

#### 20 November 2014

#### **ASX Announcement**

## Alligator Energy completes 2014 Drilling Campaign

- ➤ Alligator Energy has completed drilling of five priority targets on the Tin Camp Creek UraniumProject in the Northern Territory.
- ➤ A total of 5,965 metres across 34 holes were drilled at five targets in the 2014 drilling campaign.
- Outcomes of 2014 drilling were highly positive with three of five targets tested (North East Myra, Mintaka and Orion South) returning positive results with discovery potential.
- Uranium mineralisation with potential strike length greater than 500 metres identified at North East Myra and Mintaka.
- > Strong potassic alteration + sulphide (pyrite + chalcopyrite) mineralisation intersected over a 30m (from 241m in OBRD14-127) interval whilst drilling a deeper geophysical target at the Mintaka prospect.
- ➤ Alligator has also completed an extensive radiogenic pathfinder sampling program which has defined substantial anomalies in the Orion South and TCC-1 target areas.
- Radiogenic pathfinder technique developed in collaboration with CSIRO, shows potential to identify blind uranium deposits.

Alligator Energy Ltd (ASX: AGE) (Alligator, the Company) is pleased to announce that it has completed its 2014 drilling campaign at the Tin Camp Creek Uranium Project, in the Alligator Rivers Uranium Province in the Northern Territory.

The Company has completed the drill testing of the first five priority targets at the Tin Camp Creek (TCC) Project - the Orion North, North East Myra, Mintaka, Orion South and Orion East prospects. In addition a substantial radiogenic pathfinder survey has been undertaken over sandstone covered areas of the project area, focusing on broad SAM/MMR geophysical anomalies identified earlier in the year.

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**ASX Code: AGE** 

Number of Shares: 304M 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)

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#### Summary of 2014 drill results to date

Alligator considers the outcomes of the 2014 drilling season to be highly positive, with three of five targets tested returning positive results with discovery potential. Furthermore significant advances have been made in the application of refined exploration technologies, including SAM/MMR/TFEM (Total Field Electromagnetic) geophysical surveys and radiogenic pathfinder geochemistry. It is considered these tools will improve the efficiency of exploration in terms of cost effectiveness and improving the strike rate for drill targeting.

In summary, drilling of the first five targets at the TCC Project has achieved the following outcomes:

- A total of 5,965 metres across 34 holes were drilled in the 2014 drilling campaign
- Uranium mineralisation with potential strike length greater than 500 metres identified at North East Myra and Mintaka
- The North East Myra and Mintaka-Orion South trends continue to have discovery potential and will be pursued by further drilling in 2015.
- Initial Drilling at Orion South has identified strong chlorite alteration at the
  unconformity. Subsequent radiogenic pathfinder sampling in the area has identified a
  substantial anomaly in the Orion South-Mintaka area covering a strike length of 5km.
  Lead and uranium isotope ratios are indicative of a uranium source underlying the
  Kombolgie Sandstone.
- Drilling has consistently intersected alteration and anomalous uranium geochemistry when targeting the peak MMR/SAM anomalies confirming this newly applied technique to be a significant step forward in targeting mineralisation in this region.
- Drilling of a deeper Total Field Electromagnetic (TFEM) target has intersected strong potassic alteration and sulphide mineralisation with visible chalcopyrite within prospective lower Cahill Formation rock types.
- Drilling at Orion North and Orion East has downgraded these prospect areas, however the area to the north of Orion North remains untested.



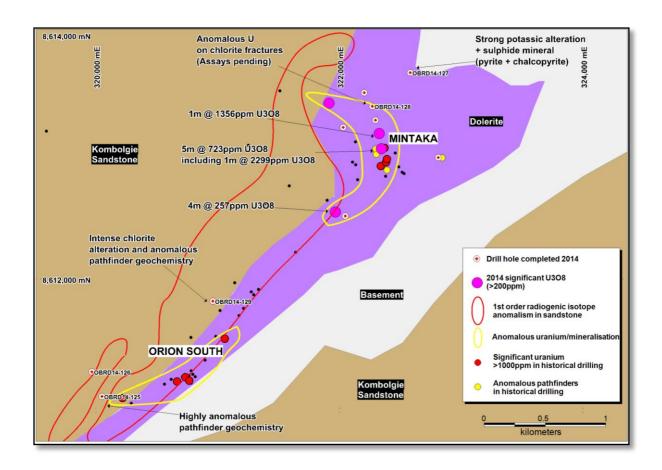


Figure 1: Location map showing completed drilling at Mintaka and Orion South

#### **Recent Drilling Results**

The most recent drilling at Tin Camp Creek was undertaken on the Orion South, Mintaka TFEM geophysical targets and also at Orion East. In total three drill holes have been completed at Orion South, 3 holes at Mintaka (refer ASX announcement, 21 October 2014) and three drill holes at Orion East. Subsequent to this release of 21 October, detailed logging of drill core from these drill holes has been completed. Hole OBRD14-127, which targeted the peak of a TFEM geophysical anomaly approximately 500 metres northeast of the Mintaka prospect, intersected 30 metres of strong potassic alteration with sulphide mineralisation in a lower Cahill Formation Schist. Visible chalcopyrite was associated with the sulphide mineralisation.

This hole is the first hole to have targeted this type of anomaly on the project area. This particular anomaly has dimensions of approximately 500 x 500m. A 50 metre interval of the drill hole has been submitted for base metal and gold analysis. No significant uranium was intersected in this drill hole, however the rock type is considered to be an ideal host rock for uranium mineralisation. Identifying the intersection of this rock unit with Mintaka uranium mineralisation structures will be a priority for follow up drilling on this target area.



#### **Orion East Drilling**

Three drill holes (OBR131, 132 and 133) have been completed as an initial test of the Orion East prospect. Previous ground work in this area identified outcropping uranium mineralisation associated with a north-south trending silicified breccia. Three drill holes were completed to test the northern continuation of this structure and associated geophysical anomalies.

No significant uranium was intersected however the silica breccia structure was intersected as anticipated. Weakly anomalous uranium was intersected in OBR-132 (2m @145ppm U308 from 75m). It is considered the host rock in this area is not favourable for uranium mineralisation. Consideration will be given to pursuing the silica breccia to the south of the outcropping occurrence after the results of surface radiogenic pathfinder surveys have been completed in this area.

#### **Radiogenic Pathfinder Survey**

The Company has also undertaken an extensive radiogenic isotope sampling program over the Tin Camp Creek project area, focusing on the Kombolgie Sandstone covered areas and historic drill core. Results from this survey to date have identified substantial radiogenic lead anomalies in the Orion South-Mintaka area and also in the north of the project at the TCC-1 target area (refer Figure 2).

These anomalies are considered to be indicative of a deeper uranium source underlying the sandstone. The objective of the survey has been to identify and trace radiogenic pathfinder anomalies related to concealed uranium deposits. It is considered this work has the potential to be a significant step forward in the exploration of concealed deposits in the region and is an extension of findings from Alligator's Research and Development collaboration project with CSIRO.

A substantial lead (Pb) isotope anomaly has been identified in the **Orion South-Mintaka** area covering a strike length of 5km over the Kombolgie Sandstone. Pb206/Pb204 and U238/Pb206 ratios are strongly indicative of excess radiogenic lead derived from a uranium source. Pb206/Pb208 and Pb207/Pb206 ratios also suggest a uranium source. As a comparison, this anomaly is substantially larger than that which occurs in the Caramal area.

Regional sampling has also identified a 4km long anomalous zone at the Tin Camp Creek-1 target area (TCC 1 on Figure 2) in the northern part of the tenement area and is coincident with a prominent SAM geophysical anomaly. Previous sampling of ground waters in the northern part of the tenement has identified anomalous Ra226 over a broad area. This region has strong radiogenic signatures indicative of a concealed uranium source and will be a focus of further follow up sampling in the coming months.



While the use of lead isotopes has been used to a limited extent in uranium exploration, the particular methodologies being applied are considered by Alligator to be a significant refinement of both the technique and scope. Previous research has identified significant lead isotope halos surrounding the Cigar Lake deposit and Jabiluka deposit (Holk et al., 2003). The recent survey has also defined a radiogenic isotope signature in barren sandstone overlying the Caramal Deposit and its broader alteration system providing confidence the method is detecting anomalies related to uranium mineralisation. A more detailed discussion of the method is provided in **Appendix 2** of this release.

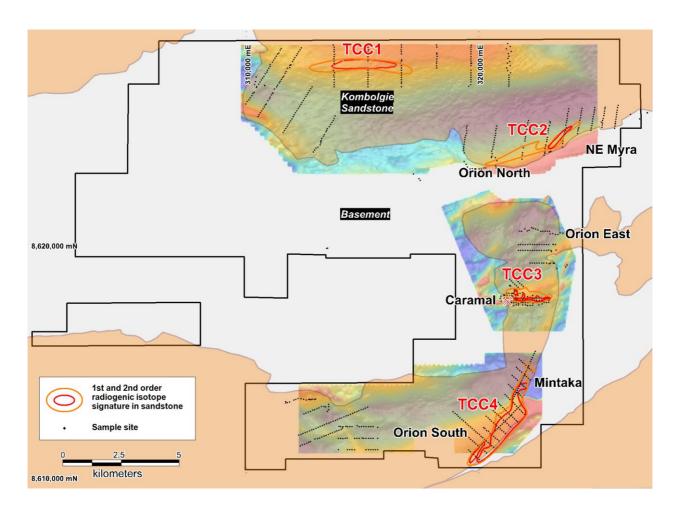


Figure 2: Tin Camp Creek Project - Surface Sampling and Radiogenic Isotope anomalies on SAM Geophysics image.



#### **Ongoing Program**

A substantial body of data has been obtained during the 2014 field season within a relatively short timeframe. In addition, further assay results are awaited for Mintaka and South Horn core drilling. During the next 6 weeks, a more detailed assessment of this data will be undertaken to refine follow up drilling of the Mintaka, Orion South and NE Myra targets. In addition, more detailed geophysical and geochemical surveys will be planned to pursue the TCC-1 target area in the New Year. Prioritisation of follow up drilling will take into consideration targets generated by ongoing work on the Mamdawerre Project area. Alligator also expects to finalise the Beatrice JV agreement in the coming weeks. Further advice on the forward work program will be provided in December.



Hole ID	Prospect	MGA 94 Easting	MGA 94 Northing	Azimuth (Mag)	Dip	From	Length	Grade (U3O8 ppm)	
OBR14101		322675	8623368	357	75		No Significant	Uranium mineralisation	
OBN14101		322073	8623368	357	75	lov	v level uranium	anomalism up to 169ppm	
OBR14102		322677	8623247	357	75		No Significant	Uranium mineralisation	
OBR14103		322696	8623446	357	80	No Significant Uranium mineralisation		Uranium mineralisation	
OBR14104	North	323092	8623416	340	75	No Significant Uranium mineralisation			
OBR14105	Orion	323653	8624083	360	75	46	1	267	
OBN14103		323033			/3	94	1	228	
OBR14106		323640	8624040	360	No Significant Uranium mineralisation				
OBR14107	-	323616	8623818	360	75	lo		n anomalism up to 83ppm Uranium mineralisation	
						02	1		
OBR14108	_	325367	8624706	357	75	93	2	1005	
OBR14109	_	325354	8624628	357	60			Jranium mineralisation.	
OBR14110	_	325895	8624832	357	60	55	1	315	
OBR14111		325926	8624827	357	60	60	3	1489	
	North East					67	1	430	
OBR14112	Myra	325927	8624690	357	70		_	Uranium mineralisation	
OBR14113		325924	8624924	N/A	90	76	1	250	
OBR14114		324898	8624648	357	75	No Significant Uranium mineralisation			
	_					lov	v level uranium	anomalism up to 100ppm	
OBR14115		324906	8624574	357	75		No Significant	Uranium mineralisation	
OBR14116		321915	15 8613445	335	70	49	1	264	
						54	1	297	
OBR14117		322030	8613244	335	75		No signific	ant mineralisation	
OBR14118		322204	8613530	335	75		No signific	ant mineralisation	
OBR14119		322296 8613304	335	75		No signific	ant mineralisation		
OBN14119		322290	0013304	<b>333</b>	/3	low level anomalism up to 119ppm			
	Mintaka						38	5	723
OBR14120		322343 8613069 Mintaka	8613069	9 340	75		including	g 1m @ 2299ppm	
						55	1	220	
OBR14121		321968	8612550	290	75	83	4	257	
		322326 8613193	3312330	230		86	1	1356	
OBR14122			160	60	97	4	253		
						165	1	215	
OBR14123	1	322048	8612517	290	60		1	cant mineralisation	
OBR14124	1	322810	8612996	153	60			cant mineralisation	
OBRD14127 (RC	1	322581	8613694	215	75				
Precollar)		322301	3013034	213	,,,		No signific	ant mineralisation	

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		1	1	1	1	
OBRD14127 (DD Tail)						No significant radioactivity, visible pyrite+chalcopyrite mineralisation, assays pending
OBRD14128 (RC Precollar) OBRD14128 (DD		322270	8613418	160	75	No significant mineralisation
Tail)						No significant radioactivity, assays pending
OBR14130		322213	8613207	360	90	No significant mineralisation
OBRD14125 (RC Precollar) OBRD14125 (DD		320052	8611035	315	65	No significant mineralisation., Strongly anomalous Pb isotope ratios in PreCollar assays.
Tail)						No significant radioactivity, assays pending
OBRD14126 (RC Precollar) OBRD14126 (DD	Orion South	319967	8611236	315	65	No significant mineralisation
Tail)						No significant radioactivity, assays pending
OBRD14129 (RC Precollar) OBRD14129 (DD Tail)		320960	8611818	315	80	No significant mineralisation. Strongly anomalous Pb isotope ratios in PreCollar assays.  No significant radioactivity, assays pending
OBR14131		322969	8619684	90	70	No significant mineralisation
OBR14132	Orion East	323397	8619642	270	60	No significant mineralisation low level anomalism up to 164ppm
OBR14133		323347	8619643	270	60	No significant mineralisation

Table 1: Laboratory Assay results Summary



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

### Tin Camp Creek Project – Phase 1 Drilling Results – 20 November 2014

#### **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 328 Reverse Circulation (RC) Spear samples of 1 metre interval drill samples were submitted for analysis.  RC samples were collected in 1 metre intervals from bulk riffle split samples collected in plastic bags at the cyclone. A 3kg sample was subsequently obtained for assay from the riffle split sample by spear sampling.  The samples obtained are considered to be representative of the intervals from which they were obtained and sampling and subsampling techniques were appropriate for the sample type and for exploration purposes  A Radiation Solutions RS125 spectrometer was used to measure radioactivity (in counts per second – cps) of each bulk 1m sample. Samples are selected for laboratory based geological observation and radioactivity (cps) relative to background.
Drilling techniques	Drill type (eg core, reverse circulation, openhole 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).	All drilling was undertaken using Reverse Circulation drilling with face sampling bit.

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## Drill sample recovery

- Method of recording and assessing core and chip sample recoveries and results assessed.
- Measures taken to maximise sample recovery and ensure representative nature of the samples.
- Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.

The project geologist remains at the rig during RC drilling activities, with logging occurring as drilled. RC Samples were collected from the cyclone via a riffle splitter and transferred directly to a plastic sample bag for each 1 metre interval. For exploration drilling sample recovery quality is monitored visually by the geologist by volume of returned sample. The option to convert to diamond drilling was available should the sample recovery have been compromised by excessive water, Sample recovery is maximised during RC drilling by use of face sampling hammers. Sample recoveries were considered to be excellent and no significant sample bias is considered to have occurred.

#### Logging

- Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.
- Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.
- The total length and percentage of the relevant intersections logged.
- All core and chip samples are logged systematically recording lithology, alteration and mineralisation. Drilling was undertaken for exploratory purposes, however logging has been undertaken to a level sufficient to support future Mineral Resource estimation, mining studies and metallurgical studies.
- Lithological logging is qualitative.
- All (100%) drill intervals have been logged.

#### Subsamplin g techniques and sample preparation

- If core, whether cut or sawn and whether quarter, half or all core taken.
- If noncore, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.
- For all sample types, the nature, quality and appropriateness of the sample preparation technique.
- Quality control procedures adopted for all subsampling stages to maximise representivity of samples.
- Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/secondhalf sampling.
- Whether sample sizes are appropriate to the grain size of the material being sampled.

- RC samples were collected in 1 metre intervals from riffle split drill cuttings collected at the cyclone. A 3kg sample was subsequently obtained for assay from the riffle split sample by spear sampling.
- The samples obtained are considered to be representative of the intervals from which they were obtained and sampling and subsampling techniques were appropriate for the sample type and for exploration purposes
- Field Blanks, duplicates and laboratory prepared standards are inserted into the sampling sequence. For exploration drilling, Blanks and standards are inserted whenever uranium mineralization is encountered as follows:
  - Blank sample of unmineralised material (immediately following a mineralised sample) 1 in each hole intersecting a mineralized zone
  - ➤ Mineralised duplicate in each drill hole intersection of a mineralized zone.
  - Certified standard for each drill hole intersecting a mineralized zone.
  - Sampling of barren material either side of mineralised zones.

RC samples were submitted for analyses to Bureau Veritas' Laboratory in Darwin. Further sample preparation was undertaken by Bureau Veritas prior to assay. Drill

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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. The pulp sample is then delivered to Bureau Veritas' laboratory in Adelaide.

Sample sizes were considered appropriate for the type of material being sampled

Quality of assay data and laboratory tests

- The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.
- For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.
- Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.

- A Radiation Solutions RS125 spectrometer was used to measure radioactivity (in counts per second – cps) of each bulk 1m sample. Samples are selected for laboratory assay based geological observation and radioactivity (cps) relative to background.
- Geochemical assay of representative samples was undertaken at Bureau Veritas' Adelaide laboratory. Uranium analysis was undertaken utilising ICPMS 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.
- Pb isotope ratios are calculated from raw count rates obtained via ICPMS. Repeatbility of results has been monitored by comparing results from equivalent samples submitted in different batches.
- Field Standards, blanks and duplicates were included in the samples submitted to the laboratory; in addition Bureau Veritas also 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

- The verification of significant intersections by either independent or alternative company personnel.
- The use of twinned holes.
- Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.
- Discuss any adjustment to assay data.
- Intersections reported for this phase of drilling have not been verified by an external party to date.
- No twinning of holes has been undertaken
- Logging, sampling and assay data is recorded and maintained digitally. Physical sample duplicates and core trays are maintained on site.
- No adjustment of assay data is required

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Location of data points	<ul> <li>Accuracy and quality of surveys used to locate drill holes (collar and downhole 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 drill hole locations were surveyed using GPS with accuracies of between 14 metres</li> <li>All drill holes 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>Drilling 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.</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 introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	<ul> <li>Current drilling is of an exploratory nature. There is generally insufficient data in the areas drilled during this phase of work to determine the orientation of host structures.</li> <li>No known sampling bias is known to have been introduced by the drilling orientation.</li> </ul>
Sample security	The measures taken to ensure sample security.	Samples, each contained in zip tied, plastic sample bags were delivered by Alligator personnel in sealed 200 litre drums directly to the Bureau Veritas Laboratory in Darwin with Chain of Custody documentation
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	<ul> <li>No audits have been undertaken for this phase of drilling</li> </ul>

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

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.	All drilling reported in this ASX release was undertaken on 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 were recently renewed by the Northern Territory Department of Mines

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	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.	and Energy for a further 2 year period (until May 2015 whereby AGE may apply for additional 2 year renewal periods) 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).  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.  There are no known existing impediments to operating on any tenement within the Tin Camp Creek 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 (19701972), Afmeco (19962001) and Cameco Australia Pty Ltd (20012010).
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 metasediments of the lowerProterozoic 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>	Drill hole survey information is provided in the Table 1 of the ASX release. Collar positions were located by GPS with accuracies of 14metres. This accuracy is considered sufficient for exploration purposes and for the style of mineralisation targeted. A multi shot down hole camera was used at 50 metre intervals to monitor deviation from planned dip in drill holes.
Data aggregation	In reporting Exploration Results, weighting averaging techniques,	Uranium drill hole intercepts reported in Table 1 of the ASX release were aggregated using a lower cutoff of 200ppm

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methods	<ul> <li>maximum and/or minimum grade truncations (eg cutting of high grades) and cutoff 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 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>	U3O8. Internal waste (<200ppm U3O8) were included if less than 2m in length.
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>	The relationship between intercept lengths and mineralisation widths is uncertain for results reported in this release as the drilling is targeting new areas and the structural relationships of mineralisation have been shown to be complex in the broader region. Consequently, results are reported as drilled intercept lengths.
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 1and 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,	No significant exploration data has been omitted

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	geotechnical and rock characteristics; potential deleterious or contaminating substances.	
Further work	<ul> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or largescale stepout drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	A number of targets have been identified on the Tin Camp Creek Project area. The drilling 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.

## Appendix 2 Supplementary background information on Radiogenic Isotope Surveys (Radiogenic Pathfinder)

A key characteristic of uranium is its radiogenic nature, resulting in decay products such as radon (a gas), radium 226 and finally stable Pb isotopes. These isotopes are unique to uranium. For example Pb206 and Pb207 are unique to Uranium, in other words they can only be sourced from uranium. The differing characteristics of these daughter products should result in a halo around a significant uranium deposit. In the case of the Alligator Rivers Uranium Province, the main mineralisation event was approximately 1.6 billion years ago, an extensive time period for migration of decay products.

In determining the significance of anomalies, Alligator considers Pb206/Pb207 vs Pb208/Pb207 ratios and Pb206/Pb204 vs U238/Pb206 ratios. Each set of ratios provides a measure of the level of radiogenic lead derived from a specific uranium source. Pb206/Pb207 vs Pb208/Pb207 ratios are utilised to screen out effects of thorium and background crustal responses. Pb206/Pb204 vs U238/Pb206 ratios are used to calculate where excess radiogenic lead is present taking into consideration the age of the host rock. In the case of Pb206/Pb207 vs Pb208/Pb207 ratios, as a comparison, global averages for sediments and dust are of the order of 0.25 (Bollhofer, 2003). First order anomalies are defined by AGE to have Pb206/Pb207 vs Pb208/Pb207 ratios of greater than 1 and have Pb206/Pb204 vs U238/Pb206 ratios indicating excess radiogenic Pb. Additionally Pb207/206 ratios <0.35 and Pb206/204 ratios > 80 are considered significant.

#### References

Bollhoffer A., 2003, *The use of Pb isotopes for research and monitoring the environmental impacts of uranium mining*. Internal Report 462, Supervising Scientist Division, Darwin.

Holk G.J., Kyser K.J., Chipley D,. Hiatt E.E., Marlatt J., 2003, *Mobile Phisotopes in Proterozoic sedimentary basins as guides for exploration of uranium deposits*. Journal of Geochemical Exploration 80 (2003) 297–320.

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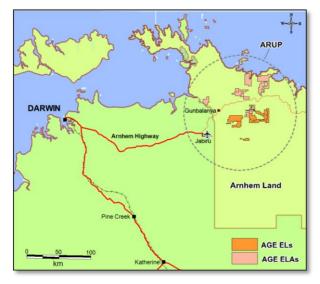
#### **Competent Persons Statement**

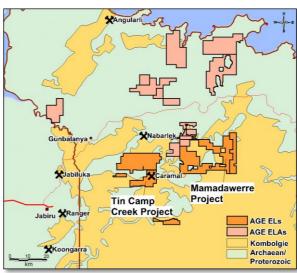
Information in this report is based on current and historic Exploration Results compiled by Mr Rob Sowerby who is a Member of the Australasian Institute of Geoscientists. Mr Sowerby is CEO and Director of Alligator Energy Ltd, and has sufficient experience which is relevant to the style of mineralisation 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, 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 U308 at 3100ppm U308) 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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