



21 August 2014

ASX Announcement

**New tenement granted at Mamadawerre East (EL27251)**

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**Highlights**

- **New tenement granted at Mamadawerre East (EL27251)**
- **EL27251 is adjacent to existing Mamadawerre JV project**
- **Initial field visit identifies visible uranium mineralisation at surface and radiometric anomalism over a strike length of 400 metres**
- **No previous systematic exploration**
- **Follow up surface sampling to be undertaken in September.**

Alligator Energy Ltd is pleased to announce that EL27251 has been granted by the Northern Territory Department of Mines for a period of 6 years. The grant of EL27251 follows the successful negotiation of an Exploration Agreement with the Northern Land Council, the representative body for the Traditional owners of the Land, in accordance with the Aboriginal Land Rights Act (1976). EL27251 covers 62 sq km adjoining the Mamadawerre JV (EL24992) and is held 100% by Northern Prospector Pty Ltd (a 100% owned subsidiary of Alligator Energy Ltd). The adjoining EL24992 is a joint venture between Cameco Australia Pty Ltd (Cameco) and Alligator whereby Alligator may earn up to 90% of the Mamadawerre JV project.

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ASX Code: AGE

Number of Shares:

237M Ordinary Shares  
12.0M Unlisted  
Options

Board of Directors:

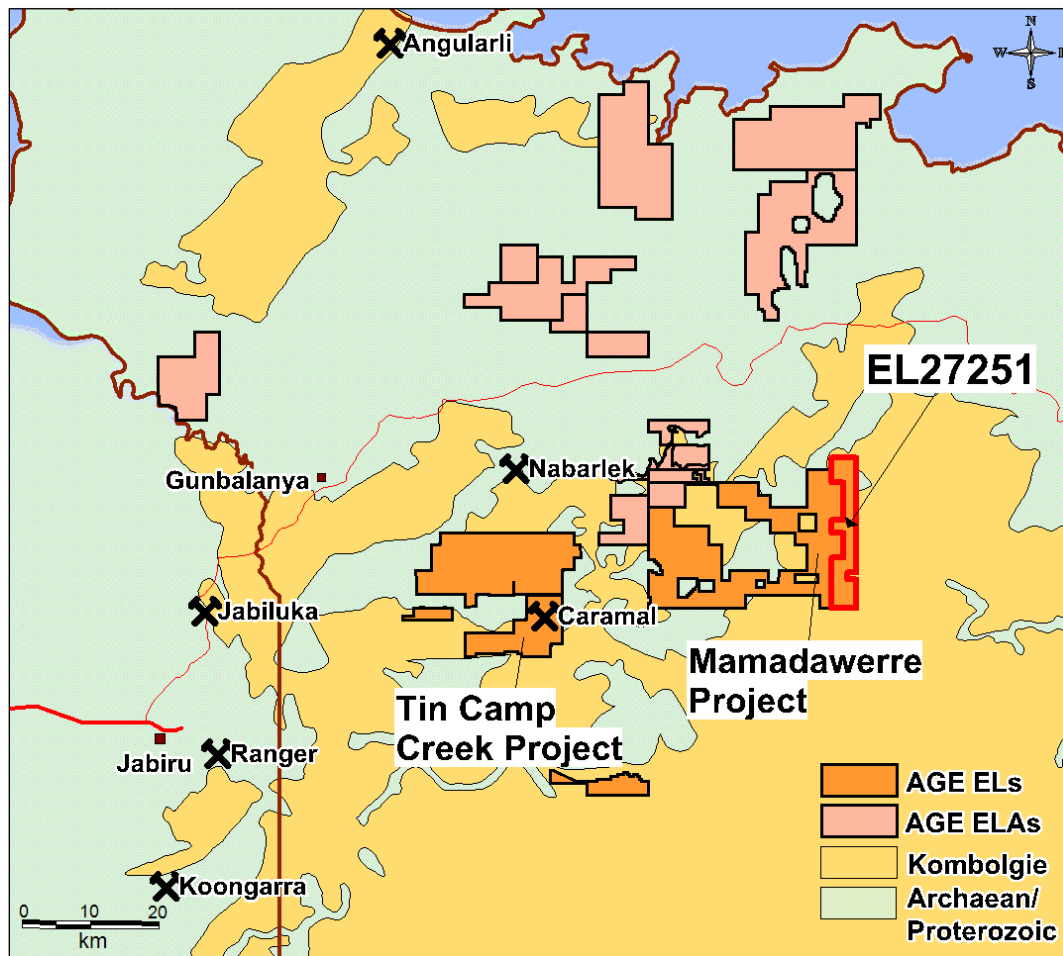
Mr John Main  
(Chairman)

Mr Robert Sowerby  
(CEO, Director)

Mr Paul Dickson  
(Non Exec. Director)

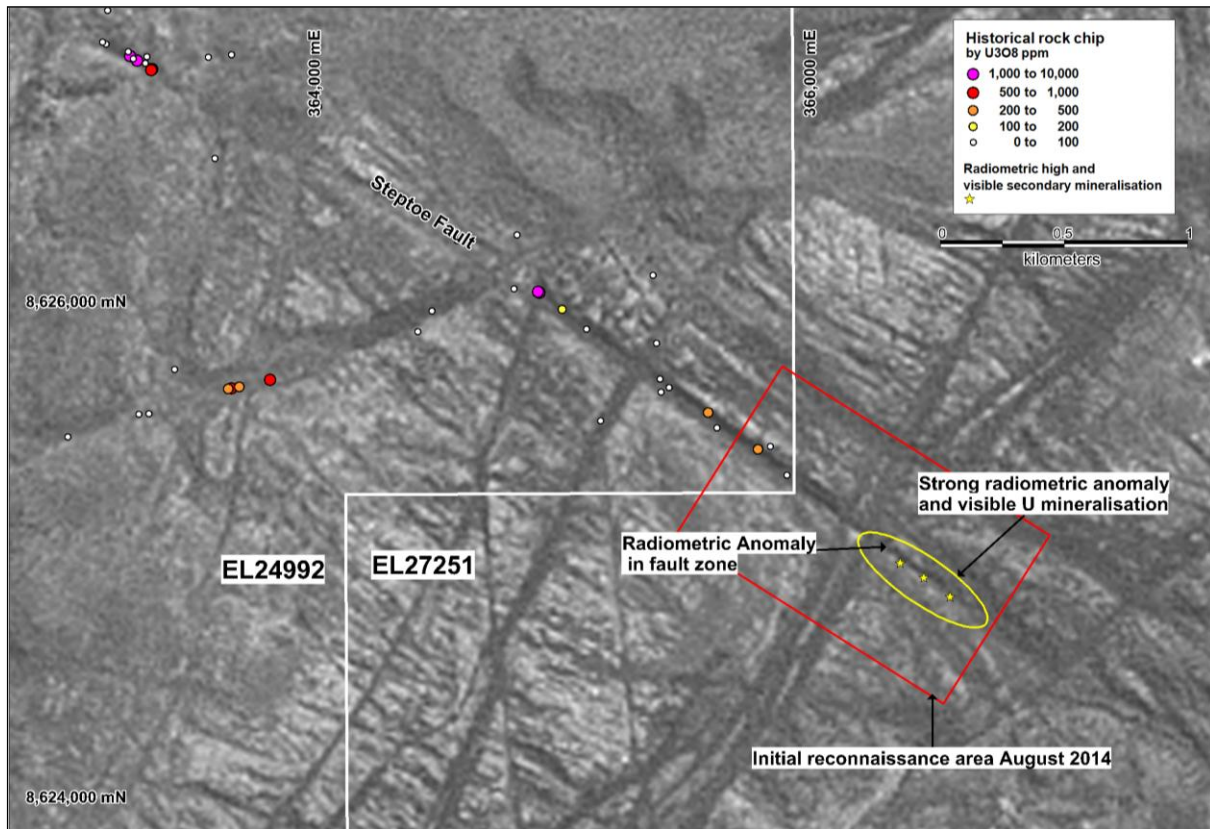
Mr Peter McIntyre  
(Non Exec. Director)

Mr Andrew Vigar  
(Non Exec. Director)



**Figure 1. Tenure status in the Alligator Rivers Uranium Province. Newly granted EL27251 highlighted by red boundary.**

An initial field inspection of EL27251 was undertaken on 16 August 2014 focusing on the prominent NW trending Steptoe Fault which continues onto the adjoining EL24992 (Mamadawerre JV) (Fig 2). The initial traverse has identified uranium mineralisation at surface associated with NW trending fracture zones. A systematic sampling program has not yet been undertaken and therefore grade and continuity of mineralisation is not yet known, however the initial traverse has identified radiometric anomalism over a strike length of approximately 400 metres. Radiometric anomalism varies significantly within this zone from 100cps (counts per second) to in excess of 20,000cps using a Radiation Solutions Inc. RS-111 scintillometer. Strong visible secondary uranium mineralisation was observed in zones having radiometric responses of greater than 10,000cps. Six rock chip samples have been obtained and submitted for laboratory analysis.



**Figure 2. Initial field visit to EL27251 showing location of strong radiometric anomalies and visible secondary uranium mineralisation at surface**

Mineralisation appears to be associated with steeply dipping, relatively narrow fracture zones (1-5 metres width) within Proterozoic aged sandstone. Anomalous zones were also observed associated with flat lying bedding parallel horizons. The extent of mineralisation is obscured by transported material. Parallel fracture zones have been observed by aerial reconnaissance but have not yet been ground checked. Despite the strong radiometric responses detected on the ground, previous regional airborne radiometric surveys show only subtle radiometric responses over the area traversed. This is considered to be due to the presence of alluvial sand and boulders along the Steptoe Fault which forms a narrow steep valley. Equivalent amplitude anomalies are noted along parallel structures and valleys within the tenement area. The mineralisation located on EL27251 occurs along strike from anomalous uranium occurrences on EL24992 (Mamadawerre JV)

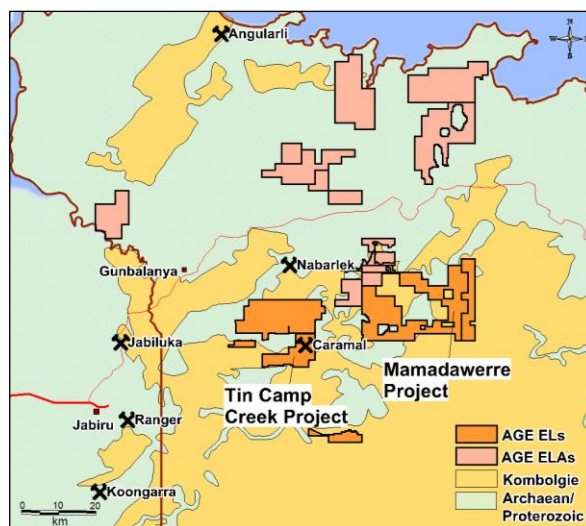
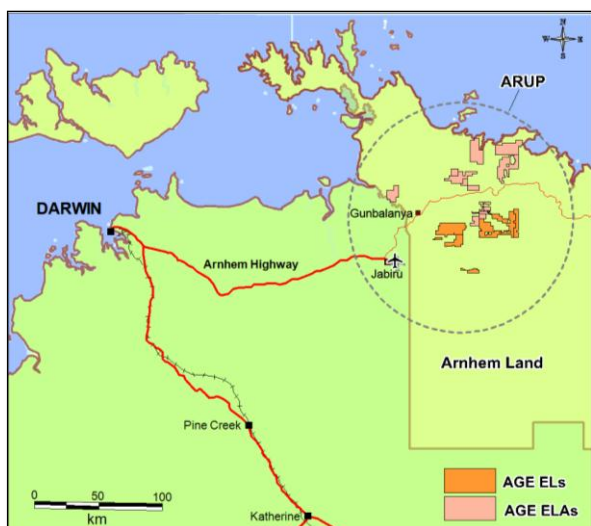
Further work is planned in September to follow up parallel structures and radiometric anomalies on both EL27251 and EL24992 to determine the extent of uranium occurrences and to prioritise areas for more detailed assessment including drill testing. Laboratory results from the recent field work are expected in Mid-September.



## 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 flagship project is the Tin Camp Creek Project. Since listing in February 2011, the company has completed in excess of 15,000m of drilling, defined a maiden high grade, JORC compliant resource at Caramal (6.5Mlb U3O8 at 3100ppm U3O8) and discovered new mineralization at Mintaka and Orion East. High Grade mineralization also occurs at the historic South Horn and Gorrunghar prospect which remain only partially tested.

The company has in excess of 1000km<sup>2</sup> of Exploration Licence applications and is also in Joint Venture with Cameco Australia Pty Ltd for the Mamadawerre Project, also within the Alligator Rivers Uranium Province



### *Project Location Diagrams*

## FOR FURTHER INFORMATION, PLEASE CONTACT

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## JORC Code, 2012 Edition – Table 1

### Mamadawerre Project – Exploration reconnaissance and rock chip sampling – August 21st 2014.

#### Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> <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>	<p>A total of 6 surface rock chip samples of less than 3kg 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>A Radiation Solutions RS-111 spectrometer was used to measure radioactivity (in counts per second – cps) of each sample. Samples were selected for laboratory based geological observation and radioactivity (cps) relative to background.</p>
Drilling techniques	<ul style="list-style-type: none"> <li>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).</li> </ul>	No drilling was undertaken.
Drill sample	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries</li> </ul>	No drilling was undertaken.

<i>recovery</i>	<p><i>and results assessed.</i></p> <ul style="list-style-type: none"> <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>	
<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>	No drilling or logging was undertaken.
<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>	<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>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 Darwin. Further sample preparation was undertaken by Bureau Veritas prior to assay. Rock chip 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 250 g is taken from the bulk and the residue retained. The pulp sample is then delivered to Bureau Veritas' laboratory in Adelaide.</p> <p>Sample sizes were considered appropriate for the type of material being sampled</p>



<i>Quality of assay data and laboratory tests</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 partial or total.</i></li><li><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.</i></li><li><i>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></li></ul>	<p>A Radiation Solutions RS-111 spectrometer was used to measure radioactivity (in counts per second – cps) of each sample. 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>	<ul style="list-style-type: none"><li><i>The verification of significant intersections by either independent or alternative company personnel.</i></li><li><i>The use of twinned holes.</i></li><li><i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></li><li><i>Discuss any adjustment to assay data.</i></li></ul>	<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>	<ul style="list-style-type: none"><li><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></li><li><i>Specification of the grid system used.</i></li><li><i>Quality and adequacy of topographic control.</i></li></ul>	<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>	<ul style="list-style-type: none"><li><i>Data spacing for reporting of Exploration Results.</i></li><li><i>Whether the data spacing and distribution is sufficient to establish</i></li></ul>	<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</p>





	<p><i>the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</i></p> <ul style="list-style-type: none"><li>• <i>Whether sample compositing has been applied.</i></li></ul>	<p>insufficient to define mineral resources.</p> <p>Sample compositing has not been applied</p>
<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>	<p>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.</p> <p>No known sampling bias is known to have been introduced.</p>
<i>Sample security</i>	<ul style="list-style-type: none"><li>• <i>The measures taken to ensure sample security.</i></li></ul>	<p>Samples, each contained in zip tied, plastic sample bags were delivered by Alligator personnel in directly to the Bureau Veritas Laboratory in Darwin with Chain of Custody documentation</p>
<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>	<p>No audits have been undertaken for this phase of drilling</p>

## Section 2 Reporting of Exploration Results

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>	<p>Exploration undertaken in this ASX release was undertaken on the Mamadawerre Project which is comprised of contiguous exploration licences EL27251 and EL24992 in the Northern Territory. EL27251 is held by Northern Prospector (100%), a wholly owned subsidiary of Alligator Energy Ltd (Alligator). EL27251 was granted on 1 August 2014 for a period of 6 years.</p> <p>Alligator Energy Ltd is currently earning into EL24992 which is held by Cameco Australia Pty Ltd. Alligator may earn up to 40% interest of EL24992 by expenditure of \$2.5M at which stage Cameco may elect to contribute to maintain its 60% share or upon Alligator sole funding a cumulative \$10 million within six years, Alligator will be entitled to a further 50% of the tenement for a total interest of 90%).</p>



		<p>Exploration and Mining agreements with the Northern Land Council (<b>NLC</b>) on behalf of traditional owners are in place for these tenements in accordance with the Aboriginal Land Rights Act (1976).</p> <p>There are no known existing impediments to operating on any tenement within the Mamadawerre Project area.</p>
<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>	<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>	<ul style="list-style-type: none"> <li><i>Deposit type, geological setting and style of mineralisation.</i></li> </ul>	<p>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.</p>
<i>Drill hole Information</i>	<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>	<p>No drilling was undertaken</p>
<i>Data aggregation</i>	<ul style="list-style-type: none"> <li><i>In reporting Exploration Results, weighting averaging techniques,</i></li> </ul>	<p>No assay data is provided in this report.</p>



<i>methods</i>	<p>maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</p> <ul style="list-style-type: none"><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 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>	
<i>Relationship between mineralisation widths and intercept lengths</i>	<ul style="list-style-type: none"><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>	No drilling undertaken
<i>Diagrams</i>	<ul style="list-style-type: none"><li>• 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.</li></ul>	Refer Figures 1,2,3 and Table 1
<i>Balanced reporting</i>	<ul style="list-style-type: none"><li>• 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.</li></ul>	All results of significance have been reported within this report
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"><li>• 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,</li></ul>	No significant exploration data has been omitted

	<i>geotechnical and rock characteristics; potential deleterious or contaminating substances.</i>	
<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>	A number of targets have been identified on the Mamadawerre Project area. 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.