Samphire Uranium Project – Very Encouraging Desktop Study Findings and Exploration Review – 16 December 2020

Alligator Energy (ASX: AGE, 'Alligator' or 'the Company') is pleased to announce results from an initial Samphire Project desktop study commissioned through Inception Consulting Engineers (ICE). A full review of the exploration potential has also been conducted by AGE's internal exploration team highlighting resource expansion potential and extensive targets throughout the tenement which are yet to be tested.

Samphire DeskTop Study Findings:

ICE's Desktop Study – Processing Review and Opportunities of the newly acquired Samphire project in SA has highlighted the following positive findings:

- Previous testwork and modern advances in resins indicate the project is highly amenable to In-Situ Recovery (ISR) production, with updated ANSTO testwork planned
- An intermediate product could be produced for toll processing offsite reducing capital costs in any future development
- An updated and improved flowsheet for uranium extraction / processing was established based on the consistent higher grade portion of the Blackbush resource
- An alternate open pit operation would be feasible but not the preferred option
- Initial OPEX and CAPEX cost estimates were calculated that were competitive with similar ISR operations – these will be confirmed and disclosed in the next phase of work
- Due to the Blackbush resource being currently 100% inferred, ASX guidelines do not allow the publication of forward-looking financial figures / statements at this stage

Samphire Exploration Review:

Extensive review of previous exploration confirmed the high quality of work – over 790 historic drill holes totalling over 58,000m, mainly focused on the Blackbush and Plumbush resources. Previous drilling in Blackbush higher grade zones showed impressive results including hole MRM881 which intercepted **15.9 metres at 0.3% eU3O8 (3,000 ppm) including 4.5 metres at 1.02% eU3O8**. Interpretation of existing electromagnetic geophysical data has identified a series of prospective palaeochannel continuations from the Blackbush deposit for immediate follow up drilling. Alligator is now planning the following work:

- Drilling to expand the previously identified higher grade zones within Blackbush
- Initial testing of the potential tonnage increase in Blackbush channel targets
- Applying the extensive studies and learnings at Blackbush to southern extension areas
- Continuing our re-engagement with community, landowner and indigenous groups
- Undertaking sonic core drilling to obtain high quality cored samples at Blackbush to progress the ANSTO testwork mentioned above

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Number of Shares:
2,127.3 M Ordinary Shares
28.8 M Unlisted Options
60M Perf Shares

Uranium Market movement: The US Senate recently passed a Bill allowing the Dept of Energy to purchase up to US$120 million of US produced uranium per year for a strategic reserve, with the market anticipating purchase prices in the US$45 to $50 per lb range to be supportive of US producers cost base. Further detail below.

Greg Hall, Alligator CEO said "*We are excited to be able to update the market with results from our desktop study and exploration review. This includes a review of previous Samphire work by UraniumSA, combined with up-to-date technology and processing opportunities, and latest exploration techniques.*

The Samphire project represents an exciting opportunity for Alligator within an improving uranium market for a timely potential development.

*Note on Desktop Study and Exploration Review, and Cautionary Statement:

The Desktop Study and associated work referred to in this report is based on low-level technical and economic assessments and is insufficient to support estimation of Ore Reserves or to provide assurance of an economic development case at this stage, or to provide certainty that the conclusions of the Desktop Study will be realised.

Key assumptions:

The Blackbush inferred resource is a JORC 2012 compliant resource previously released by UraniumSA (see ASX release by USA - 27 Sept 2013) and compiled by Mr Russel Bluck & Mr Marco Scardigno, both sufficiently competent persons at the time of release.

Inception Consulting Engineers (ICE) were selected by Alligator Energy to undertake a Desktop Study – Processing Review and Opportunities report, due to the extensive experience that their team has with In-Situ Uranium Recovery (ISR) projects within Australia and overseas.

ICE, in discussion with Alligator, selected a grade cut-off of 400ppm eU_3O_8 from the Blackbush JORC resource table (refer Table 1 below) as the target resource for the basis of design in the Desktop Study. ***This provided an inferred resource of 6.5 Mt mineralised material at 810 ppm eU_3O_8 containing 5,400 t eU_3O_8 (11.9 million lbs eU_3O_8)*** *with most of the resource contained within the permeable Kanaka beds. Due to its non-2012 JORC nature, the Plumbush deposit was not incorporated into this study.*

Based on this resource an assumed production level was selected for the Study, and other recovery and metallurgical factors were applied based on the previous leach testing and known similar operation experience.

The report reviewed previous Blackbush mineralised sample uranium leach testwork, which was found to be of a high quality. Based on this known uranium solution information, direct comparisons were made with other publicly available and more recent uranium extraction testwork on the potential for newly developed resin extraction techniques to enable extraction of uranium onto a loaded resin, and ultimately into a final product. These comparisons were made on similar ISR deposits in similar conditions, and in consultation with ANSTO (Australian Nuclear Science and Technology Organisation) who coordinated and undertook this more recent uranium extraction testwork.

The ICE technical report on "Samphire Project – Processing Review and Opportunities" undertaken as part of this Desktop Study was undertaken by Mr Jon Weir and Mr James Davidson. Mr James Davidson is a Fellow of the Australasian Institute of Mining and Metallurgy (AusIMM) and is General Manager / Consulting Metallurgist with Inception Consulting Engineers. Mr Davidson has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration in the areas of in-situ recovery, wellfield design and operations, uranium leachate processing and extraction, and uranium production, 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 Davidson consents to the inclusion in this release of the matters based on his information in the form and context in which it appears.

Cautionary Statement: *There is a low level of geological confidence associated with inferred mineral resources and there is no certainty that further exploration work will result in the determination of indicated mineral resources.*

Samphire Project Review:

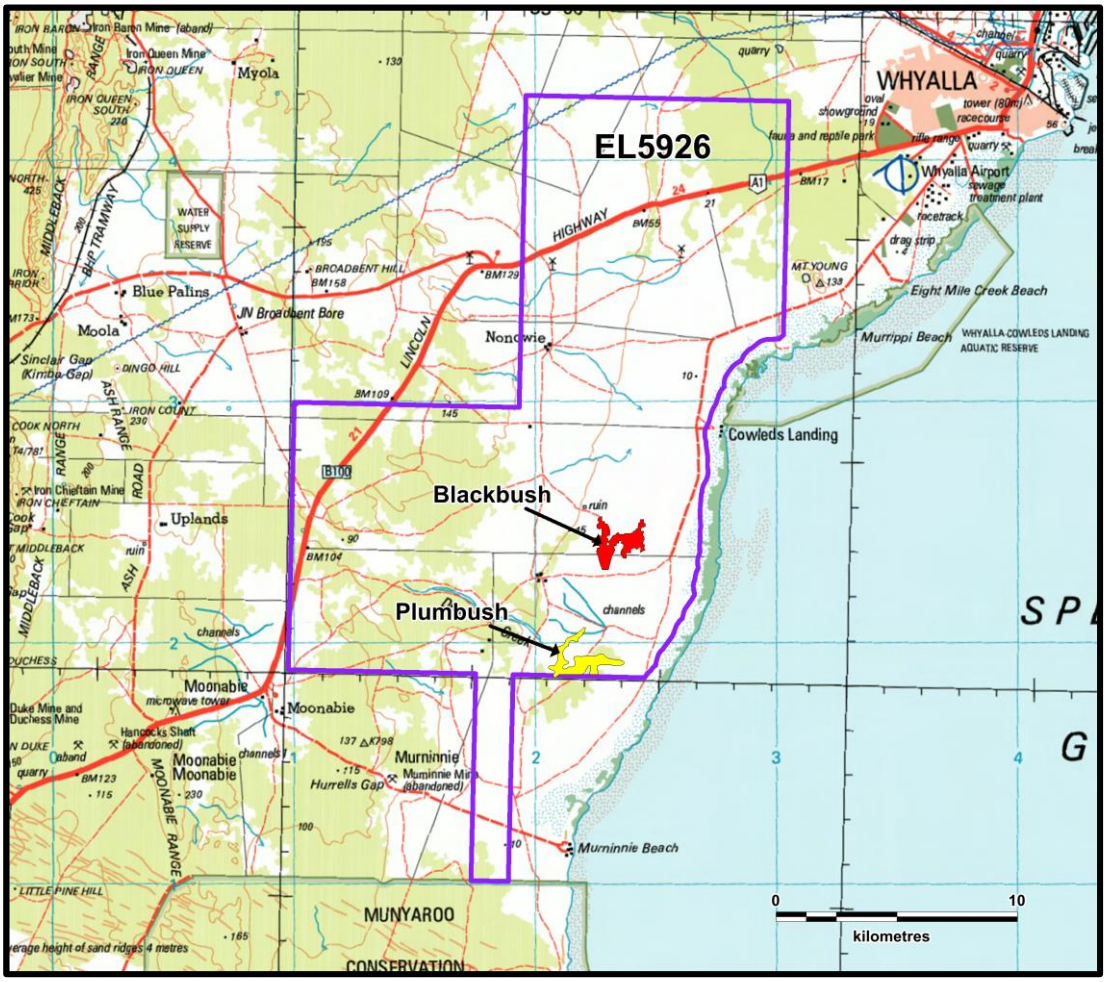

Figure 1. Location of Samphire Project in SA

Alligator announced the completion of the Samphire uranium project acquisition in October 2020. The project is approximately 20kms south of Whyalla in South Australia. Alligator staff and consultants commenced the undertaking of an initial high level desktop study and exploration review to determine the best value-add propositions for the newly acquired project in the near-term future. The overall scope of work for this included:

1. **ISR Processing update and options**
2. **Open pit potential**
3. **Resource expansion and exploration potential**
4. **Community and Environment**

Inception Consulting Engineers – Desktop Study- Processing Review and Opportunities

The detailed brief provided to Inception Consulting Engineers (ICE) included the following:

- Review the historical processing flowsheets for ISR and open pit developed by UraniumSA
- Provide a high-level assessment of ISR and open pit mining options and process treatment options
- Investigate recent developments in chloride tolerant ion exchange resins and the potential for application to the Samphire project
- Investigate opportunities for improvements to the historical processing flowsheet
- Investigate intermediate uranium bearing product alternatives for processing at other uranium processing facilities taking into consideration logistics and transport
- Identify and recommend a testwork program on fresh samples for the various ore lithologies for the selected chloride tolerant resin for both loading and elution
- Provide concept level capital and operating cost estimates for the options investigated.

Summary of work undertaken

A review of the existing historical processing flowsheet alternatives, completed in previous studies by UraniumSA / Samphire Uranium Ltd (SUL) and ANSTO, was undertaken with respect to developments in high chloride ion exchange resins and the expected highly saline environment. Post this review, preliminary processing flowsheets were developed for both in-situ recovery (ISR) and open pit mining methods, with supporting process descriptions.

The report basis of design studies was 400ppm eU_3O_8 cut-off with 200ppm and 300ppm eU_3O_8 cut-off grades examined for comparative purposes. Due to limited resource information, the Plumbush deposit was not considered in this report. The Blackbush inferred resource used for the desktop evaluation was using a cut-off of 400ppm was 6.5Mt @ 810ppm grade eU_3O_8 for 11.9 Mlbs contained uranium. (*Refer Note page 2)

The project previously has been considered as an ISR project in the upper permeable sandstone horizons (Kanaka beds) but with some indications of further uranium at deeper depths (Saprolite zone). A previous metallurgical review conducted by Inception Engineers of historic hydrogeological test work undertaken by UraniumSA indicated that the orebody was suited to ISR, supported by the leaching extent and the reagent consumption of the orebody being in line with other operational ISR mines. The high chloride content of the resource previously precluded the use of the strong base ion exchange resins and tertiary amine solvents that are currently used in mining operations for uranium recovery. However, in recent years, several promising alternative resins and solvents for use in high chloride applications have been identified by ANSTO Minerals (ANSTO).

It is recommended by ICE that a program is conducted with ANSTO for the saline leaching and ion exchange testwork, and this will include an outcome or recommendation on confirmation of water qualities required.

Inception evaluated the potential to produce and transport a few types of intermediate processed uranium products and determined that the most viable was the production of a loaded resin for sale or toll treatment.

All capital and operating cost estimates prepared in the Desktop Study were determined in Australian Dollars as of November 2020.

Blackbush deposit resource estimate, September 2013										
Cut Off assumed ppm eU3O8	100	200	300	400	500	600	800	1,000	1,500	2,000
Kanaka Beds SAND lithotype										
Mean Grade [1] ppm eU_3O_8	295	500	695	865	1,015	1,170	1,460	1,780	2,470	3,025
Contained Tonnes [2] U_3O_8	8,400	6,170	4,900	4,050	3,450	3,050	2,300	1,850	1,150	750
Kanaka Beds FGOR lithotype										
Mean Grade [1] ppm eU_3O_8	235	405	575	695	810	935	1,155	1,370	2,085	3,125
Contained Tonnes [2] U_3O_8	1,700	1,100	750	600	500	400	250	140	50	NA
Unconformity zone										
Mean Grade [1] ppm eU_3O_8	265	460	590	720	855	980	1,220	1,525	2,305	2,640
Contained Tonnes [2] U_3O_8	950	650	500	400	350	300	200	100	50	NA
Melton Sand lithotype										
Mean Grade [1] ppm eU_3O_8	180	275	355	425	NA	NA	NA	NA	NA	NA
Contained Tonnes [2] U_3O_8	370	175	70	NA	NA	NA	NA	NA	NA	NA
Saprolite lithotype										
Mean Grade [1] ppm eU_3O_8	150	330	475	590	720	810	1,035	1,290	NA	NA
Contained Tonnes [2] U_3O_8	3,450	800	450	300	200	150	50	NA	NA	NA
Totals										
Contained Tonnes [2] U_3O_8	14,850	8,900	6,750	5,400	4,500	3,850	2,800	2,150	1,250	850
Mean Grade [1] (ppm)	230	460	645	810	960	1,105	1,395	1,715	2,445	3,010
Mineralised Tonnes [3] (Mt)	64.5	19.5	10.5	6.5	4.5	3.5	2.0	1.5	0.5	NA

***Table 1**: Samphire Project Inferred Mineral Resource as at 2013 (Blackbush)*

Key outcomes

The Samphire project was identified as a resource best suited to uranium recovery by In Situ Recovery (ISR) methods for the bulk of the resource contained within the Kanaka bed lithologies.

Development of the resource as an open pit operation is considered feasible but not economically attractive with uncertainty relating to uranium recovery in the unconformity and saprolite zones with no previous testwork in these zones.

The potential for intermediate products for downstream processing to final uranium product has been evaluated with the potential for transporting a loaded uranium resin product considered to be the most viable with similar transport examples evident nationally and internationally.

Flowsheet optimisation opportunities have been identified at a concept level that can be further tested with collection of fresh samples, and through a detailed testing program in conjunction with ANSTO.

High level capital and operating costs have been developed for the flowsheet options identified. These initial cost estimates were in line with similar ISR operations within Australia, and competitive with these. As we advance our resource and exploration drilling, and upgrade the resource accordingly, we will confirm and disclose these costs during the next phase of work on the Samphire project.

Due to the Blackbush resource being currently 100% inferred, ASX guidelines do not allow the publication of forward-looking financial figures / statements at this stage.

Next Steps – Planning for 2021 Processing Testwork

A program is being planned to obtain fresh core samples through sonic drilling in key areas of the Blackbush resource (refer to Exploration Program next steps below).

A detailed uranium leach and resin recovery testwork program will be carried out in conjunction with ICE and ANSTO.

Based on these results, further processing flowsheet optimisation and evaluation work will be undertaken at a level that will update this Desktop Study and feed into any potential resource upgrade.

Additional evaluation of a loaded resin intermediate product and transport options will be undertaken, along with more detailed scoping level / pre-feasibility design and costings.

Exploration Review

Following an extensive review of the outstanding work completed by UraniumSA, Alligator has identified several priority exploration and resource expansion targets across the Samphire project.

These include opportunities for further higher grade mineralisation within the known deposit at Blackbush, as well as exploration targets within satellite occurrences of the styles of mineralisation already defined at Blackbush.

The opportunity for higher grade within the Blackbush deposit was a concept first identified by UraniumSA, after investigating the relationship of mineralisation controls relating to basement structural architecture and the overlying sediments. This theory was proven in 2012 drilling after the initial resource work was completed and demonstrated in hole MRM881 which intercepted **15.9 metres at 0.3% eU_3O_8 including 4.5 metres at 1.02% eU_3O_8**. Figure 2 below shows the 400ppm eU_3O_8 cut-off block model distribution for the Blackbush resource with higher grade mineralisation shown by a purple 1000ppm eU_3O_8 cutoff with the highest grade and thicker sections represented by deeper purple coloration in the core of the resource.

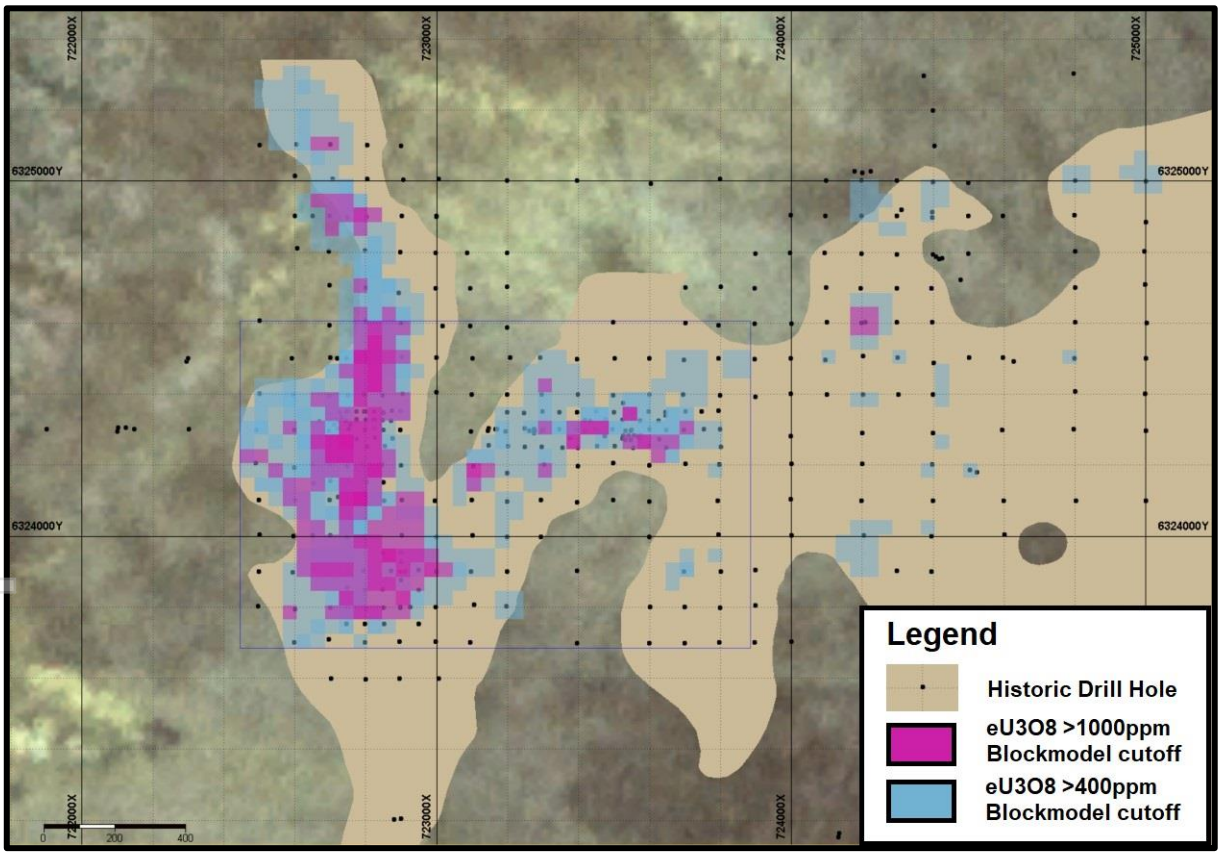

Figure 2. *Blackbush mineralisation distribution at 400ppm (blue) cut-off and 1000ppm (red) cut-off 40m blocks, Kanaka Beds basal contact shaded in behind the blocks.*

Following assessment of the available geophysics, Alligator believe that by expanding on the geophysical dataset a real opportunity exists to identify further zones of high-grade uranium concentration, having a significant impact on the resource's economic credentials. Furthermore, UraniumSA highlighted the opportunity for granite hosted mineralisation directly related to the feeder structures identified beneath the deposit. This theory requires further investigation through diamond drilling.

Utilising existing electromagnetic geophysical data in conjunction with the understanding of the geological framework of the system, a series of prospective palaeochannel continuations from the Blackbush deposit have been identified for immediate follow up drilling. Existing gamma anomalies are present within some of these where limited “scout” drilling has occurred.

Blackbush Targets

Within or proximal to the Blackbush deposit, 6 primary targets have been identified (**Figure 3**) listed here with their targeting rationale:

1) **BB1:** Targeting gamma anomalies within a previously identified palaeochannel with potential continuation to the north
2) **BB2:** Targeting westerly extensions to the Blackbush system
3) **BB3:** Targeting resource margin upgrade
4) **BB4:** Targeting resource infill and potential upgrade between mineralised zones
5) **BB5:** Targeting resource upgrade potential around southern high-grade zone
6) **BB6:** Targeting kanaka AEM channel infill and south-southwest trending palaeochannel extensions

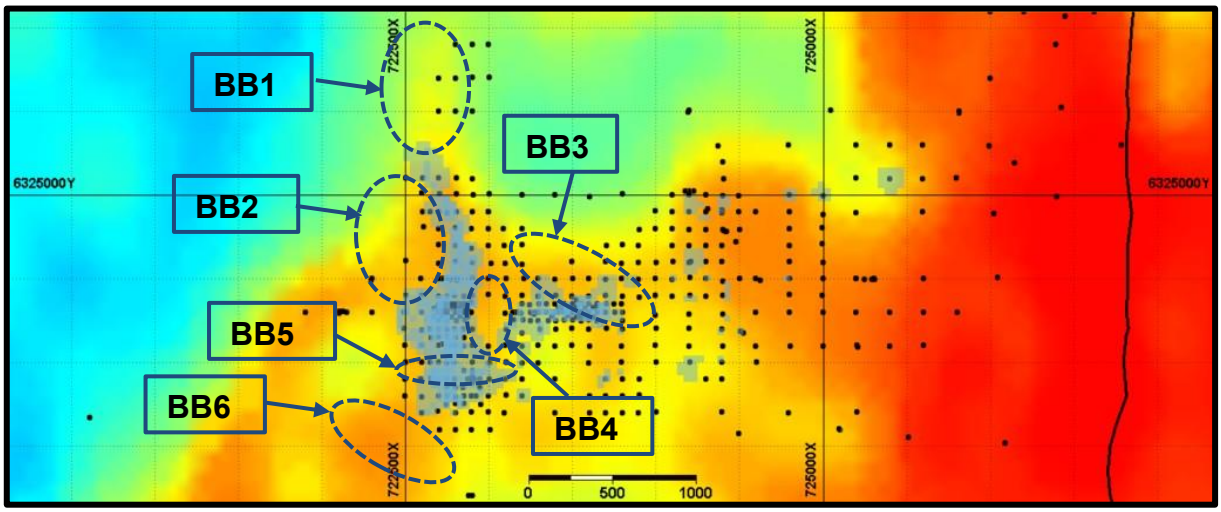

Figure 3. *Blackbush 400ppm block model over AEM depth slice (40m below surface) with historic drilling and initial targets.*

Figure 3 above shows the identified high priority exploration opportunities within and proximal to Blackbush. Historic drilling represented by black dots above can been seen almost entirely focused within and to the west of the resources.

South Blackbush Targets

South of the Blackbush deposit, three priority target areas have been identified between Blackbush and Plumbush believed to represent the continuation of palaeochannels in AEM geophysics connecting the two resources. While mineralisation is not anticipated to be continuous within the palaeochannel system, key basement architectural similarities have been identified mean the channels require systematic further evaluation. The three targets areas are listed below with their rationale and highlighted in **Figure 4**.

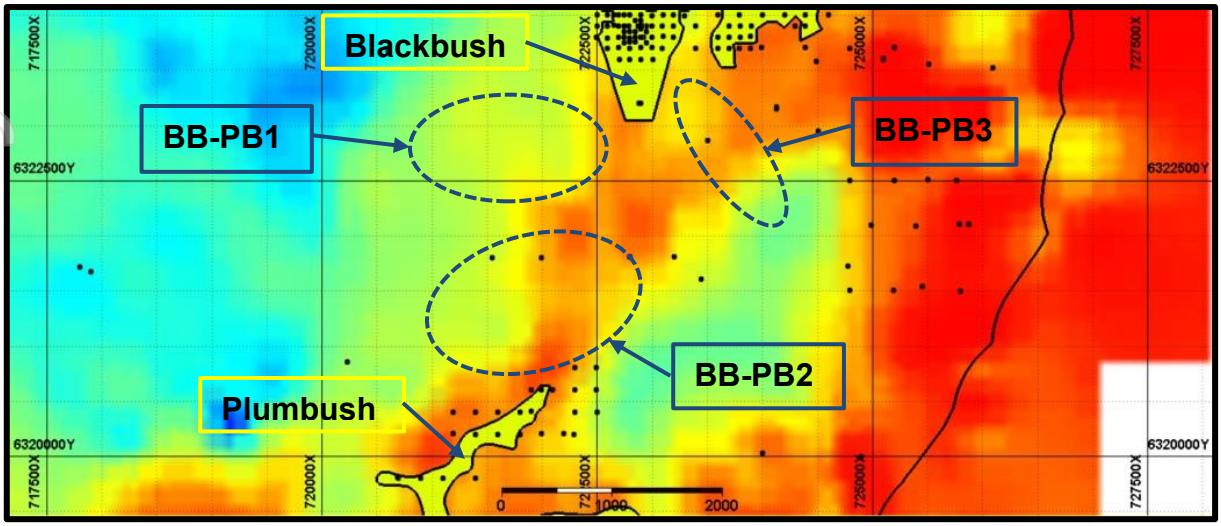

Figure 4. *Blackbush & Plumbush outlines over AEM depthslice (60m below surface) with historic drilling and new initial targets*

1) **BB-PB1:** Identified channel system overlying red granite domain with basement structural signatures similar to those seen at Blcakbush West
2) **BB-PB2**: Prominent palaeochannel linking Blackbush and Plumbush covering varying coincident Magnetic and Gravity structural features
3) **BB-PB3:** Palaeochannel feature passing southeast of Blackbush merging with BB-PB connecting channel

Next steps – Planning for 2021 Exploration program

Planning of drilling and additional geophysical programs for these exploration targets is now underway.

A trial passive seismic survey was completed by Samphire Uranium in 2019, which successfully mapped channel architecture and underlying basement offsets (refer Figure 5 below). A further program is being designed by Alligator to assist with the targeting of additional high-grade zones within the known deposit areas. In addition, Alligator will conduct a trial ground magnetic survey to determine the effectiveness in refining basement structures allowing targeted investigations into the possibility for high grade basement hosted mineralised structures.

Significant exploration potential remains in the region immediately surrounding the Blackbush and Plumbush deposits, and south of Blackbush between the two existing resources.

Drilling is being planned in a staged manner which will use three distinct techniques to achieve different results. This will entail Rotary Mud, diamond and Sonic drilling as follows:

- Up to 55 rotary mud holes to approximately 100m (up to 5500 metres total) to test the Blackbush targets and upgrade the resource
- Up to 55 rotary mud holes to approximately 100m (up to 5500 metres total) required to test the target zones between Blackbush and Plumbush.
- 6 sonic drill holes up to 100m each (600m total) at the Blackbush deposit are being planned to test existing high-grade zones of the Blackbush deposit and obtain suitable samples to allow up-to-date test work by ANSTO on uranium recovery through leaching using modern high chloride tolerant resins and detailed ion exchange evaluation. A proposal for works to be conducted by ANSTO has been received as part of Inception Consulting Engineers report and will be undertaken following future drilling.

- 6 diamond holes up to 150m each (900m total) targeting large structural features immediately below high-grade zones of the Blackbush deposit and identified through trial passive seismic lines conducted by SUL in 2019

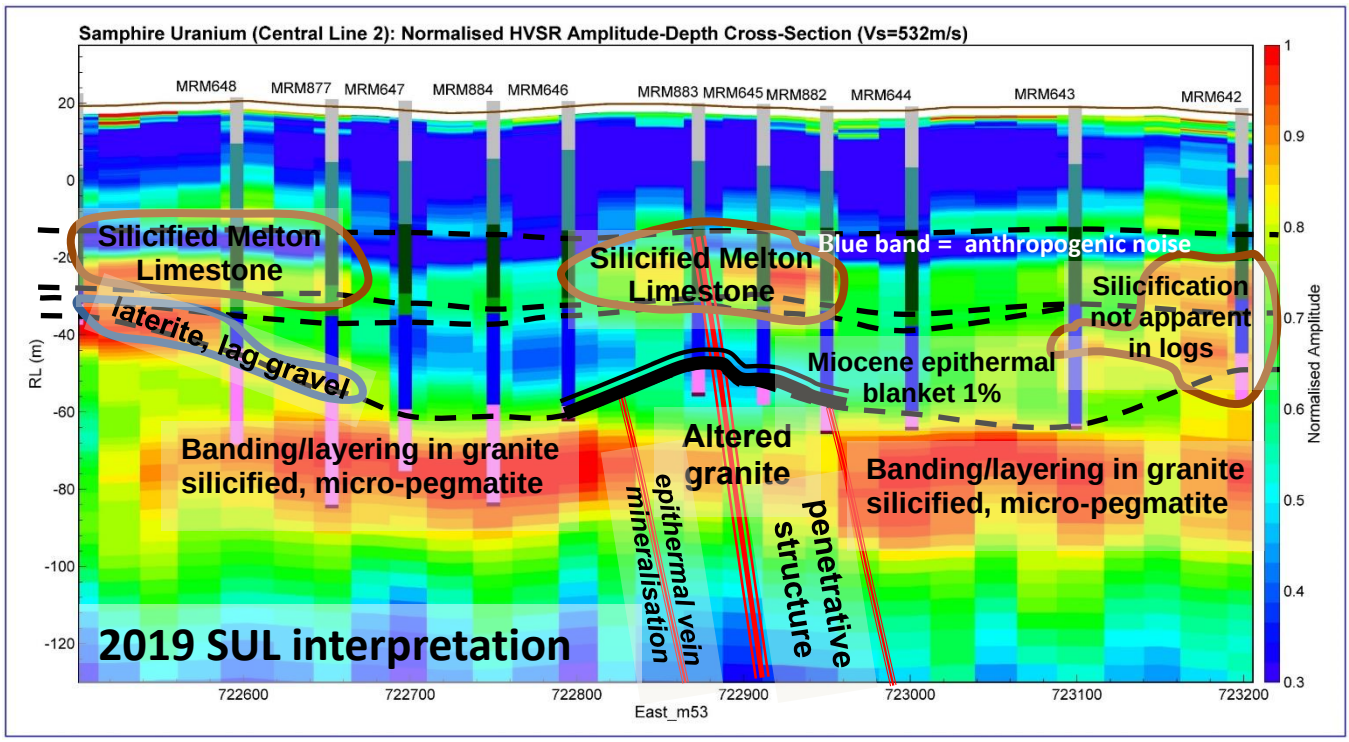

Figure 5. *Blackbush Passive seismic interpretations from SUL 2019 trial survey to identify basement penetrative structures.*

Historic Work Summary

Following the completion of the Samphire acquisition Alligator commenced a detailed review of all historic drilling and geophysical data. To date extensive drilling has been conducted focused around the Blackbush and Plumbush deposits totaling more than 790 holes and over 58,000m. The majority of this historic drilling has primarily been conducted at the Blackbush deposit following its initial discovery by SUL leading to the definition of a maiden JORC2012 compliant resource and some subsequent feasibility test work. Remaining historic drilling is aggregated within the Plumbush deposit forming the historic JORC2004 resource and modest regional exploration work primarily West and North of these resources.

Detailed geophysics have also been conducted across the Samphire license with detailed Magnetics, AEM and Gravity all covering parts of the license. Following a review of the Blackbush deposit mineralisation mechanics by SUL 6 trial passive seismic lines were also conducted in 2019 designed to identify basement structures within the underlying Granite believed to source mineralisation.

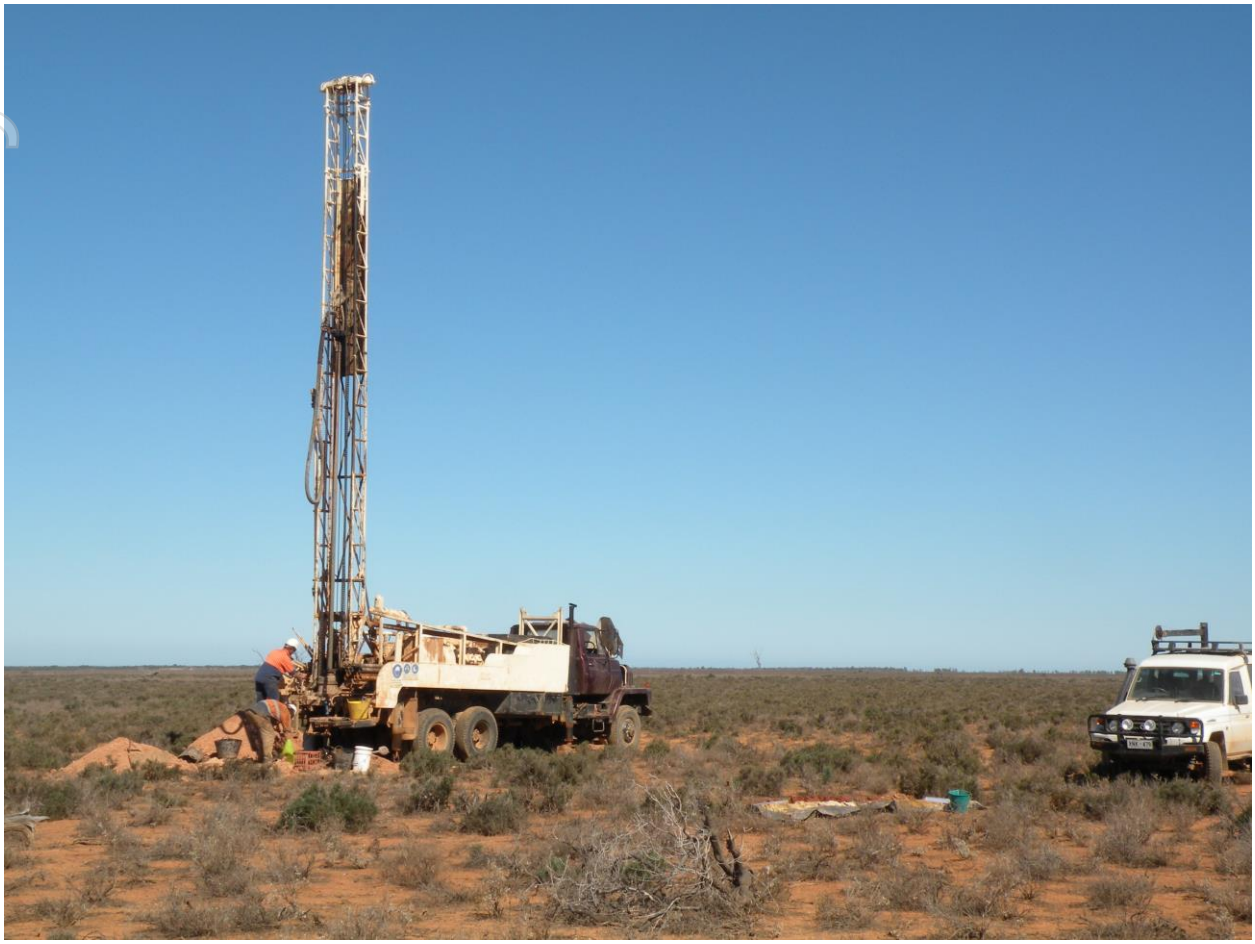

Figure 6. *Historic drilling at the Blackbush deposit and saltbush plain.*

Uranium and Nuclear Market commentary

The global uranium market received a boost recently when the US Government House and Senate lawmakers revealed a compromise version of the annual National Defence Authorisation Act. The Bill effectively provides for the military to continue a policy under President-elect Joe Biden that classifies the domestic supplies of certain minerals such as uranium, graphite and lithium as vital to national security.

As part of this, the bipartisan US Senate Committee on Environment and Public Works approved the American Nuclear Infrastructure Act designed to boost the US nuclear industry, establish a strategic Uranium Reserve, support enhancing the US nuclear fuel cycle and encourage US reactor exports worldwide. To establish the Strategic Uranium Reserve the Bill allows the US Dept of Energy to purchase up to US$120 million of US produced uranium per year, with the market anticipating purchase prices in the US$45 to $50 per lb range to be supportive of US producers cost base. These future higher contract purchase prices in the US should flow through to the general market.

A recent article by industry commentator ZeroHedge put the above matters and other significant market impacts into perspective. Below are some extracts from this, along with a link to the full article below:

"The consensus seems to be that Biden will be far more bullish for uranium than Trump. Biden's US$2 trillion Infrastructure plan embraces the current nuclear reactor industry and creates a new ARPA Agency for Climate that has put the development and deployment of advanced nuclear reactors as a priority, seeking to build them cheaper and faster through technical innovation. Biden's push for clean energy may also serve to reduce competition from coal powered plants and carbon-emitting gas plants as well, rewarding carbon-free nuclear and hydro for their climate change mitigation.

All signs are pointing towards a US nuclear renaissance if the Biden Administration is to achieve its Net Zero emissions goals. The outlook for US nuclear has never been better in the past few decades as Democrats now flip to be nuclear advocates, and with pro-nuclear Kerry nominated as Biden's Climate Envoy, that renaissance could spread throughout the west as US rejoins Paris Climate Accord."

Both US and Russia are also now looking to leverage their nuclear power generation capacity to produce clean hydrogen fuel, adding more value to reactors in the clean energy transition while creating a new revenue stream that will support maintaining the US fleet where already a number of utilities have applied to extend reactor operating lives to 80 years from the previous limit of 60.

On the supply side, 2020 has seen a record uranium supply deficit due to previous mine shutdowns, flexing down by Kazakhstan, and 5-month mining suspensions at Cameco's Cigar Lake and Kazakhstan's ISR uranium mines. Total mined supply this year will come in under 120M lbs, a level not seen since 2008.

The 5-month cessation of ISR wellfield development, during what is usually Kazakhstan's peak seasonal period for drilling and expanding wells to maintain production levels, is only now beginning to impact uranium production, and there is a high expectation that 2021 will see that supply destruction continue into Q2. For the first time ever both Cameco and Kazatomprom have depleted their held inventory, forcing both to be active buyers in the Spot market in order to fulfill their contract delivery commitments. With COVID-19 case numbers continuing to spike higher in Northern Saskatchewan, chances of another temporary shutdown of Cigar Lake are increasing daily. Spot U3O8 price has responded, jumping above $34/lb in March/April then backing off to level off near $30/lb at present to create a new floor at 25% above its March low.

Further fueling the bullish outlook for uranium was the decision by BHP to scrap its Olympic Dam mine expansion plan. Uranium is an 8M lbs/yr by-product of that mine. The expansion plan was expected to add another 7-8M lbs/yr supply to Spot market. ERA's Ranger Mine in Australia closes permanently next month, and Orano's COMINAK mine in Niger, West Africa, will close permanently in March of next year. Together they will reduce 2021 supply by somewhere around 7M lbs/yr. Many other mine projects remain on hold, as are all mine restarts, as operators wait for uranium prices to move significantly higher into the $40-$50/lb range."

On the nuclear demand side, nuclear utilities have seen almost all of the political and trade overhangs removed that have been keeping them on the sidelines since the Section 232 Uranium Petition was served in January 2018. They withdrew their RFP's nearly 3 years ago, preferring to delay contracting until a long list of uncertainties were dealt with. The Section 232 morphed into the Nuclear Fuel Working Group but many of the recommendations were not actioned. Uncertainty over the Iran nuclear waivers became a major issue but that too has been resolved. The most significant uranium trade issue this year was negotiating an extension to the Russian Suspension Agreement, which Commerce and Rosatom eventually concluded successfully. The RSA was extended to at least 2040 with limits on Russian uranium imports being reduced from 20% to 15% of US nuclear fuel requirements by 2040. The last remaining political overhang is the US election outcome, as nuclear utilities do not want to enter into long term contracts until certain that they will get the support they need to keep them running under a new administration.

While COVID-19 has had a severe impact on uranium supply, it has had an opposite effect on demand. Continuous baseload power has been in high demand throughout the pandemic, and many nations are targeting COVID recovery infrastructure funds to rebuild their power grids with carbon-free energy to achieve their net zero emissions goals. In just the past few months there has been a strong shift to expand nuclear power generating capacity in China, India, and most recently in Britain where PM Boris Johnson is pushing for construction of a new 3200MW Sizewell-C power plant, and the 16 x 440MW UKSMR advanced reactors that the Rolls-Royce consortium is planning to build across the UK, hoping to expand into the global market.

Advanced reactor projects have found new legs in Canada and the US. In all there are now 72 new advanced reactor designs (including SMR's) under development in 18 countries. Many had thought that COVID-19 would hurt the nuclear industry by reducing demand, but the outlook now seems to be that it has instead fueled a new global nuclear renaissance, just as global uranium supply is in a record deficit. Demand this year is in the order of 187M lbs (vs 120M lbs of primary mined supply) and TradeTech expects

demand to rise to 220M lbs over the next 10 years. Where the supply will come from to bring the market back into balance is the big unknown.

All the major new mines are many years away from construction, and those looking to restart, like Paladin's Langer Heinrich and Cameco's McArthur River, are also 2 years or more away. Kazatomprom has extended their production flex-down through to the end of 2022. Never have the fundamentals been so strong for a major uranium price recovery like what was seen in 2004-2007. "If" is no longer the question… only "When" remains open.

Term contracting has been very slow as utilities choose to draw down inventories, buying small quantities on Spot, deferring contracting into next year. With Cameco, Kazatomprom and some utilities buying pounds in a depleted Spot market, the Spot price has found its floor near $30. Once COVID begins to wane we are expecting to see a strong re-stocking cycle where utilities will over-buy to replace their cushions and acquire the new fuel needed in 2-3 years' time. As the waiting game continues we are seeing new interest emerging in the uranium space, with some significant gains in quite a few developers and explorers over the past few weeks. I expect that to continue in what is usually a strong seasonal period from now until April/May.

https://www.zerohedge.com/markets/uranium-stocks-soar-beginning-next-esg-craze

Approved for release by the Board of Alligator Energy Ltd

FOR FURTHER INFORMATION, PLEASE CONTACT

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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.

The ICE technical report on "Samphire Project – Processing Review and Opportunities" undertaken as part of this Desktop Study was undertaken by Mr Jon Weir and Mr James Davidson. Mr James Davidson is a Fellow of the Australasian Institute of Mining and Metallurgy (AusIMM) and is General Manager / Consulting Metallurgist with Inception Consulting Engineers. Mr Davidson has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration in the areas of in-situ recovery, wellfield design and operations, uranium leachate processing and extraction, and uranium production, 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 Davidson consents to the inclusion in this release of the matters based on his Desktop Study in the form and context in which it appears.

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

The Company is primarily 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's Tin Camp Creek and Beatrice tenements form the exploration focus but the Company also assesses other opportunities as they arise.

The Company is 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.

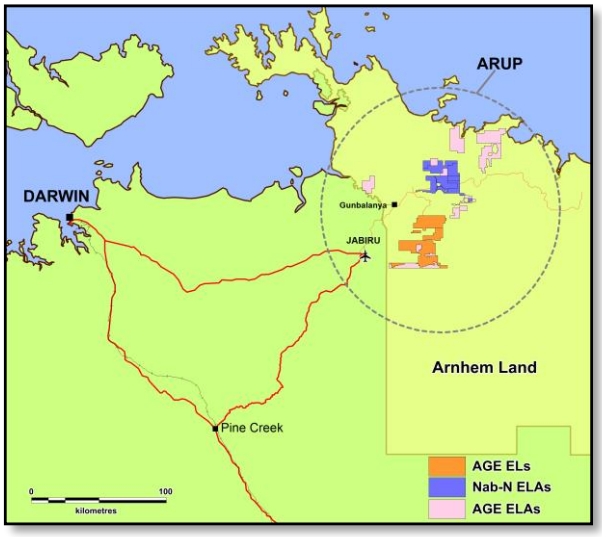
In early October 2020 Alligator acquired the Samphire Project within the shallow Kanaka Beds of the Pirie Basin at Samphire, a location approximately 20 kilometres southwest of Whyalla within the South Australian Gawler Craton. Over several years two uranium deposits were identified, Blackbush and Plumbush,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

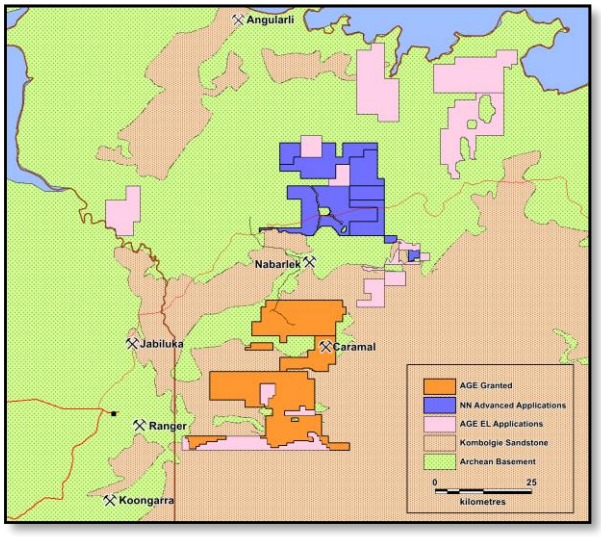
Cobalt- Nickel

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.

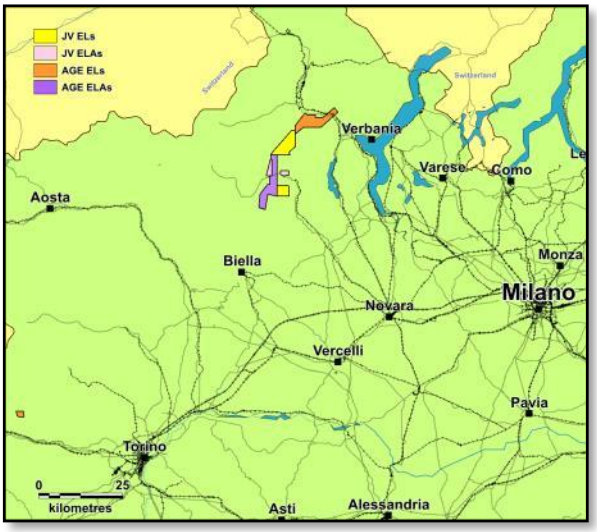
The project covers four titles containing ultramafic-hosted cobalt-nickel sulphide deposits that were mined between the 1860's and the end of World War II. Sulphides in pipe-like intrusive bodies and massive sulphide accumulations at the base of large, layered ultramafic intrusions were mined. The cobalt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

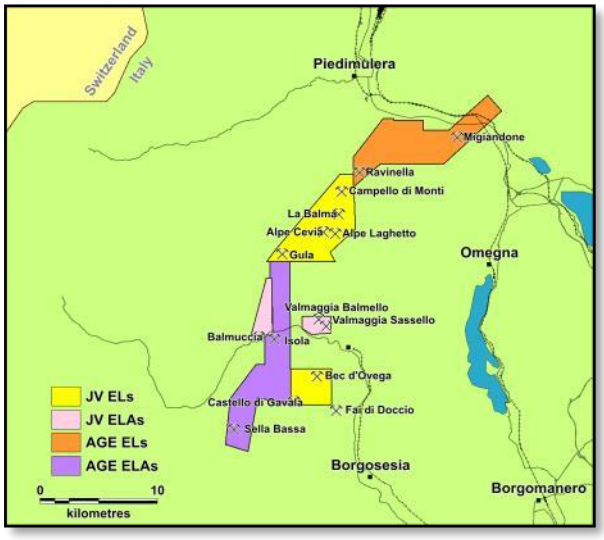
NT Australia – ARUP U:



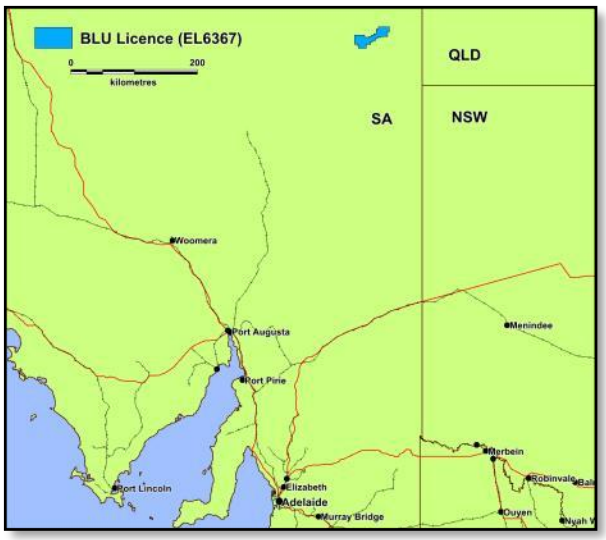


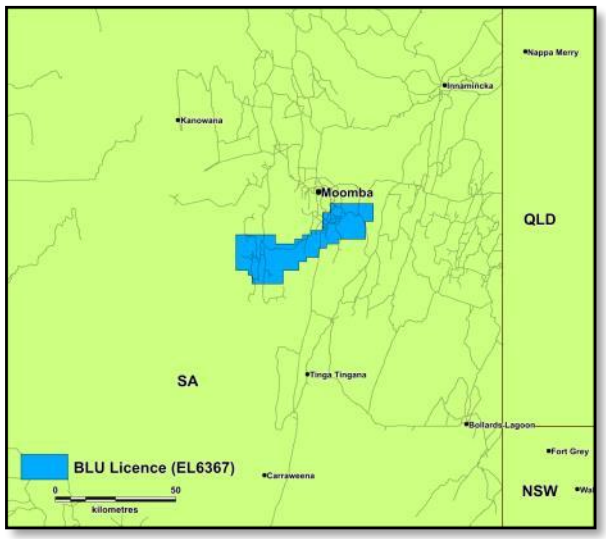
Northwest Italy – Piedmont Ni-Co:



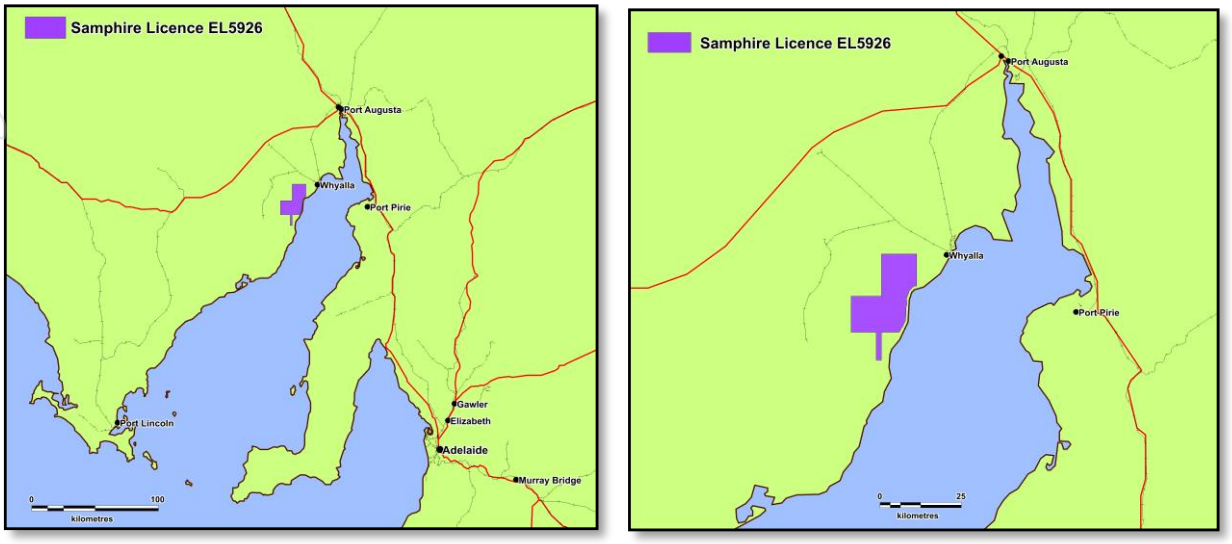


SA Australia – Big Lake U:





SA Australia – Samphire U:



Project Location Diagrams

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.*	• *The historic sampling work is based on rotary mud drilling and all grade determinations are from down hole geophysical logging with appropriately calibrated Sondes.* • *Rotary mud samples are not suitable for assay for the determination of grade. Some 188 samples of core have been assayed in certified laboratories.*
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).*	• *Holes used in the Blackbush resource estimate were drilled with industry standard rotary mud rigs and thirteen holes were drilled either core or a combination of rotary mud and core.* • *Vertical rotary mud holes used industry standard bits and bit sizes. Mud was based on saline formation waters and very successfully facilitated hole stability and minimised collapse and wash out.* • *Three vertical holes in the central and east of the deposit were fully cored through the mineralised Eocene sections (4" diameter custom barrel). Recovery through the target zones was good averaging over 90%. Following geological logging 188 samples of half-core were submitted for assay.* • *Ten vertical PQ core holes targeted the western part of the deposit. There was moderate to good recovery of basement. Conventional PQ core barrels in the target Eocene section achieved minimal recovery. No samples were submitted for assay.*

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.*	• *During rotary mud drilling cuttings are collected at the stand-pipe over 2m or 1m intervals and laid out on black industrial plastic in a sample field.* • *Every interval drilled is represented in an industry standard chip tray which is retained in secure storage. The end-of-hole sample is bagged in its entirety for possible geochemical assay.* • *Rotary mud collar samples are not necessarily representative of the drilled interval and fines suspended in the return drill mud (density and viscosity modified saline formation waters) by-pass to the drilling sumps. The samples are not suitable for assay.* • *Core recovery and sampling is considered above.*
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.*	• *The material laid out in sample fields was geologically logged by the Site Geologist or by a UraniumSA trained Geotechnician.* • *A standardised log sheet for rotary mud drilling has been used for the project and records semi- quantitative data. The level of detail is sufficient for the construction of geological models, the investigation of sedimentology and the sub-domaining of mineralisation employed in this estimation.* • *Core from the 3 holes in the central and east of the deposit was geologically logged from the split, recovery measured and discrepancies accounted for, point radiometric readings taken every 10cm along the length, photographed, cut to 40cm lengths and photographed again, sealed to exclude air and frozen. After the completion of downhole logging the core was re-logged in detail by a Sedimentologist and, after detailed consideration of all the information, sampled with 188 half-cores taken and the balance resealed and returned to the freezer. The retained core is stored according to statute.* • *The ten holes drilled in the west of the area did not recover sufficient sediment core to justify systematic investigations. Recovery of basement granites was good with cores retained in conventional trays and stored according to their radiation levels.*
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*	• *Frozen sediment core remains unconsolidated and soft and was cut by hand. Half core was collected and the balance retained for subsequent metallurgical testing.* • *The core sampling was representative of the material available but potentially of*

Criteria	JORC Code explanation	Commentary
	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.*	*insufficient mass to fully account for the nuggetty distribution of uranium.* • *The density of core holes and samples across the deposit is sufficient for the present estimation.* • *Rotary mud samples are collected at the stand pipe are not fully representative of the interval drilled and are not suitable for assay.*
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.*	• *All drill holes referred to and used in the estimation of a resource have been logged with calibrated natural gamma sonde with raw data collected and field checked using industry standard WellCad software and verified material captured to database.* • *Some 37% of drill holes have been logged with PFN and density tools by independent contractors. QA/QC control has been applied by the contractor and UraniumSA.* • *Individual tool identifications were recorded at the time of use and cross checked to ensure they have current calibration certificates.* • *The 188 half-core samples collected were submitted to accredited laboratories for a range of assays and procedures to investigate the mineralisation. Industry standard QA/QC routines were applied by the laboratories.* • *Because of the limited material available UraniumSA has not submitted duplicate samples.* • *Composites based on assay intervals have been constructed for metallurgical purposes and the head assays compared back to the calculated grade of the individual samples. The results have been within the range of variation expected with the known nuggetty distribution of uranium in sediments.*
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.*	• *All holes referred to and used in resource estimation were logged by UraniumSA calibrated natural gamma tools. Duplicate runs have been used to qualitatively investigate response variation with time arising from settling of material in the fluid column and bleeding of mineralisation from the drilled formations. No material variation was identified.* • *Approximately 37% of the holes used in the estimation were logged under contract by Geoscience Associates Australia. The duplication of natural gamma logging by UraniumSA is the basis for QA/QC of gamma equivalent grade and depth.* • *Natural gamma profiles are evaluated in the*

Criteria	JORC Code explanation	Commentary
		field by the Site Geologist or Geotechnician, 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 are electronically delivered to the Adelaide office of UraniumSA where they are interrogated and checked by a Senior Geologist, corrected if necessary in consultation with the Site Geologist and captured to database.* • *Mineralisation is known to be nuggetty and no hole twinning had been carried out. The investigation of in-ground variability has been partially investigated with relatively close spaced drilling in the wellfield array.*
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.*	• *Hand held GPS has been used for drill collar location. All sites used in the estimation were revisited, coordinates reacquired and adjusted if results were outside a nominated error range. Precision is sufficient for the present resource estimations.* • *The grid system is AMG94 Zone 53.* • *Topographic control is from airborne survey flown at 25 meter line separation with elevation correct to 10cm. This is considered sufficient for the present estimation.*
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.*	• *Drill collar separation varies across the deposit with a basic 200m by 200m pattern infilled at a 100m by 100m separation delineating the limits of mineralisation with 50m by 50m patterns and closer spaced holes to investigate particular aspects of the deposit at Blackbush.* • *The drilling has evidenced the lateral continuity of the stratigraphy at all hole separations at levels of confidence sufficient for this estimation.* • *The drilling has evidenced the geologic control on mineralisation and its lateral continuity at all drill hole separation at levels of confidence sufficient for this estimation.* • *UraniumSA has used an in-house written software to composite individual natural gamma data captured at 1cm intervals into 10cm composites for data manipulation, processing, modeling and estimation. The software has been extensively checked against data and is regarded as reliable and appropriate for the present estimate*
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*	• *All drill holes are collared vertical. Downhole surveys are available for ~37% of holes and indicate end-of-hole drift in the range 1m to 5m which is within the error of GPS collar location. For the purpose of current and*

Criteria	JORC Code explanation	Commentary
	orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	*previous estimations holes are regarded as vertical.* • *Geological interpretation and core logging shows the sediment sequence is flat lying.* • *3D modelling shows mineralised structures in basement dip ~10 degrees from horizontal.* • *For the purpose of this estimation hole widths are true widths.*
Sample security	• *The measures taken to ensure sample security.*	• *The principle grade estimation method is downhole geophysical logging.* • *All historic data was electronically generated on the drill site, verified as useable and electronically transmitted to UraniumSA head office where it is secured in DataShed formats.*
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• *All data collected was subjected to internal audit and ~37% of holes have been surveyed by both UraniumSA and contractors.* • *Duplicate surveys are cross-collated to verify the data is comparable within limits of precision (raw count and depth).*

Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	• *The JORC2012 compliant Blackbush deposit and all additional drilling referred to across the Samphire project is contained entirely within Exploration Licence 5926 granted 20th November 2016 for a term expiring 2018 and subsequently renewed for 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 and information pertaining to this release.* • *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).*

Criteria	JORC Code explanation	Commentary

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.*
		• *A tabulation of all the drill holes referred to in this report and used in the Blackbush resource estimation have previously been released and can be found in the USA ASX release dated 27 Sept 2013 (https://www.asx.com.au/asxpdf/20130927/pdf/42jnqgsn2cqcgg.pdf)*
		• *The previous tabulation provides easting and northing of the drill hole collars, elevation of the drill hole collar, dip and azimuth of the hole, hole depth, depth to top of mineralisation.*

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.*	• *In historic drilling referred to gamma data is collected downhole at 1cm intervals and aggregated to 10cm composites using Samphire Uranium Limited in- house developed software.* • *Incepts are estimated assuming minimum parameters of 40cm above cut-off grade with a maximum of 10cm of internal dilution. These assumptions are regarded as appropriate for the present estimation.* • *Grades above 7,000ppm are cut to that level.*
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').*	• *The mineralised widths are effective true widths.* • *Drill holes are collared vertical and lateral drift at end-of-hole is within the error band of drill collar location.* • *Core logging and geological modelling confirm the sediment sequence is flat lying.*
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.*	• *Scaled maps, sections and tabulations of intercepts for the Blackbush resource have previously been released by SUL.* • *All diagrams within this release have respective appropriate scales.*
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 have been reported in prior announcements by SUL.* • *No new exploration results are contained within this report. All works within this report have used historic results for appraisal purposes.* • *Limitations on data, data quality and potentially negative aspects of the geology, hydrogeology and metallurgy have been considered at levels of detail appropriate to*

Criteria	JORC Code explanation	Commentary
		the Blackbush deposit at time of estimation.
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 meaningful and material results and observations relevant to previous estimation results referred to have been considered at levels of detail appropriate to their use.*
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 possible extension of mineralisation beyond resource estimated areas is considered and exploration planning is ongoing.*

Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

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.*	• *The natural gamma data which is the basis of all resource estimations is generated and captured electronically at the drill site.* • *Data profiles are reviewed at the time of acquisition in the field to ensure they are consistent with expectation and prior experience in the area.* • *Once accepted as valid raw data is electronically delivered to the Site Geologist/Geotechnician and a further validation against logged geology completed.* • *Raw data and initial interpretations and checks were sent electronically to the Adelaide office of UraniumSA where the data sets were captured to database with original data secured in a Datashed database.* • *Cross checking and validation of referenced figures, statistics and drilling results has been conducted by AGE staff.*
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.*	• *Initial site visits have been conducted by Pete Moorhouse and AGE staff to the Blackbush resource and surrounding area in conjunction with meetings with SUL staff intimately familiar with the project and involved in defining the resources.* • *Additional field trips have been conducted by AGE staff and contractors conducting site rehabilitation following the project acquisition.*

Criteria	JORC Code explanation	Commentary
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.*	• *There is high confidence in the geological models used in the estimation which honor the information; the knowledge available on the sedimentology and distribution of mineralisation has determined the criteria used in previous modelling.* • *Historic resource modelling and interpretation is based on systematic pattern drilling; targeted infill drilling which has confirmed interpretation from broader scale work; there has been a detailed examination of localised close spaced drilling.* • *Three holes cored the Eocene sequence in their entirety with high core recovery providing confirmation of previous interpretations and contributing detailed sedimentology data.* • *There have been a series of resource estimates conducted on the Blackbush deposit up to 2013 as continued exploration drilling delivered more information. The sequential estimates have been consistent one with the other providing confidence in the underlying geological interpretations and models for the distribution and control on mineralisation and grade.*
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 resource model and estimate is constrained within a bounding box extending from 722260E/6323115N to 724700E/6325336N, the envelope of mineralisation estimated is ~2.2km east-west and a similar extent north-south.* • *The physical limits of the estimated mineralisation are well defined in the west and central portions by the edges of the basement incised palaeodrainage filled with Eocene sediments.* • *Mineralisation estimated in the east is not laterally physically constrained and limits are determined by drill hole density and mineralised intercepts.*
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.*	• *Four estimates of mineralization at the Blackbush deposit have been made since 2009 as drill hole density has increased with further mineralisation extent delineated. The initial estimate was made on the basis of a 200m by 200m pattern and this has since been significantly infilled and extended to the south and west.* • *The most recent estimate used Leapfrog 3D software and the techniques applied and assumptions made are have been adequately described.* • *Comparison of the historic and current estimates gives significant confidence to the geological models applied and to the lateral*

Criteria	JORC Code explanation	Commentary
	• *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 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 data if available.*	*continuity of host sediments and contained mineralisation.* • *The deposit is uranium-only. Limited but sufficient geochemical assay of rotary mud drill cutting has not identified any other metals at potentially significant levels.* • *Formation waters are hypersaline; metallurgical research and hydrogeological investigations have investigated appropriate solutions to these issues along with the Inception Consulting Engineers initial desktop study discussed herein this report.*
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• *Density estimations are natural moisture.*
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• *Various cut-off grades have previously been reported for the Blackbush deposit by SUL.* • *A Cut-off grade of 400ppm has been used for the Inception Consulting Engineers initial desktop study referred to in the body of this report.*
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.*	• *A consideration of potential mining methods is contained in the description within the main document above, and the methodology undertaken for this is described in the Notes on page 2 of the above.* • *Inception evaluated the ISR method, and an open pit method of mining, based both on previous testwork and current mining practice within similar operations for both mining methods*
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*	• *Historic mineralogical investigations of SAND and FGOR lithotypes show mineralisation is uraninite and coffinite (ASX: USA 3 Sept 2010)* • *Previous column leach trials (ASX: USA 16 June 2011) demonstrated mineralisation was extractable from SAND lithotypes into an acidified sea water solution.* • *Historic metallurgical analysis and testing of ion exchange resins (ASX: USA 12 Aug 2011) formed initial proof of concept for ISR potential with modern improvements*

Criteria	JORC Code explanation	Commentary
	made.	*discussed within the body of this report.*
Environmen-tal 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.*	• *Ground water in the Samphire project area is saline to hypersaline and has no known domestic or pastoral use.* • *Hydrogeological investigation has established a single interconnected basal Miocene-Eocene aquifer confined below regionally extensive upper Melton Limestone and Pliocene Gibbon Bed aquatards.* • *Surficial ground waters in fluvial sequences above the Gibbon Beds extend part-way across the coastal plain at sea level. There is no hydrogeological connectivity between the Eocene-Miocene and surficial aquifers.* • *Uranium mineralisation at the Blackbush deposit occurs at depths of ~50m and below a modern coastal plain which extends from coastal mangroves in the east ~5km west to the foot of a low north-south trending topographic escarpment.* • *Systematic flora and fauna surveys have been carried out by SUL between 2009 & 2016. Vegetation is dominated by regionally prevalent native grass and saltbush species with localised wooded areas. Fauna are typical for the environment; bird species which have been recorded at the Samphire project and which are scheduled as threatened or endangered are prevalent across the district and are not specific to the Blackbush site.* • *The Samphire project is located on unimproved pastoral land used for grazing sheep for wool production.*
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.*	• *The average bulk densities used in the Blackbush estimate referred to are based on information from 138 drill holes with down hole density logs, and laboratory determinations on 11 drill core samples.* • *The available core samples for SAND and FGOR subdomains show an excellent match to the corresponding density log data and the figures are considered appropriate for the purpose of this estimation, and have been rounded to one decimal place.*
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*	• *The considerations and calculations carried out have taken appropriate account of all known relevant factors.* • *The Competent Persons consider the Inferred Resource classification to be appropriate for the mineralisation estimated and for the deposit as it is presently known.*

Criteria	JORC Code explanation	Commentary
	geology and metal values, quality, quantity and distribution of the data). • *Whether the result appropriately reflects the Competent Person's view of the deposit.*	
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• *A review and audit of the processes, procedures and results used by UraniumSA in the determination of the Blackbush deposit was contracted to Geos Mining Minerals Consultants.* • *An independent review of the Blackbush deposit has also been conducted by Inception Consulting Engineers as part of the Initial Desktop study discussed herein* • *The present Blackbush estimation takes appropriate account of UraniumSA internal reviews and of the Geos Mining Exploration Consultants audit report.*
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 data, data distribution, geological modelling, grade determination and statistical procedures employed are in the opinion of the Competent Persons appropriate to the confidence level required for the level of estimation at the Blackbush deposit.*