this repost was obtained utilising a GEM Systems GMS-19T advanced magnetometer base station in conjunction with two GSM-19W overhauser rover unit.* • *Survey data acquisition was obtained through "Walking" mode on the rover units. Continuous magnetic readings were recorded along 25m line spaced traverses.* • *To ensure data integrity both the base station and rover units were time synced daily and data was quality checked by contracted geophysical consultants at Geodiscovery Brisbane.* • *Units are hired from Modern Magnetic Australia who maintain the units and their calibration.* ***Passive Seismic:*** • *Sampling of Geophysical data referenced within this repost was obtained utilising 6 Moho Tromino Blu 3G Seismometers.* • *Survey data acquisition was obtained at 25m sample spacing along selected traverses.* • *Sample acquisition time was 20 minutes per station at 128hz sample frequency.*
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).*	• *N/A New geophysical data only*
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.*	• *N/A New geophysical data only*
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*	• *N/A New geophysical data only*

Criteria	JORC Code explanation	Commentary
	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.*	
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.*	• *N/A No sampling required. Ground based continuous magnetic readings only.*
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.*	***Ground Magnetics:*** • *The magnetometer survey referenced within this report was conducted by AGE personnel using hire equipment to acquire improved resolution magnetic imagery for the purposes of ongoing geological interpretations.* • *Sampling of geophysical data was obtained utilising a GEM Systems GMS-19T advanced magnetometer base station in conjunction with two GSM-19W overhauser rover unit supplied by Modern Magnetic Australia.* • *Survey data acquisition was obtained through "Walking" mode on the rover unit recording continuous magnetic readings every 1 second along 25m line spaced traverses forming the surveyed area.* • *RAW data was submitted to Geodiscovery Australia daily for independent QAQC, filtering and processing.* ***Passive Seismic:*** • *The passive seismic survey referenced within this report was conducted by AGE personnel using hire equipment to continue historic acquisition of passive seismic traverses for sedimentary ground profile understanding.* • *Sampling of geophysical data referenced within this report was obtained utilising 6 Moho Tromino Blu 3G Seismometers supplied by Resource Potentials Australia.* • *Survey data acquisition was obtained at 25m sample spacing along selected traverses.*

Criteria	JORC Code explanation	Commentary
		• *Sample acquisition time was 20 minutes per station at 128hz sample frequency* • *RAW data was submitted to Resource Potentials Australia daily for independent QAQC, filtering and processing.*
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.*	***Ground Magnetics:*** • Geophysical data has been verified externally by Geodiscovery Australia. ***Passive Seismic:*** • Geophysical data has been verified externally by Resource Potentials Australia.
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.*	***Ground Magnetics:*** • RAW data lactation points were recorded by GPS in WGS84 Zone 53H datum. • A high accuracy GPS is fitted to the GEM-19W overhauser rover units. • Topographical control requirements for the survey referenced within the report are negligible with the survey area considered flat. ***Passive Seismic:*** • RAW data lactation points were recorded by hand held GPS in GDA94 Zone 53H datum. • Hand Held GPS accuracy in considered to be within a +/-3m range. • Topographical control requirements for the survey referenced within the report are negligible with modest rises and undulose terrain on sample line 3 only.
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.*	***Ground Magnetics:*** • *Survey data acquisition was recording continuously every 1 second along 25m line spaced traverses totalling 333 line kilometers.* • *The combined survey includes an additional 40.6 line kilometres previously acquired and reported for a total survey area of 373.6 line kilometers* • *The spacing and density of magnetic data forming the survey is deemed high resolution and forms the basis of a program to improve geological understanding in the survey area.* • *RAW data was diurnally corrected and split into lines by Geodiscovery to form survey located data from which various grid and enhanced filtered images have been produced.* ***Passive Seismic:*** • *Survey data consisted of 4 traverses totalling 185 station recording, 15 of which were*

Criteria	JORC Code explanation	Commentary
		repeat station recordings for line 1. • *Line 1 = 41 station points oriented East-West* • *Line 2 = 33 station points oriented East-West* • *Line 3 = 66 station points oriented North-South* • *Line 4 = 30 station points oriented East-West* • *The station spacing along passive seismic traverses forming the survey is deemed to be of reasonable resolution for the basis of a program to improve geological understanding in the survey area.* • *RAW data was processed and normalised by Resource Potentials using wave length velocity analysis to refine data and generate representative georeferenced cross-sections.*
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.*	***Ground Magnetics:*** • *Survey lines were conducted East-West with geological features within historic magnetics primarily orientated North-South, northeast-southwest and northwest-southeast.* • *High resolution 25m line spacing additionally mitigates any sampling orientation bias high density gridded sampling.* ***Passive Seismic:*** • *Survey transects were conducted oblique to targeted AEM (Airborne Electromagnetic) features.* • *Lines 1,2 and 4 were orientated East-West cross cutting interpreted North-South features.* • *Line 3 was orientated North-South cross cutting an interpreted Northeast-Southwest AEM feature.*
Sample security	• *The measures taken to ensure sample security.*	• *No physical samples take. Digital data provided by e-mail only to geophysical contractors.* • *All data backed up from hire equipment daily and equipment data erased prior to being returned.*
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• *None*

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*	• *The JORC2012 compliant Blackbush deposit, referenced historical drilling and geophysics covering the Samphire project are located within Exploration Licence 5926 granted 20th November 2016 for a term expiring 2018 and subsequently renewed for*

Criteria	JORC Code explanation	Commentary
	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.*	*a further 3 years expiring 2021 where a subsequent renewal will be required.* • *The land covering the licence area is Crown Lease; consisting of several leases over 2 respective pastoral stations.*
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• *Samphire Uranium Limited (SUL), previously UraniumSA (USA) historically conducted almost all previous exploration within EL5926 defining the Plumbush (JORC2004) and Blackbush (JORD2012) resources and all relevant drilling, geophysics except new ground magnetics conducted AGE.* • *Third party drilling is confined to one rotary mud hole for lignite exploration located in the southeast of the licence area.*
Geology	• *Deposit type, geological setting and style of mineralisation.*	• *Mineralisation is dominantly sediment hosted uranium within Eocene Kanaka Beds. Minor amounts of mineralisation are present in the overlying Miocene Melton sands (informal name) and underlying Samphire granite (informal name).*

Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:*
	  ○ *easting and northing of the drill hole collar*
	  ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*
	  ○ *dip and azimuth of the hole*
	  ○ *down hole length and interception depth*
	  ○ *hole length.*
	• *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*
		• *N/A*

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.*	• *N/A*
Relationship between	• *These relationships are particularly important in the reporting of Exploration Results.*	• *N/A*

Criteria	JORC Code explanation	Commentary
mineralisation widths and intercept lengths	• *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').*	
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.*	• *All diagrams within this release have respective appropriate scales.* • *Scaled maps, sections and tabulations of intercepts for the Blackbush resource have previously been released by SUL.*
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	• *All referenced drilling and exploration results have been reported in prior announcements by SUL.* • *No new exploration results are contained within this report. Geophysical data has been acquired for assisting geological interpretations and understanding.*
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.*	• *All previous geophysical data covering the area is publicly available and has been sourced and utilised by AGE. Historic surveys will continue to be used in conjunction with new data to further geological understanding and support future exploration.*
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.*	• *Extend passive seismic and ground magnetic surveys as required.* • *Consideration of new techniques and differing geophysical surveys to further exploration methods.* • *Rotary mud and sonic drilling.* • *Continued reprocessing of new and historical geophysics.*