

Wednesday 5th August, 2015

ASX Announcement

Highly prospective uranium targets in Arnhem Land to be drilled by Alligator Energy

Highly prospective uranium targets, defined by Alligator Energy Pty Ltd (ASX: AGE), will be drill tested on its Arnhem Land, NT tenements in an extensive, imminent drilling program.

Key targets include:

- **A potential 200m Southerly extension of the high grade Beatrice Prospect**
- **Two new targets in the Beatrice Project area, BT4 and BT1 identified by specialised geophysical and radiometric surveys.**
- **Highly anomalous targets coincident with a geophysics defined anomaly and structure at TCC4 on the Tin Camp Creek Project.**

Drilling on these targets is planned to commence in early September with a light drill rig drilling up to 5,000metres under the relatively thin cover, using a combination of shallow air-core and deeper diamond core drilling techniques (refer Figure 1).

The Beatrice Prospect has previously produced high-grade intersections, including 19m@3,626ppm (0.36%) U₃O₈. The Prospect is open to the north with a potential plunge and remains open to the South under younger shallow sediments.

The results demonstrate that the two innovative technologies (specialised application of Sub Audio Magnetics (SAM) geophysics and radiogenic isotope techniques) developed by Alligator Energy, are working well and that together with follow up of known but unexplained radiometric features, are yielding top quality drill targets.

Alligator Energy CEO, Rob Sowerby said, "The forthcoming drilling program will be testing what I believe is by far the strongest set of targets since the company listed in 2011. The development of specialised geophysical tools to assist in the search for new uranium deposits has been a very significant factor in the generation of these very high quality drill targets."

More than 1,000 samples were collected for radiogenic isotope analyses with about two thirds of the results received so far. SAM geophysical surveys were completed over seven areas with initial processing of results completed. Final modelling is in progress.

Traditional spectrometer, soil and rock sampling carried out over several known but unexplained uranium anomalies have identified other emerging drill targets.

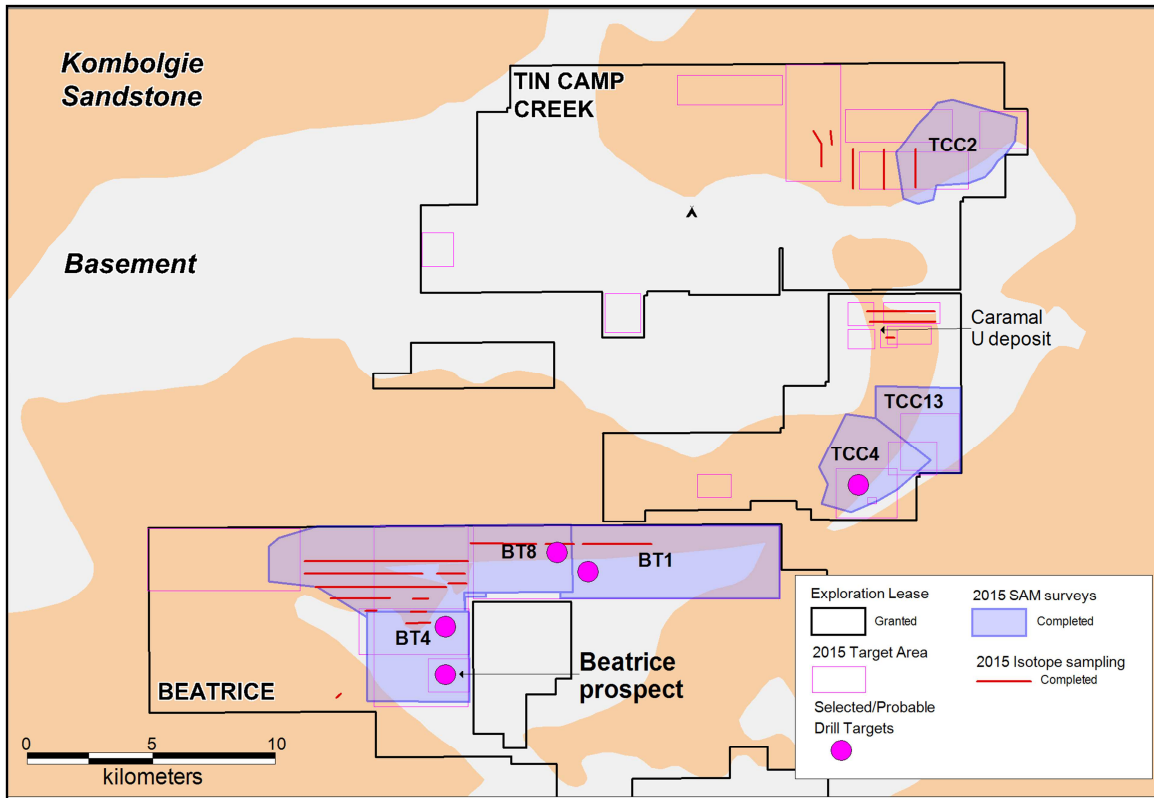


Figure 1: 2015 Drill Target Locations.

Beatrice Prospect:

Soil and ground radiometric surveys completed over Beatrice show strong uranium (>100ppm U3O8) and strong radiogenic isotope anomalies extending more than 200 metres south from the known high grade mineralisation to the edge of younger cover material (refer Figure 2). These anomalies are open to the south under the younger cover material. The north-south trend and coincidence of these anomalies with the SAM conductor feature and the presence of significant uranium in the adjacent drill holes makes this a compelling target. It is planned to drill 8 holes on 4 lines to test this target.

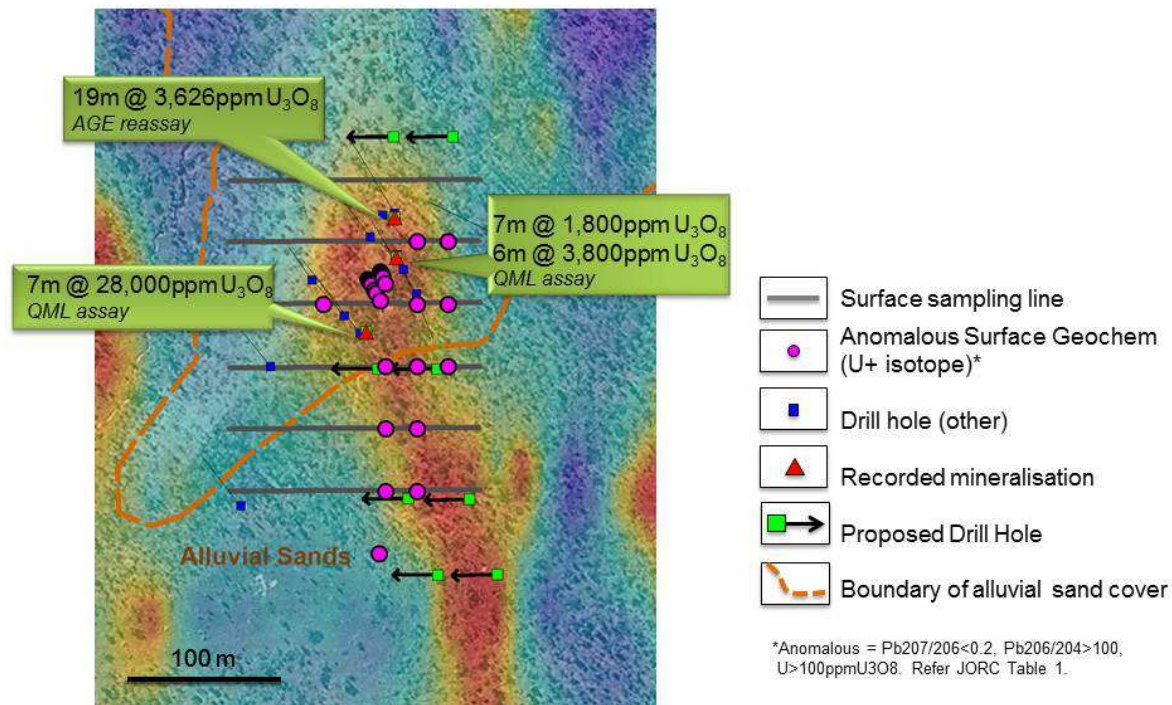


Figure 2. Beatrice Prospect Soil Sampling on SAM image- Red indicates more conductive/lower resistivity rocks. Purple dots indicate strongly anomalous soil geochemistry (isotope+U)

BT 4:

A very strong, shallow, north-south trending SAM conductor extending over 1,000 metres has been located two kilometres north of the Beatrice Prospect along strike from the SAM conductor, magnetic and uranium mineralisation and soil anomalism that defines the Beatrice drill target. The source of this basement conductor is not covered by thick sandstone but is concealed by young alluvial material. While this cover material is expected to be thin it renders traditional spectrometer and geochemical sampling as well as radiogenic isotope sampling ineffective. Light rig drilling is planned to collect weathered bedrock samples from beneath the young alluvial material for radiometric/geochemical analysis. Any uranium geochemical response will upgrade **BT4** to an excellent drill target to be drilled in 2015.

BT 1:

A very strong, shallow, east-west trending SAM conductor extending over 4,000 metres and associated with a known strong uranium radiometric anomaly but covered by thin, young alluvial material has been located at the **BT1** target area in the northern part of the Beatrice tenement. This feature lies adjacent to the sandstone escarpment from which radiogenic groundwater has been identified, seeping from the base of



the sandstone. Drilling is planned to collect weathered bedrock geochemical samples from beneath the young alluvial material for radiometric/geochemical analysis.

Any uranium geochemical anomalism will upgrade **BT1** to an excellent target to be drilled in 2015.

TCC 4

Radiogenic isotope sampling at **TCC 4** in the Tin Camp Creek prospect during 2014 showed highly anomalous results. Additional sampling of outcropping sandstone and old reconnaissance drill holes in 2015 has shown the anomalism extends over more than 2,000 metres. A peak response over 1,000 metres long was defined (refer ASX Release, 20 November 2014). The 2015 SAM survey defined a coincident anomaly associated with this radiogenic isotope anomaly.

6 holes on 2 lines will be drilled to test this *prospective target* in 2015.

Emerging Targets:

Final processing of the results from the seven SAM surveys is still in progress but it is revealing other conductors worthy of follow-up. Similarly the analytical results from more than 600 sandstone samples have been received and show anomalous responses which may firm up as definite anomalies once the results for the more than 300 samples yet to be analysed are received. It is the coincident anomalous radiogenic isotope responses (uranium metal proxies) and SAM conductors (alteration associated with unconformity uranium deposits) which constitute the *very good drill targets*. These are the anticipated responses from potential large uranium deposits in the basement through the covering sandstone.

FOR FURTHER INFORMATION, PLEASE CONTACT

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JORC Code, 2012 Edition – Table 1

Exploration update – August 2015

Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
<i>Sampling techniques</i>	<p><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></p> <p><i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></p> <p><i>Aspects of the determination of mineralisation that are Material to the Public Report.</i></p> <p><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></p>	<p>A total of 625 surface rock chip samples, 29 soil samples and 390 historical core samples were obtained during the reported phase of work.</p> <p>The samples obtained are considered to be representative of the lithology from which they were obtained and sampling and sub-sampling techniques were appropriate for the sample type and for exploration purposes.</p> <p>Spectrometer surveys were completed utilising a Radiation Solutions RS-125 spectrometer.</p> <p>Over 1,200 line km of Helicopter-borne Sub-Audio Magnetic surveys were conducted over 7 target areas by GAP Geophysics of Brisbane. Data was collected at 200m line spacing with 100m spaced infill where warranted.</p> <p>Initial data provided includes DEM, TMI, MMC (magnetometric conductivity) and TFEM (Total Field Electromagnetics). Final modelling of data is underway.</p>
<i>Drilling techniques</i>	<p><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></p>	No drilling was undertaken.
<i>Drill sample recovery</i>	<p><i>Method of recording and assessing core and chip sample recoveries and results assessed.</i></p> <p><i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i></p> <p><i>Whether a relationship exists between sample recovery and grade and</i></p>	No drilling was undertaken.



	<i>whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</i>	
<i>Logging</i>	<p><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></p> <p><i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i></p> <p><i>The total length and percentage of the relevant intersections logged.</i></p>	No drilling or logging was undertaken.
<i>Sub-sampling techniques and sample preparation</i>	<p><i>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.</i></p> <p><i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></p> <p><i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></p> <p><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></p> <p><i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></p>	<p>Historical core samples were collected in 1m intervals where possible (intervals <1m are documented in company database) from existing core trays. Both NQ and HQ samples were sampled. Core was cut along core axis using a brick saw and samples collected in calico bags. ½ core was sampled full core existed and ¼ core sampled where only ½ core existed.</p> <p>Rock chip samples were obtain from in-situ locations using geological pick/hammer and <3kg in weight.</p> <p>Soil samples were obtained from a nominal 20-30cm depth and sieved to -80# and <1kg in weight.</p> <p>The historical core samples obtained are considered to be representative of the lithology from which they were obtained and sampling and sub-sampling techniques were appropriate for the sample type and for exploration purposes</p> <p>Field Blanks, duplicates and laboratory prepared standards are not used at this early exploration phase.</p> <p>Samples were submitted for analyses to Bureau Veritas' Laboratory in Adelaide. Further sample preparation was undertaken by Bureau Veritas prior to assay. Samples are dried to a core temperature of approximately 100°C. Dried samples are then coarse crushed using a Boyd crusher to a sizing of approximately 5mm. The total sample is then milled in an LM5 pulveriser to 85% passing 75µm. An analytical pulp of 250g is taken from the bulk and the residue retained.</p> <p>Sample sizes were considered appropriate for the type of material being sampled.</p>



<i>Quality of assay data and laboratory tests</i>	<p><i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></p> <p><i>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.</i></p>	<p>A Radiation Solutions RS-125 spectrometer was used to measure radioactivity (in counts per second – cps) of each sample. Some samples are selected for laboratory assay based geological observation and radioactivity (cps) relative to background.</p> <p>Geochemical assay of representative samples is undertaken at Bureau Veritas' Adelaide laboratory. Uranium analysis is undertaken utilising ICP-MS using Lithium Borate fusion of the pulp sample. This technique is considered a total analysis method and appropriate for the style of mineralisation targeted.</p> <p>Field Standards, blanks and duplicates were not included in the samples submitted to the laboratory at this early exploration phase.</p> <p>No assay data is provided in this report</p>
<i>Verification of sampling and assaying</i>	<p><i>The verification of significant intersections by either independent or alternative company personnel.</i></p> <p><i>The use of twinned holes.</i></p> <p><i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></p> <p><i>Discuss any adjustment to assay data.</i></p>	<p>No assay data is provided in this report</p> <p>No adjustment of assay data is undertaken</p>
<i>Location of data points</i>	<p><i>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.</i></p> <p><i>Specification of the grid system used.</i></p> <p><i>Quality and adequacy of topographic control.</i></p>	<p>Current sample locations were surveyed using GPS with accuracies of between 1-4 metres.</p> <p>All samples have been surveyed on Map Grid of Australia 94 (MGA94 Zone 53).</p>
<i>Data spacing and distribution</i>	<p><i>Data spacing for reporting of Exploration Results.</i></p> <p><i>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.</i></p> <p><i>Whether sample compositing has been applied.</i></p>	<p>Sampling during this phase of work has been broad spaced for exploratory purposes to test new structural targets and until significant mineralisation is identified is insufficient to define mineral resources.</p> <p>Sample compositing has not been applied.</p>



<i>Orientation of data in relation to geological structure</i>	<i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</i>	Current sampling is of an exploratory nature. There is generally insufficient data in the areas during this phase of work to determine the orientation of host structures. No known sampling bias is known to have been introduced.
<i>Sample security</i>	<i>The measures taken to ensure sample security.</i>	Samples, each contained in calico and subsequent zip tied polyweave sample bags were delivered by Alligator personnel in directly to Northline Transport in Darwin. Delivery to the Bureau Veritas Laboratory in Adelaide with Chain of Custody documentation is through Northline Transport.
<i>Audits or reviews</i>	<i>The results of any audits or reviews of sampling techniques and data.</i>	No audits have been undertaken for this phase of work.

Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
<i>Mineral tenement and land tenure status</i>	<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. 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>	All work reported in this ASX release was undertaken on the Beatrice Project JV and the Tin Camp Creek Project. The Beatrice Project JV with Cameco which is comprised of exploration licences EL24291 and EL26796 in the Northern Territory. The tenements are held by Cameco Australia Pty Ltd. Alligator executed the Beatrice Joint Venture agreement with Cameco on 18 December 2014. The key terms of the Joint Venture are as follows: Alligator may earn a Stage 1 interest of 51% of the project by exploration expenditure of \$250,000 prior to 2 July 2016. Alligator may maintain its Stage 1 interest by sole funding to a total of \$2.0 million for exploration activities prior to 2 July 2017 (Stage 2). Following completion of Stage 2, Cameco may elect to fund continuing exploration on a pro-rata basis to maintain a 49% interest or dilute its interest. If AGE fails to meet its expenditure commitments up to the end of Stage 2, AGE will forfeit its interest in the Project. On definition of a resource of 75Mlb U3O8



		<p>resource (inferred+indicated+measured), the JV must commence a NI43-101 compliant Prefeasibility Study (PFS) within 12 months of identifying a qualifying resource.</p> <p>Cameco may elect to manage and operate during the PFS stage and fund 51% of the PFS following making a payment of \$2 million to AGE, provided they have maintained a 49% interest.</p> <p>Following completion of the PFS, Cameco may acquire an additional 2% of the project (for a total of 51%) by paying AGE:</p> <p>For a total resource of less than 100Mlb U3O8, an amount equal to 2% x Total Resource (lbs U3O8) x \$5/lb U3O8.</p> <p>For a total resource of greater than 100Mlb U3O8, an amount equal to 2% x Total Resource (lbs U3O8) x \$6/lb U3O8 less the initial PFS payment (\$2 million).</p> <p>There are no known existing impediments to operating on any granted tenement within the Beatrice Project area.</p> <p>The Tin Camp Creek Project which is comprised of contiguous exploration licences EL24921 and EL24922 in the Northern Territory. The tenement is held by TCC Project Pty Ltd (98%), a wholly owned subsidiary of Alligator Energy Ltd (Alligator) and by West Arnhem Corporation Pty Ltd (2%). The tenements renewal process for a further 2 year period is underway the Northern Territory Department of Mines and Energy. The tenements and are in good standing. Exploration and Mining agreements with the Northern Land Council (NLC) on behalf of traditional owners are in place for these tenements in accordance with the Aboriginal Land Rights Act (1976).</p> <p>The Tin Camp Creek Project is also subject to a uranium buy back agreement with Cameco Australia Pty Ltd whereby Cameco may buy 51% of a defined resource greater than 20,000t contained U3O8.</p> <p>There are no known existing impediments to operating on any tenement within the Tin Camp Creek Project area.</p>
<p><i>Exploration done by other parties</i></p>	<p><i>Acknowledgment and appraisal of exploration by other parties.</i></p>	<p>Regional exploration has previously been undertaken by other parties in the region by Queensland Mines Ltd (1970-1972), Afmeco (1996-2001) and Cameco Australia Pty Ltd (2001-2010).</p>



<i>Geology</i>	<i>Deposit type, geological setting and style of mineralisation.</i>	Alligator is exploring for Unconformity Associated Style Uranium Deposits. The geology of the area being targeted is comprised primarily of Carpentarian aged sandstones of the Kombolgie Formation overlying multiply deformed meta-sediments of the lower-Proterozoic Cahill Fm and Archaean granite Gneiss Complexes.
<i>Drill hole Information</i>	<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: 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.</i>	No drilling was undertaken.
<i>Data aggregation methods</i>	<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. 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.</i>	No drilling undertaken.
<i>Relationship between mineralisation widths</i>	<i>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</i>	No drilling undertaken.



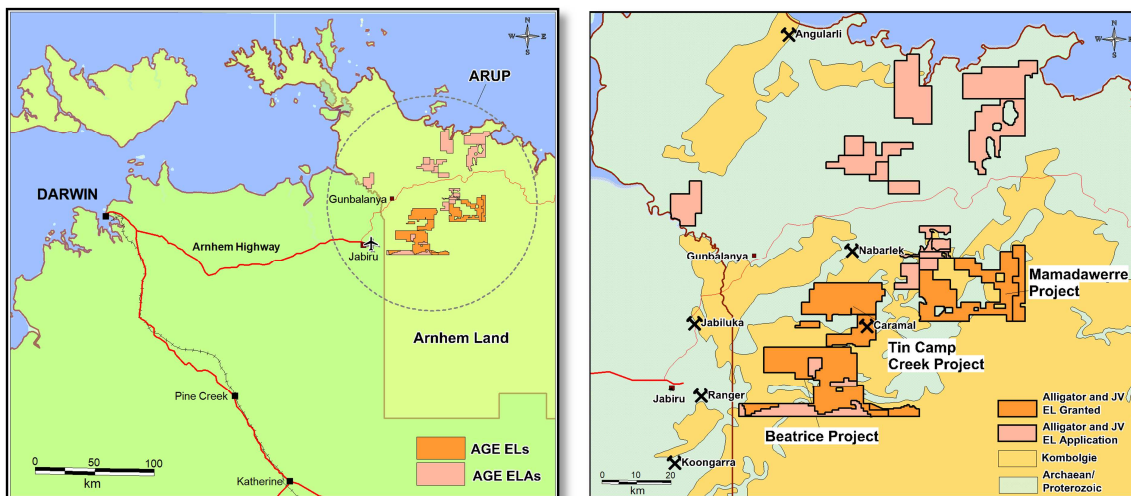
<i>and intercept lengths</i>	<i>known, its nature should be reported. If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</i>	
<i>Diagrams</i>	<i>Appropriate maps and sections (with scales) and 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>	Refer Figures 1 and 2
<i>Balanced reporting</i>	<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>	All results of significance have been reported within this report.
<i>Other substantive exploration data</i>	<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>	Over 1,200 line km of Helicopter-borne Sub-Audio Magnetic surveys were conducted over 7 target areas by GAP Geophysics of Brisbane. Data was collected at 200m line spacing with 100m spaced infill where warranted. Data provided included DEM, TMI, MMC (magnetometric conductivity) and TFEM (Total Field Electromagnetics). Final modelling of data is underway. Reported soil geochemical anomalies are based on the following cut-offs: Pb207/206 <0.2, Pb206/204 >100, U>90ppmU3O8
<i>Further work</i>	<i>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.</i>	A number of targets have been identified on the Tin Camp Creek and Beatrice JV project areas. The exploration reported on in this release is the first part of what Alligator intends to be a systematic test of these targets. Further advice on this ongoing work will be provided following further assessment and ranking of these targets in the coming months.

Competent Persons Statement

Information in this report is based on current and historic Exploration Results compiled by Mr Rob Sowerby who is a Member of the Australasian Institute of Geoscientists. Mr Sowerby is CEO and Director of 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 Sowerby consents to the inclusion in this release of the matters based on his information in the form and context in which it appears.

About Alligator Energy

Alligator Energy Ltd is an Australian, ASX listed, company with uranium exploration tenements in the world class Alligator Rivers Uranium Province in Arnhem Land, Northern Territory. The Alligator Rivers Uranium Province hosts nearly 1 billion pounds of high grade uranium resources and past production, including the Ranger Mine and Jabiluka. The company's assets include the Tin Camp Creek Project and Joint Ventures with Cameco Australia Pty Ltd at the Beatrice and Mamadawerre Projects. Since listing in 2011, the company has defined the Caramal Resource (6.5Mlb U3O8 @ 3100ppm U3O8) and intersected high grade uranium at a number of prospects including Mintaka, South Horn and NE Myra. High Grade uranium mineralisation has also been confirmed at the historic Beatrice Prospect. The company has a strong pipeline of prospects with known high grade mineralisation and potential to discover large (>100Mlb U3O8) high grade resources.



Project Location Diagrams