

#### 10 June 2015

#### **ASX Announcement**

# 2015 Field Program Underway-Outcropping Uranium Located 2km NNW of Beatrice Prospect.

#### **Highlights**

- Roads and tracks to Myra Camp re-established, camp re-opened and resupplied, annual weed control undertaken with Warddeken Land Management.
- Detailed mapping and radiometric surveys underway at Beatrice Prospect indicates uranium mineralisation extends southwards and not drill tested.
- New outcropping uranium mineralisation identified 2km NNW of Beatrice Prospect.
- Radiometrically anomalous groundwater identified, emanating from Beatrice Fault.
- Extensive regional geological reconnaissance and rock sampling program underway and other radiometric anomalies being checked on Beatrice Project area.
- Sampling for radiogenic isotopes underway, starting on Beatrice Project area.
- All equipment for airborne geophysical surveys in place with flying to commence on Tin Camp Creek and Beatrice Project areas.

Alligator Energy Ltd (Alligator) is pleased to provide an update on recent work undertaken on the Beatrice and Tin Camp Creek Projects.

Access was re-established to the Myra Camp and the camp was re-opened and re-supplied. Annual consultation meetings with the Traditional Owners of Alligator's Project areas and facilitated by the Northern Land Council (NLC) areas were held in April and May. Alligator considers the outcomes of these meetings to have been positive and constructive with valuable input from the Traditional Owners on a number of issues including access options for the Beatrice Project area.

Alligator has also been involved with regional efforts to counter mission grass infestations in the area; providing logistical support for Warddeken Land Management (formed by the

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**ASX Code: AGE** 

Number of Shares:

311.2M Ordinary Shares 16.2M Unlisted Options

**Board of Directors:** 

Mr John Main (Chairman)

Mr Robert Sowerby (CEO, Director)

Mr Paul Dickson (Non Exec. Director)

Mr Peter McIntyre (Non Exec. Director)

Mr Andrew Vigar (Non Exec. Director)



Traditional Owners to assist with the protection and management of their country) and active involvement in weed spraying and seed head removal over the Tin Camp Creek and Beatrice Project areas.

#### Beatrice:

A detailed ground radiometric survey has been undertaken at the *Beatrice Prospect*. In the south of the Prospect it showed a strong radiometric anomaly trending north-south coincident with both magnetic and SAM geophysical features. A soil sampling and portable XRF survey is currently underway covering this radiometric anomaly. Limited rock chip surface sampling at the Beatrice Prospect showed uranium mineralisation, up to 10,870ppm U3O8, associated with a NE trending fault zone. Some previous drill holes were located to allow effectiveness of the drilling testing of the north south trending zone to be assessed.

Reconnaissance mapping and surface rock sampling has been undertaken on radiometric anomalies in close proximity to the *Beatrice Prospect* as part of a systematic survey of radiometric anomalies on the *Beatrice Project* area. To date 5 of 16 high-priority radiometric anomalies have been inspected with two showing uranium mineralisation and worthy of follow up. Also uranium mineralisation has been identified two kilometres NNW of the *Beatrice Prospect* in a N-S trending fault zone that has no associated airborne radiometric anomaly. Uranium values up to 1,934ppm U3O8 were returned. Further work is required to assess the significance of these new discoveries but will not commence until all of the radiometric anomalies have been visited and ranked.

Inspection of radiometric anomalies in the northern part of the *Beatrice Project* area identified radiogenic groundwater emanating from the Beatrice Fault. Water samples were collected and submitted for radiogenic isotope analysis. The presence of anomalous uranium or Radium 226 will indicate the presence of a uranium source.

#### Radiogenic Isotope Sampling:

An extensive radiogenic isotope sampling program that will cover much of the Beatrice and Tin Camp Creek Projects and part of the Mamadawerre Project has commenced. First results from the Beatrice Project showed unclosed anomalous responses. The areas to be sampled are shown on Figure 1, sampling is expected to be completed by the end of June with assays available in July.

Alligator has developed this technique in collaboration with CSIRO. It uses decay isotopes of uranium that have migrated from their source to locate large concealed uranium deposits. It is a key targeting and prioritisation tool which in conjunction with innovative airborne geophysical surveys will be used to select the 2015 drill targets. These two techniques are the keys to discovering the uranium deposits in the approximately 50% of Alligator's project areas covered by sandstone.

#### Detailed Airborne Geophysical Surveys to commence in early June.

Mobilisation of equipment has been completed for extensive and detailed SAM/MMR and Fixed Loop Electromagnetics (FLEM) surveys on both the Beatrice and Tin Camp Creek Project areas. Survey work is expected to commence in the second week of June.



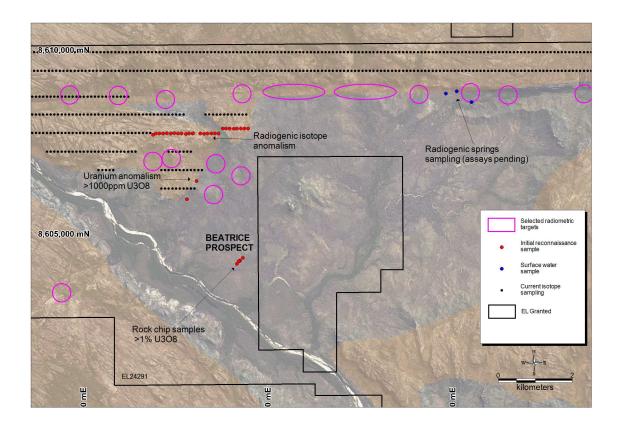


Figure 1: Beatrice Project showing location of rock chip, surface isotope samples and selected radiometric targets.



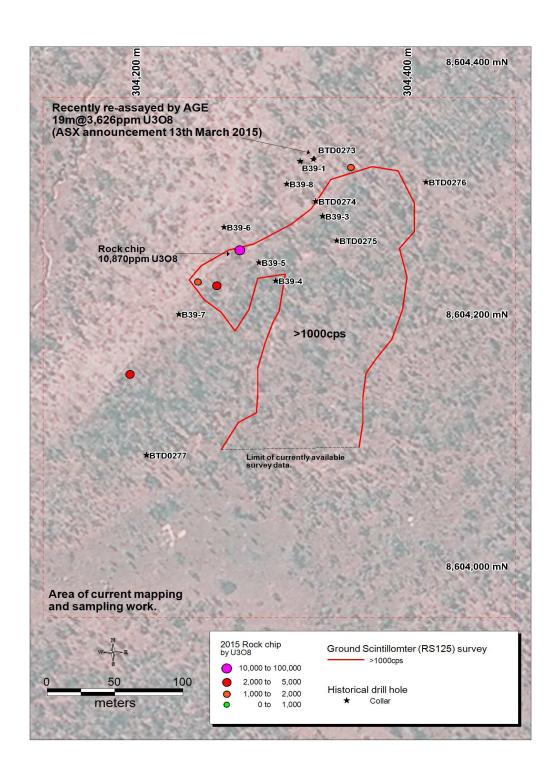


Figure 2: Beatrice Prospect – Current work area showing initial results.

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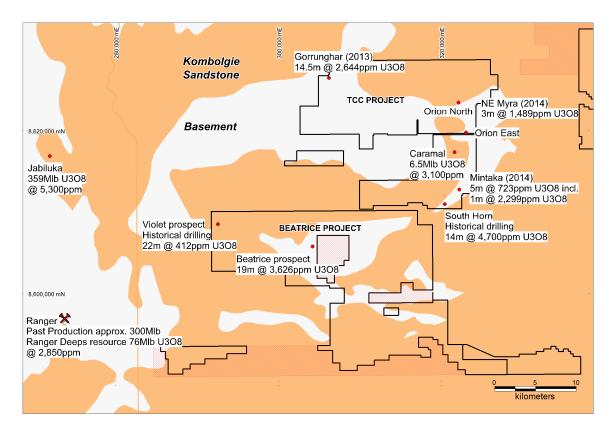


Figure 3: Beatrice JV and TCC Project Areas

Table 1: Rock chip location and assay

DataSet	SampleID	Sample_Type	NAT_Grid_ID	NAT_North	NAT_East	U3O8 ppm
ВТ	19175	Rock Chip	MGA94_53	8607655	301929	0.8253
ВТ	19176	Rock Chip	MGA94_53	8607690	302000	0.8253
ВТ	19177	Rock Chip	MGA94_53	8607690	302100	1.2969
ВТ	19178	Rock Chip	MGA94_53	8607690	302200	0.9432
ВТ	19179	Rock Chip	MGA94_53	8607697	302298	1.0611
ВТ	19180	Rock Chip	MGA94_53	8607688	302407	0.7074
ВТ	19181	Rock Chip	MGA94_53	8607695	302503	1.7685
ВТ	19182	Rock Chip	MGA94_53	8607690	302600	0.9432
ВТ	19183	Rock Chip	MGA94_53	8607690	302700	0.8253
ВТ	19184	Rock Chip	MGA94_53	8607673	302814	1.0611
ВТ	19185	Rock Chip	MGA94_53	8607690	302900	1.0611
ВТ	19186	Rock Chip	MGA94_53	8607690	303000	0.7074

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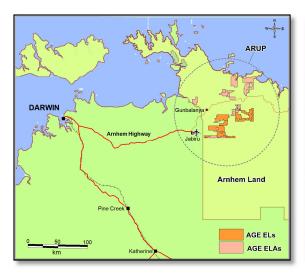


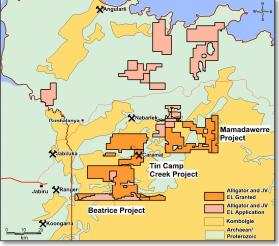
вт	19187	Rock Chip	MGA94_53	8607693	303015	1.0611
ВТ	19188	Rock Chip	MGA94_53	8607690	303200	0.9432
ВТ	19189	Rock Chip	MGA94_53	8607679	303305	1.0611
ВТ	19190	Rock Chip	MGA94_53	8607690	303400	0.9432
ВТ	19191	Rock Chip	MGA94_53	8607690	303500	1.179
ВТ	19192	Rock Chip	MGA94_53	8607690	303600	1.179
ВТ	19193	Rock Chip	MGA94_53	8607690	303700	0.8253
ВТ	19194	Rock Chip	MGA94_53	8607821	303816	0.9432
ВТ	19195	Rock Chip	MGA94_53	8607820	303900	1.5327
ВТ	19196	Rock Chip	MGA94_53	8607820	304000	1.4148
ВТ	19197	Rock Chip	MGA94_53	8607813	304111	1.0611
ВТ	19198	Rock Chip	MGA94_53	8607820	304200	0.7074
ВТ	19199	Rock Chip	MGA94_53	8607820	304300	1.2969
ВТ	19200	Rock Chip	MGA94_53	8607820	304400	0.8253
ВТ	19201	Rock Chip	MGA94_53	8607820	304500	1.179
ВТ	19202	Rock Chip	MGA94_53	8604250	304278	10870.38
ВТ	19203	Rock Chip	MGA94_53	8604222	304261	3761.01
ВТ	19204	Rock Chip	MGA94_53	8604152	304197	4079.34
ВТ	19205	Rock Chip	MGA94_53	8604316	304360	1473.75
ВТ	19206	Rock Chip	MGA94_53	8604225	304247	1721.34
ВТ	19207	Rock Chip	MGA94_53	8605917	302847	307.719
ВТ	19208	Rock Chip	MGA94_53	8606408	303107	1933.56

#### **About Alligator Energy**

Alligator Energy Ltd is an Australian, ASX listed, exploration 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** 

#### FOR FURTHER INFORMATION, PLEASE CONTACT

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## Appendix 1- JORC Code, 2012 Edition – Table 1

## **Exploration Update.**

## **Section 1 Sampling Techniques and Data**

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <li>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.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>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.</li> </ul>	A total of 34 rock chip samples were submitted for analysis.  In-situ rock samples were collected at geologists discretion or as part of a planned grid using geological hammer  The samples obtained are considered to be representative of the intervals from which they were obtained and sampling and sub-sampling techniques were appropriate for the sample type and for exploration purposes  A Radiation Solutions RS-125 spectrometer was used to measure radioactivity (in counts per second – cps) during fieldwork. Samples are selected for laboratory based geological observation and radioactivity (cps) relative to background.
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, facesampling bit or other type, whether core is oriented and if so, by what method, etc).	• N/A.
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> </ul>	• N/A



	<ul> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>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.</li> </ul>	
Logging	<ul> <li>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.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	• N/A
Sub- sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>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.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul> <li>N/A</li> <li>The samples obtained are considered to be representative of the intervals from which they were obtained and sampling and sub-sampling techniques were appropriate for the sample type and for exploration purposes</li> <li>No Field Blanks, duplicates or laboratory prepared standards were inserted into the sampling sequence.</li> <li>Rock chip samples were submitted for analyses to Bureau Veritas' Laboratory in Adelaide. Further sample preparation was undertaken by Bureau Veritas prior to assay. Samples were 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 250 g is taken from the bulk and the residue retained</li> <li>Sample sizes were considered appropriate for the type of material being sampled</li> </ul>
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and</li> </ul>	<ul> <li>A Radiation Solutions RS-125 spectrometer was used to measure radioactivity (in counts per second – cps) in the field. Samples are selected for laboratory assay based geological observation and radioactivity (cps) relative to background.</li> <li>Geochemical assay of representative samples was undertaken at Bureau Veritas' Adelaide laboratory. Uranium analysis was undertaken</li> </ul>



	<ul> <li>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>	utilising ICP-MS following a four acid digest of the pulp sample. This technique is considered a total analysis method and appropriate for the style of mineralisation intersected.  Bureau Veritas include quality control samples routinely to monitor the precision and accuracy of analysis. Acceptable levels of accuracy have been established.
Verification of sampling and assaying	<ul> <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> <li>Assays have not been verified by an external party to date.</li> <li>No twinning of holes has been undertaken</li> <li>Logging, sampling and assay data is recorded and maintained digitally. Physical sample duplicates and core trays are maintained on site.</li> <li>Calculated U3O8 field involves U ppm multiplication factor of 1.179 (i.e 1ppm U = 1.179ppm U3O8)</li> </ul>
Location of data points	<ul> <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> <li>Current sample locations were surveyed using GPS with accuracies of between 1-4 metres</li> <li>All samples have been surveyed on Map Grid of Australia 94 (MGA94 Zone 53)</li> <li>A digital Terrain model (DTM) derived from previous airborne geophysical surveys is used for topographic control. Vertical resolution for the DTM is considered to be within 1 metre.</li> </ul>
Data spacing and distribution	<ul> <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> <li>Sampling was broad spaced for exploratory purposes to test new structural targets and until significant mineralisation is identified is insufficient to define mineral resources.</li> <li>Sample compositing has not been applied</li> </ul>
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have</li> </ul>	Current sampling is at an early exploratory phase nature. Orientation of host structures is discussed in the text.



	introduced a sampling bias, this should be assessed and reported if material.	
Sample security	The measures taken to ensure sample security.	Samples, each contained in zip tied, plastic sample bags housed in sealed 44gallon drums were delivered by Alligator personnel directly to the Bureau Veritas' chosen transportation company, Toll priority/NQX, in Darwin with Chain of Custody documentation.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	No audits have been undertaken for this sampling.

## **Section 2 Reporting of Exploration Results**

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul> <li>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.</li> <li>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.</li> </ul>	All sampling reported in this ASX release was undertaken on 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 resource (inferred+indicated+measured), the JV must commence a NI43-101 compliant Prefeasibility Study (PFS) within 12 months of identifying a qualifying resource.  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.  Following completion of the PFS, Cameco may acquire an additional 2% of the project (for a total of 51%) by paying AGE:  For a total resource of less than 100Mlb U3O8, an amount equal to 2% x Total Resource (lbs U3O8) x \$5/lb U3O8.  For a total resource of greater than 100Mlb U3O8, an amount equal to 2% x Total Resource (lbs U3O8) x \$6/lb

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		U3O8 less the initial PFS payment (\$2 million).
		There are no known existing impediments to operating on any granted tenement within the Beatrice Project area.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	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).
Geology	Deposit type, geological setting and style of mineralisation.	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.
Drill hole Information	<ul> <li>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:         <ul> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>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.</li> </ul>	Sample survey information is provided in the Table 1 of the ASX release. Sample positions were located by GPS with accuracies of 1-4metres. This accuracy is considered sufficient for exploration purposes and for the style of mineralisation targeted.
Data aggregation methods	<ul> <li>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.</li> <li>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</li> </ul>	Uranium content of samples is reported in Table 1 of the ASX release. U308 calculation from U ppm assay using multiplication factor of 1.179



	<ul> <li>such aggregations should be shown in detail.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	
Relationship between mineralisati on widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>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').</li> </ul>	Surface sampling only.
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.	Refer Figure 1,2 and Table 1 of ASX release
Balanced reporting	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	All results of significance have been reported within this report
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.	No significant exploration data has been omitted
Further work	<ul> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological</li> </ul>	A number of targets have been identified on the Beatrice area. The sampling reported on in this release is the first part of what Alligator intends to be a systematic test of these targets. Work is continuing.



interpretations and future drilling areas, provided this information is not commercially sensitive.

#### **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.