

## Geophysical EM data assessment triggers purchase of Big Lake Uranium Project

### Key Highlights

- Airborne EM interpretation reveals promising palaeochannel systems within Tertiary Lake Eyre Basin at Big Lake Uranium Project (EL6367), South Australia
- Preliminary assessment of public domain seismic supports this and also shows significant opportunity to guide exploration for potential ISR uranium in the Cooper Basin
- This geophysical investigative work was partially supported through the Accelerated Discovery Initiative (ADI) by the SA Department for Energy and Mining
- Data supports targeting of broader levels of stratigraphy analogous with the Chu-Sarysu Basin in Kazakhstan, which produced 42% of world's mined uranium in 2020
- Detailed assessment and integration of various data sets into a 3D model is being initiated
- Funding committed by Alligator for maiden aircore and mud rotary drillhole programs targeted to commence Q2 2022
- Alligator has issued an Acquisition Notice and finalised the Contract of Sale for the purchase of EL6367 as per the Farm-in and Share Sale Agreement Heads of Agreement with the shareholders of Big Lake Uranium Pty Ltd (BLU) announced on 5 December 2019
- Acquisition will compliment Alligator's Uranium Project portfolio with significant future exploration potential aiming to define a new Uranium Province.

**Alligator Energy (ASX: AGE, 'Alligator' or 'the Company')** is pleased to announce that it is sufficiently satisfied with geophysical data interpretation and desktop data reviews of the Big Lake Uranium project to commit funding for a significant maiden drilling program targeted for Q2 2022. This program will be staged aircore and mud rotary, testing targets in both the Tertiary and Cretaceous basin sediments. Drill locations will be guided by the upcoming results of 3D integration model of geophysical, seismic and well log data, as well as historic uranium intersections viewed with a holistic "roll front" model.

**While all greenfields exploration is ultimately an evaluated risk / reward opportunity, the interpretation of various geophysical and historic drilling data by Alligator (including the presence of uranium in the system) supports the Company's contention that the Big Lake Project in the Cooper Basin, South Australia, has bona fide uranium exploration potential.**

Broad continuous palaeochannel systems have been identified in recently-acquired airborne electromagnetics (“EM”) and these are also evident in public domain seismic data emanating from the petroleum industry. The seismic also resolves to deeper levels of Cretaceous stratigraphy where potential uranium traps are also evident, broadening the prospectivity of the project. The geological setting and scale are analogous in many respects with the giant Chu-Sarysu Basin Uranium Province in Kazakhstan, as initially prognosed by the current BLU owners and Alligator. Over 40% of the world’s mined uranium comes from this province, exclusively via the In Situ Recovery (“ISR”) method, which is currently the dominant means of uranium extraction globally. The principal hosts of uranium at the Beverley and Honeymoon Deposits, the Eyre and Namba Formations, are the principal shallower targets at Big Lake.

On the basis of these observations, Alligator has finalised the acquisition of the Big Lake Project under the terms of the Farm-in and Share Sale Agreement (**Agreement**) announced on 5 December 2019 and the extension of the Earn-in Period approved by shareholders at an EGM on 29 June 2021. This will bring the Project under Alligator ownership adding to the Company’s growing uranium portfolio. Under the terms of the Agreement, Alligator will now acquire all of the shares in Big Lake Pty Ltd, the holder of the 100% owned licence EL 6367 through the conversion of 30,000,000 Acquisition Performance Shares to fully paid ordinary shares in the Company. The issue of the Acquisition Performance Shares was approved by Shareholders at the 26 November 2019 AGM.

**Greg Hall, Alligator CEO, said:** *“This is an exciting time for Alligator in being able to acquire the Big Lake Uranium Project after our initial and somewhat delayed investigation work. The extensive and detailed airborne EM survey, combined with the innovative use of public seismic data and the known presence of uranium in the system, has supported our view of the uranium potential over the Big Lake tenement. This acquisition still represents very good value for a prospective uranium exploration region, with known uranium presence, in light of recent uranium exploration project market valuations as indicated through recent IPOs.”*

## **Background and Technical Description**

The Big Lake Project concept targets the margins of deep-seated dome structures associated with known oil and gas reservoirs within the Cooper Basin of South Australia (**Figure 1**). REDOX-controlled “roll front” uranium mineralisation is being targeted within sedimentary sandstone units primarily of the Lake Eyre and Namba Formations, sourced from distal U-rich source rocks transported as oxidised fluids through palaeochannels. The original uranium source rocks are represented by the highly radiogenic Big Lake Granite suite, recognised initially in seismic data and later intersected in petroleum wells. These granites not only supplied the uranium into the sedimentary basin, they have also acted as a heat source to stimulate and maintain fluid flow, as well as drive isostatic neotectonics in the region. Hydrocarbons generated in the lower part of the basin have transgressed stratigraphy and leaked into the upper parts of the basin system to enable chemical reduction of uranium from the basinal fluids above. These are all considered primary prerequisites to a functional roll front uranium mineral system.

The best analogue for Big Lake is the Chu-Sarysu Basin (Province) in Kazakhstan, which hosts dozens of highly productive uranium deposits, all of which are exploited via ISR methods. This province currently produces over 40% of the world’s uranium and does so in the lowest production cost quartile. The stratigraphy of the Chu-Sarysu Basin mirrors the Cooper-Eromanga-Lake Eyre Basins in many respects. While many Australian ISR deposits lie in the younger geologic units, the dominant host in Kazakhstan is in the Cretaceous. Both provinces are active petroleum producing

basins and both exhibit broad zones of oxidised (red-brown) and reduced (green-grey) sands. The Cooper Basin Province has received very little uranium exploration and hence is very immature in that respect, despite the obvious comparisons with the Chu-Sarysu Basin.

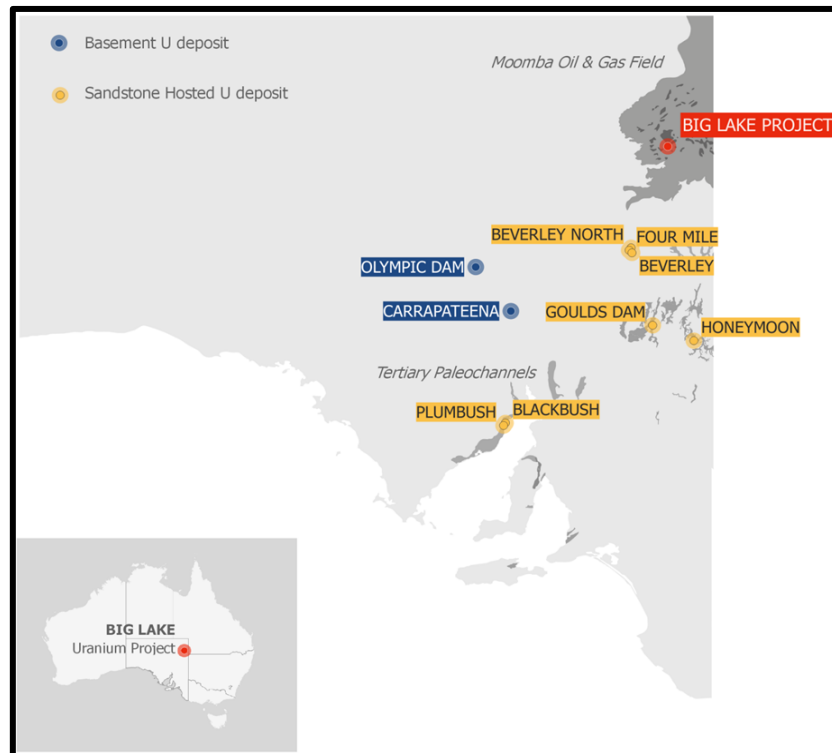


Figure 1. Location of BLU Project in South Australia and existing uranium deposits.

Similarly, the targets sought at Big Lake are comparable to those at Beverley, where mobile hydrocarbons are likely to have been the major catalyst for uranium deposition (**Figure 2**). Other analogues are West Texas and Wyoming, which are also co-producing ISR uranium and oil/gas.

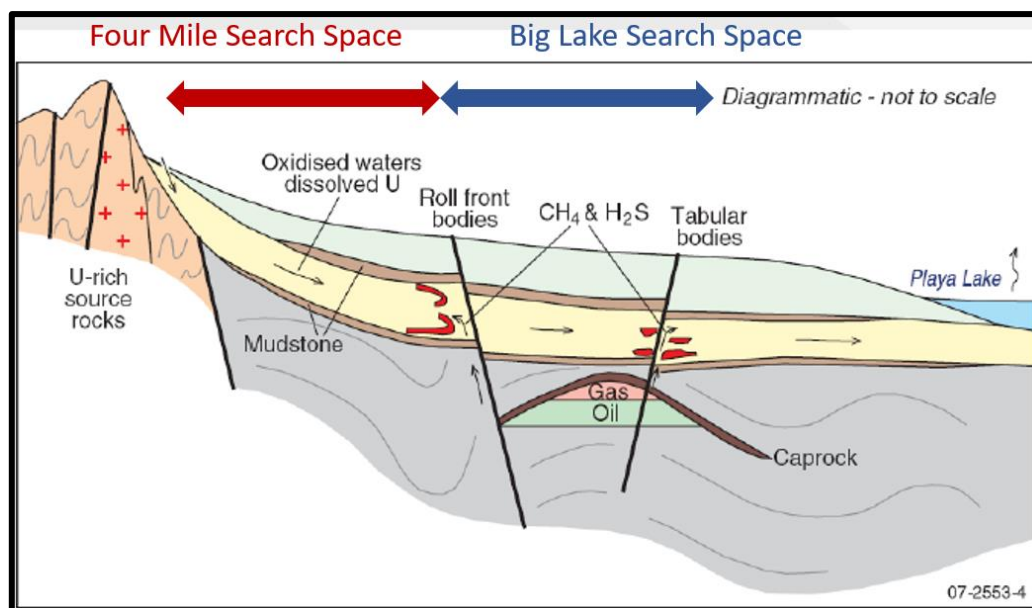


Figure 2. Diagrammatic section (not to scale) of sandstone hosted roll front uranium system, where uranium is sourced within the basin and is precipitated along roll fronts where hydrocarbons leak from underlying petroleum traps (source: Jaireth et al, 2008)

Demonstration that uranium is in the groundwater system at Big Lake and has moved along aquifers is the presence of radiometric “tails” in historic oil and gas drill logs, complimented by narrow but highly anomalous uranium in assays in drill cores, including 0.4m @ 329 ppm  $U_3O_8$  (refer ASX 16/10/2019). This is especially significant given that only a small proportion of historic holes have been gamma logged or assayed in the fertile stratigraphic interval. The accompanying sands are oxidised indicating that uranium fluids have passed, and the responsible roll front is lateral to the drill hole. Beyond these sites the sands are reduced. Exploration will be focussed on locating these migrated roll fronts and will be fundamentally guided by the 3D sedimentary architecture that Alligator now begins to build. Fortunately for the company, there is a plethora of historic data available to build this model, including: airborne EM that Alligator has acquired over the project area (refer ASX 4/6/2021); over 50 lines of 2D seismic and large coverage of 3D seismic acquired by petroleum companies over the last 30 years and that is available in the public domain; and drill hole data acquired by both the petroleum and minerals companies.

Preliminary interpretation of the Airborne EM has highlighted several large sinuous conductive features interpreted as potential palaeochannel systems that meander throughout the licence (**Figure 3**). Initially EM profiles were correlated with historic drilling demonstrating a strong affiliation of conductive horizons with historically logged sand units. Referencing analogous palaeochannel systems of the Eyre and Namba Formations such as Beverley, Gould’s Dam and Honeymoon, it has been inferred these conductive sand horizons relate to saline groundwaters passing through subsurface palaeodrainage systems in which roll front and REDOX uranium mineral occurrences can develop.

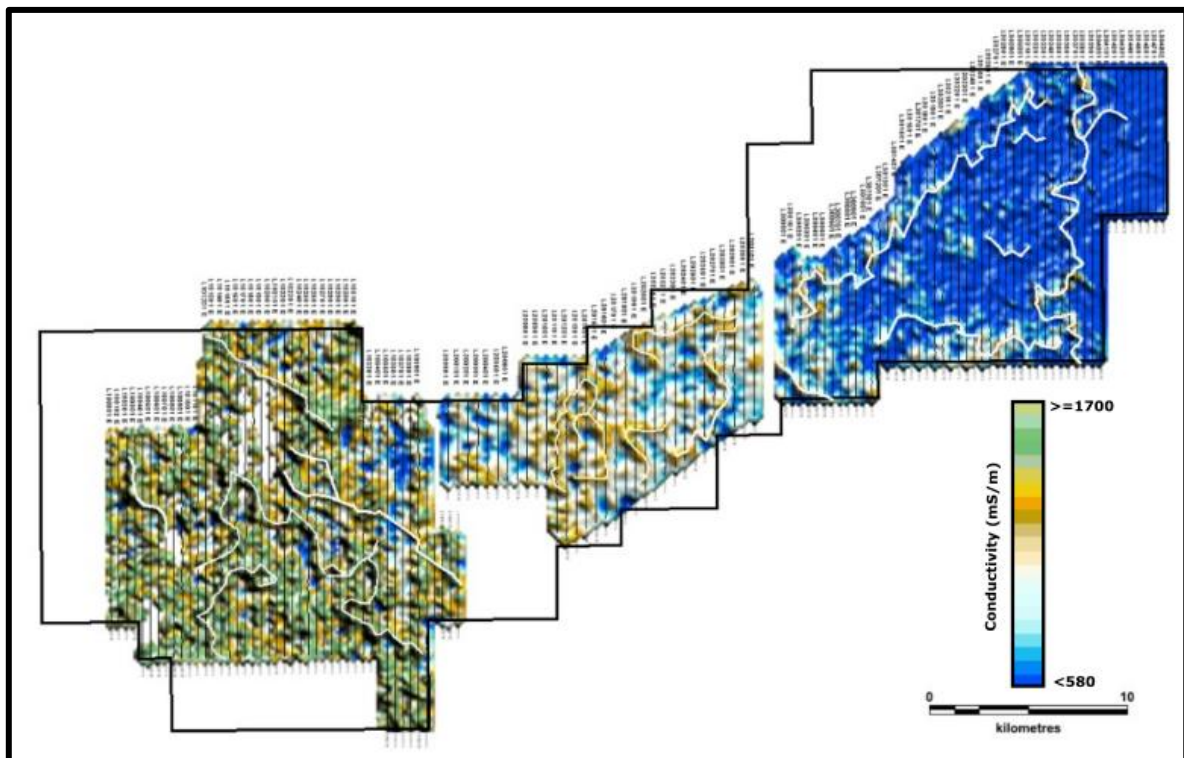
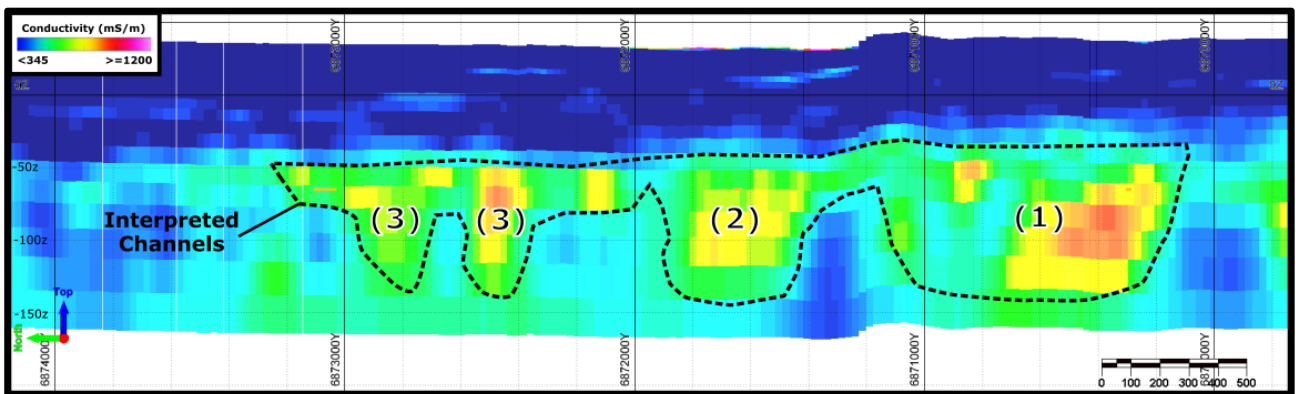


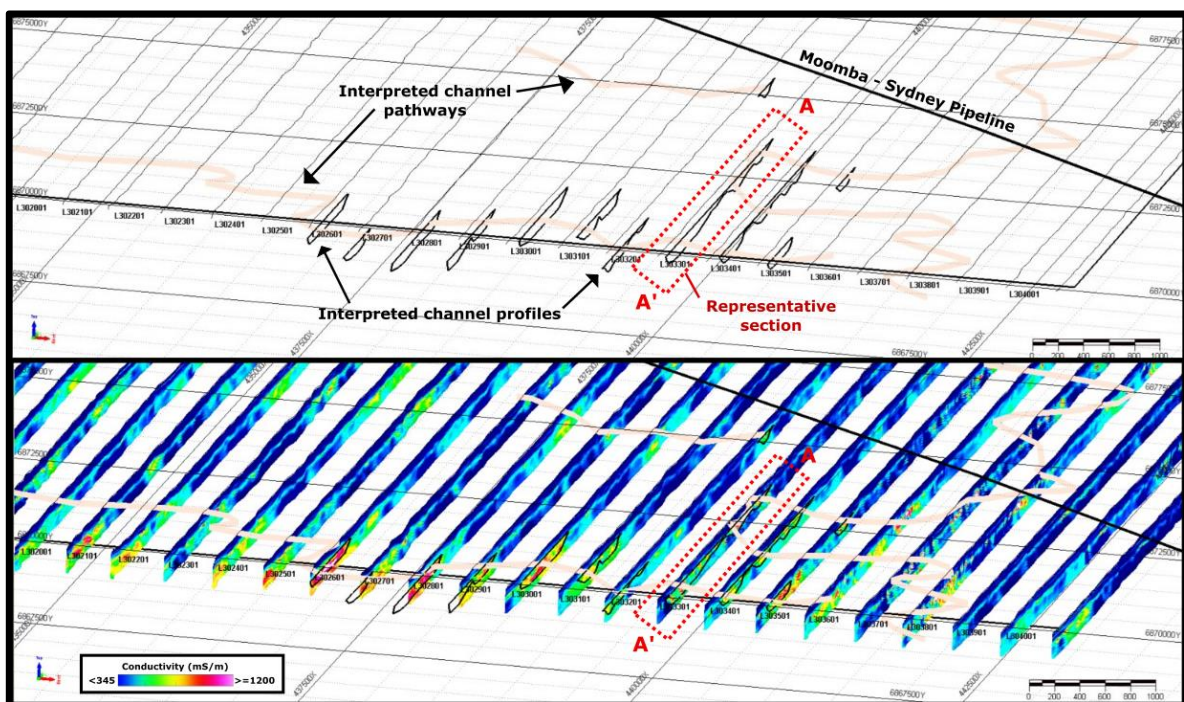
Figure 3. Regional colour stretch of the Big Lake WB\_MGA54\_Con021\_doi\_gm\_097.8-113.0m.grd with interpreted channel pathways.



While **Figure 3** shows planar conductive traces, 3D modelling of potential channel systems has commenced as shown below in **Figures 4** and **5**. Through analysing individual sections and tracing conductive EM responses several conductors with channel style morphologies have been identified, shown best in **Figure 4**. This section shows a potential meandering system having developed large channel profiles (1) with inferred narrow tributaries in the north (3) through a broadening channel (2) into a large U-shaped channel with similar dimensions to those observed at Gould's Dam and Honeymoon. Whilst this remains an early-stage interpretation, confirmation of saline groundwaters and continued modelling will remain ongoing to delineate key targets.



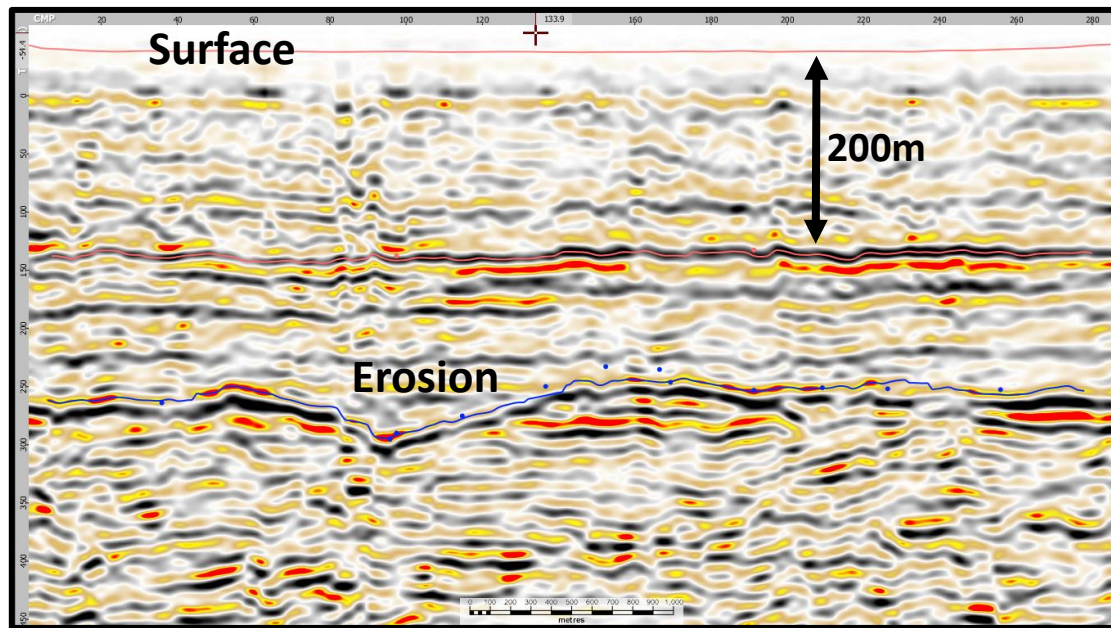
**Figure 4. L303301 southern section A-A' channel interpretation looking east on 1D conductivity (5x vertical exaggeration)**



**Figure 5. Initial interpretations and modelling of EM sections**

A 2D seismic re-processing program was also piloted to investigate the shallow (<500m) profiles of publicly available 2D seismic data, which was collected by petroleum companies to exclusively explore for oil and gas in reservoirs over 2000m below surface. This pilot program was able to resolve

the complex sedimentary sequences of the Tertiary Lake Eyre Basin (Namba and Eyre Formations) and Cretaceous Eromanga Basin (Winton and Cadna-owie Formations). From this data there is evidence of channel cut-and-fill from various levels of the stratigraphy (**Figure 6**). This broadens the exploration target in the Big Lake licence to much deeper than initially envisaged.



**Figure 6. Example of 2D seismic line re-processed to enhance the geology in the top 500m. Erosional surfaces and cut-and-fill geometry is evident at various levels of the stratigraphy.**

### Next steps

Alligator will undertake a thorough 3D integration of the available data, including imagery resulting from the re-processing of open-file seismic, which was originally acquired and processed to resolve the petroleum target depth in the Cooper Basin, which underlies the Lake Eyre and Eromanga Basins. This will complement the airborne EM data and may also lead to ways of re-processing that data to suit the purpose of mapping palaeochannels and aquifers. Of vital importance is the integration of minerals drilling or petroleum well log data, including lithology, gamma-ray data, and geochemistry. Much of this logging data is not fit-for-purpose and will require detailed evaluation and manipulation to suit uranium exploration. From these, Alligator aims to produce a detailed 3D model of the near-surface geology that will enable effective drill targeting. Roll front uranium systems are complex and the “sweet spots” for uranium mineralisation are elusive. They require incremental learning and model development.

In parallel, the company will progress various aspects of permitting and stakeholder engagement to facilitate access, including native title agreements, drilling management plans, operations coordination with pastoral and petroleum stakeholders, and government approvals.

Alligator aims to be drill ready with a well-considered plan in Q2 2022. The first phase of drilling is largely to ground truth the 3D model, such as locating palaeochannels, logging lithology and redox state, assessing groundwater conductivity and establishing REDOX gradients. These will all be crucial in guiding the second phase of drilling. The focus at phase 1 will be the shallow targets in the Eyre and Namba Formations that can be drilled using inexpensive aircore techniques. The follow-up phase 2 later in 2022 will be targeting redox anomalies with the aim of locating roll fronts and

uranium mineralisation. Exploration will also be extended deeper in the stratigraphy to test concepts in the Eromanga Basin. A mud rotary rig will be required for this phase of exploration.

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

## Contacts

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### Competent Person's Statement

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

Further detailed information in this report is based on current and historic Exploration Results compiled by Dr David Rawlings who is a Member of the Australasian Institute of Mining and Metallurgy. Dr Rawlings is a senior geological consultant with Alligator Energy Limited and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Dr Rawlings consents to the inclusion in this release of the matters based on his information in the form and context in which it appears.

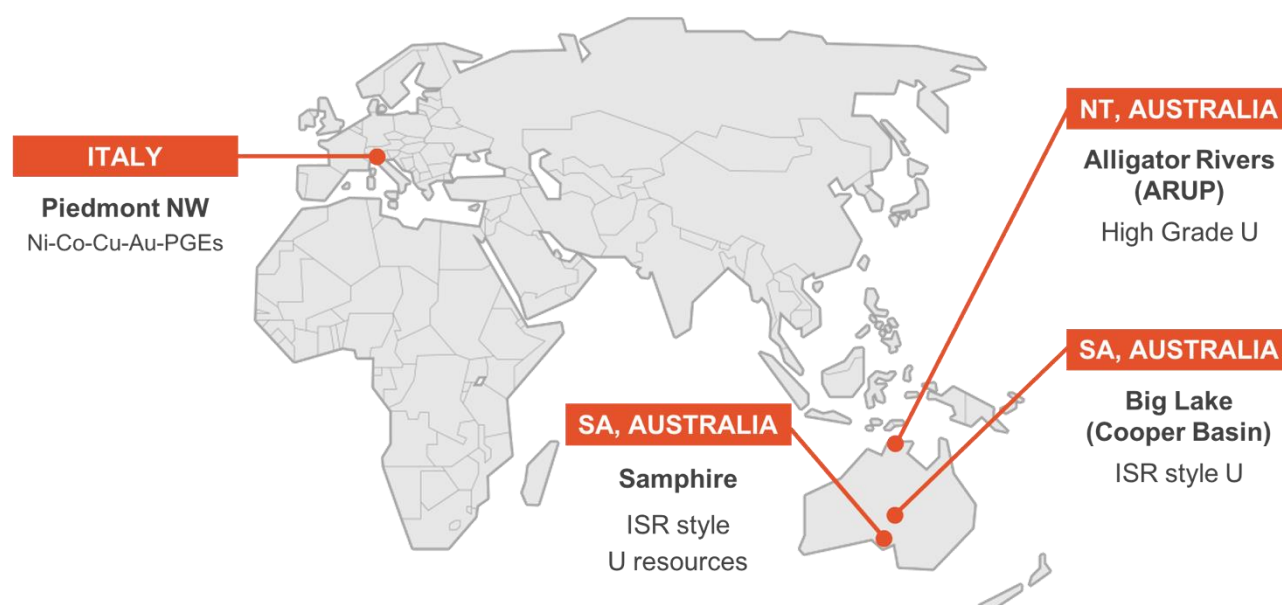
## Forward Looking Statement

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

## About Alligator Energy

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

## Projects





# JORC Code, 2012 Edition – Table 1

## Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></li> <li>• <i>Aspects of the determination of mineralisation that are Material to the Public Report.</i></li> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Sampling of Geophysical data referenced within this report was obtained utilising a SkyTEM304M airborne system which includes a time domain electromagnetic system, a magnetic data acquisition system .</li> <li>• An auxiliary data acquisition system containing two inclinometers, two altimeters and 3 DGPS is also comprised within the SkyTEM304M system.</li> <li>• All instruments are mounted on the frame suspended ~40 m below the helicopter, the generator used to power the transmitter is suspended between the frame and the helicopter, ~30 m below the helicopter</li> <li>• The nominal terrain clearance is 35 m, with an increase over forests, power lines, or any other obstacles or hazards.</li> <li>• The nominal production airspeed is ~80 kph for a flat topography with no wind. This may vary in areas of rugged terrain and/or windy conditions.</li> <li>• Average values and standard deviations of the survey flight parameters are presented below in Appendix 1, Table 1.</li> <li>• Data Acquisition: The SkyTEM304M system setup is a dual moment configuration containing a Low Moment (LM) with a peak moment of ~3,000 NIA and a High Moment (HM) with a peak moment of ~157,000 NIA.</li> <li>• A dual moment system provides a major advantage over single moment systems in that it is possible to measure a wider range of time gates. In LM mode early time gates can be measured allowing more accurate resolution in the near surface while in the HM mode, deeper penetration can be achieved.</li> <li>• Data from two DGPS receivers are recorded by the EM data acquisition system while a third DGPS is recorded by the magnetic data acquisition system. The DGPS systems are used for time stamping, positioning, and correlation of the EM and magnetic datasets. All recorded data are marked with a time stamp used to link the different data types.</li> <li>• A magnetometer base station and DGPS base station were also utilised, positioned within the vicinity of the survey area.</li> <li>• In the instance of the DGPS antenna this was place in maximum sight of satellites and away from metallic objects which could influence signal.</li> <li>• In the instance of the Magnetometer base</li> </ul>

Criteria	JORC Code explanation	Commentary
		<p>station this was placed in an area of low magnetic gradient and away from electrical transmission lines and metallic objects such as motor vehicles and aircraft.</p> <ul style="list-style-type: none"> <li>All referenced drilling and associated results/intervals have been previously reported.</li> </ul>
<i>Drilling techniques</i>	<ul style="list-style-type: none"> <li><i>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).</i></li> </ul>	<ul style="list-style-type: none"> <li>All referenced drilling and associated results/intervals have been previously reported.</li> </ul>
<i>Drill sample recovery</i>	<ul style="list-style-type: none"> <li><i>Method of recording and assessing core and chip sample recoveries and results assessed.</i></li> <li><i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i></li> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>All referenced drilling and associated results/intervals have been previously reported.</li> </ul>
<i>Logging</i>	<ul style="list-style-type: none"> <li><i>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.</i></li> <li><i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i></li> <li><i>The total length and percentage of the relevant intersections logged.</i></li> </ul>	<ul style="list-style-type: none"> <li>All referenced drilling and associated results/intervals have been previously reported.</li> </ul>
<i>Sub-sampling techniques and sample preparation</i>	<ul style="list-style-type: none"> <li><i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></li> <li><i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i></li> <li><i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></li> <li><i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></li> <li><i>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</i></li> <li><i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></li> </ul>	<ul style="list-style-type: none"> <li>All referenced drilling and associated results/intervals have been previously reported.</li> </ul>
<i>Quality of assay data and</i>	<ul style="list-style-type: none"> <li><i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered</i></li> </ul>	<ul style="list-style-type: none"> <li>The airborne EM survey referenced within this report was conducted by geophysical contractors SkyTEM utilising proprietary</li> </ul>

Criteria	JORC Code explanation	Commentary
laboratory tests	<p><i>partial or total.</i></p> <ul style="list-style-type: none"> <li>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.</li> <li>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</li> </ul>	<p>equipment and processing software. Continual QAQC is employed during the data capture process with each data stream timestamped as they are defined in the geometry file (.geo)</p> <ul style="list-style-type: none"> <li>Aarhus Workbench is utilised to handle time shift and calibrations automatically as they are defined in the geometry file.</li> <li>All data captured by SkyTEM was independently verified by geophysical consultants, Geodiscovery Australia following the completion of the survey with additional block model formats of data generated for in-house 3D interpretation work.</li> </ul>
Verification of sampling and assaying	<ul style="list-style-type: none"> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul style="list-style-type: none"> <li>Geophysical data has been verified externally by Geodiscovery Australia.</li> <li>All referenced drilling and associated results/intervals have been previously reported.</li> </ul>
Location of data points	<ul style="list-style-type: none"> <li>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul style="list-style-type: none"> <li>Data from two DGPS receivers are recorded by the EM data acquisition system while a third DGPS is recorded by the magnetic data acquisition system. The DGPS systems are used for time stamping, positioning, and correlation of the EM and magnetic datasets. All recorded data are marked with a time stamp used to link the different data types.</li> <li>Two altimeters forming part of the SkyTEM304 system record elevation allowing for adequate topographic control and correction</li> <li>The time stamp is in UTC/GMT</li> <li>Digital data was provided in MGA Zone 54 (GDA2020)</li> </ul>
Data spacing and distribution	<ul style="list-style-type: none"> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul style="list-style-type: none"> <li>The combined survey totalled 1333 line kilometers (Lkm) over 3 survey areas covering a large portion of EL6367. <ul style="list-style-type: none"> <li>The Big Lake West survey was conducted North-South at 400m line spacing totalling 612Lkm</li> <li>The Big Lake Central survey was conducted North-South at 500m line spacing totalling 213Lkm</li> <li>The Big Lake East survey was conducted North-South at 400m line spacing totalling 508Lkm.</li> </ul> </li> <li>The spacing and density of EM data comprising the survey is deemed satisfactory for the basis of a program to identify subsurface conductive features</li> </ul>

Criteria	JORC Code explanation	Commentary
<i>Orientation of data in relation to geological structure</i>	<ul style="list-style-type: none"> <li><i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i></li> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>Survey lines were conducted North-South with geological interpretation from historic exploration and petroleum drilling indicating east-west hydraulic pathways within the survey area.</li> <li>Through conducting a north-south 400/500m line spaced survey a larger survey area could be undertaken with suitable spacing to cross cut anticipated hydraulic pathways and geological features.</li> </ul>
<i>Sample security</i>	<ul style="list-style-type: none"> <li><i>The measures taken to ensure sample security.</i></li> </ul>	<ul style="list-style-type: none"> <li>No physical samples take. Digital data was collected and downloaded daily from survey equipment by geophysical contractors.</li> <li>All data backed up by contractors daily and uploaded for processing.</li> </ul>
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <li><i>The results of any audits or reviews of sampling techniques and data.</i></li> </ul>	<ul style="list-style-type: none"> <li>None</li> </ul>

## Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
<i>Mineral tenement and land tenure status</i>	<ul style="list-style-type: none"> <li><i>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.</i></li> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>The geophysics referenced in this report covering the Big Lake project are located within Exploration Licence 6367 granted 22nd July 2019 for a 2 year term and recently renewed for a further 3 years expiring July 2024 where a subsequent renewal will be required.</li> <li>The land covering the licence area is predominantly Crown Lease; consisting of several leases over 2 respective pastoral stations.</li> </ul>
<i>Exploration done by other parties</i>	<ul style="list-style-type: none"> <li><i>Acknowledgment and appraisal of exploration by other parties.</i></li> </ul>	<ul style="list-style-type: none"> <li>Extensive petroleum well drilling has been conducted throughout the licence – this form of drilling typically targets deep geological features in the region and detailed logging above 300m depth is very limited.</li> <li>In conjunction with petroleum exploration in the region extensive seismic surveys have also been conducted covering large portions of EL6367.</li> <li>Evaluation of petroleum drilling and geophysics confirmed a high focus on deep geological features in the cooper basin recording low detail in the target Eyre and Namba formations. Holes with downhole gamma from surface are being interpreted for facies analysis providing some sedimentary sequence insights where recorded.</li> <li>Uranium and mineral exploration in the district has been very limited with modest uranium exploration conducted by TC development during 2008 &amp; 2009.</li> </ul>



Criteria	JORC Code explanation	Commentary
		Exploration conducted by TC development targeted gamma anomalies from historic petroleum wells totalling 129 rotary mud holes.
Geology	<ul style="list-style-type: none"> <li><i>Deposit type, geological setting and style of mineralisation.</i></li> </ul>	<ul style="list-style-type: none"> <li>Historic explorations has identified anomalous uranium in small clay seams.</li> <li>Target mineralisation style in Roll front and REDOX type uranium occurrences, hosted within permeable palaeochannels of the Namba and Eyre formation analogous to Kazakh style mineralisation above hydrocarbon basins or similar stratigraphic channel resources such as Honeymoon and Gould Dam.</li> <li>Targeted geological settings are sand hosted palaeochannel systems within the interbedded lacustrine environments of the Namba and Eyre formations.</li> <li>All referenced drilling and associated results/intervals have been previously reported.</li> </ul>
Drill hole Information	<ul style="list-style-type: none"> <li><i>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:</i> <ul style="list-style-type: none"> <li><i>easting and northing of the drill hole collar</i></li> <li><i>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i></li> <li><i>dip and azimuth of the hole</i></li> <li><i>down hole length and interception depth</i></li> <li><i>hole length.</i></li> </ul> </li> <li><i>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</i></li> </ul>	<ul style="list-style-type: none"> <li>All referenced drilling and associated results/intervals have been previously reported.</li> </ul>
Data aggregation methods	<ul style="list-style-type: none"> <li><i>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</i></li> <li><i>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</i></li> <li><i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></li> </ul>	<ul style="list-style-type: none"> <li>All referenced drilling and associated results/intervals have been previously reported.</li> </ul>
Relationship between mineralisation	<ul style="list-style-type: none"> <li><i>These relationships are particularly important in the reporting of Exploration Results.</i></li> <li><i>If the geometry of the mineralisation with</i></li> </ul>	<ul style="list-style-type: none"> <li>All referenced drilling and associated results/intervals have been previously reported.</li> </ul>

Criteria	JORC Code explanation	Commentary
<i>on widths and intercept lengths</i>	<p><i>respect to the drill hole angle is known, its nature should be reported.</i></p> <ul style="list-style-type: none"> <li><i>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</i></li> </ul>	
<i>Diagrams</i>	<ul style="list-style-type: none"> <li><i>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</i></li> </ul>	<ul style="list-style-type: none"> <li>All diagrams within this release have respective appropriate scales.</li> <li>All referenced drilling and associated results/intervals have been previously reported.</li> </ul>
<i>Balanced reporting</i>	<ul style="list-style-type: none"> <li><i>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</i></li> </ul>	<ul style="list-style-type: none"> <li>All referenced drilling and exploration results have been reported in prior announcements by SUL.</li> <li>No new exploration results are contained within this report. Geophysical data has been acquired for assisting geological interpretations and understanding.</li> </ul>
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> <li><i>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</i></li> </ul>	<ul style="list-style-type: none"> <li>Historic 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.</li> </ul>
<i>Further work</i>	<ul style="list-style-type: none"> <li><i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li> <li><i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></li> </ul>	<ul style="list-style-type: none"> <li>Process and assess 2D seismic sections from petroleum exploration and correlate with EM modelling.</li> <li>Finalisation of Native title agreements to facilitate on ground works.</li> <li></li> <li>Consideration of new techniques and differing geophysical surveys to further exploration methods.</li> <li>Rotary mud and sonic drilling.</li> <li>Continued reprocessing of new and historical geophysics.</li> </ul>

**Appendix 1:** SkyTEM EM survey average flight parameters & Gate times

Control parameter		Average Value	Standard Deviation
Ground speed*)		79.0 kph	8.9 kph
Processes height		37.4 m	4.4 m
Tilt angle	X	-0.4 degrees	1.8 degrees
	Y	0.4 degrees	0.8 degrees
Tx Voltage	Tx_off	61.3 V	--
	Tx_on	57.2 V	--
Low Moment Current		8.6 A	0.0
High Moment Current		110.9 A	1.4
Tx temperature		22.8 °C	--

**Table 1: Average flight parameters**

Gate #	Gate Open (μs)	Gate Close (μs)	Gate width (μs)	Raw Gate center (μs)	Comment
1	0.43	1	0.57	0.715	Not Used
2	1.43	3	1.57	2.215	Not Used
3	3.43	5	1.57	4.215	Not Used
4	5.43	7	1.57	6.215	Not Used
5	7.43	9	1.57	8.215	Not Used
6	9.43	11	1.57	10.215	Not Used
7	11.43	13	1.57	12.215	LM Only
8	13.43	16	2.57	14.715	LM Only
9	16.43	20	3.57	18.215	LM Only
10	20.43	25	4.57	22.715	LM Only
11	25.43	31	5.57	28.215	LM Only
12	31.43	39	7.57	35.215	LM & HM
13	39.43	49	9.57	44.215	LM & HM
14	49.43	62	12.57	55.715	LM & HM
15	62.43	78	15.57	70.215	LM & HM
16	78.43	98	19.57	88.215	LM & HM
17	98.43	123	24.57	110.715	LM & HM
18	123.43	154	30.57	138.715	LM & HM
19	154.43	205	50.57	174.215	LM & HM
20	205.43	256	50.57	230.715	LM & HM
21	256.43	307	50.57	287.715	LM & HM
22	307.43	408	100.57	347.715	LM & HM
23	408.43	509	100.57	458.715	LM & HM
24	509.43	610	100.57	572.715	LM & HM
25	610.43	762	151.57	690.715	LM & HM
26	762.43	964	201.57	863.215	LM & HM
27	964.43	1217	252.57	1090.715	HM Only
28	1217.43	1571	353.57	1394.215	HM Only
29	1571.43	1975	403.57	1773.215	HM Only
30	1975.43	2480	504.57	2227.715	HM Only
31	2480.43	3188	707.57	2834.215	HM Only
32	3188.43	3996	807.57	3592.215	HM Only
33	3996.43	5006	1009.57	4501.215	HM Only
34	5006.43	6218	1211.57	5612.215	HM Only
35	6218.43	7634	1415.57	6926.215	HM Only
36	7634.43	9454	1819.57	8544.215	HM Only
37	9454.43	11470	2015.57	10462.22	HM Only
38	11474.43	14204	2729.57	12839.22	HM Only

**Table 2: Gate times**