



11 June 2014

ASX Announcement

## **Alligator Energy commences 2014 Field Season at Tin Camp Creek Uranium Project**

### **Highlights**

- **Alligator Energy has commenced its 2014 field season at the Tin Camp Creek Uranium Project.**
- **Geophysical surveys on primary targets to commence this month to define drill targets using innovative application of SAM/TFMMR techniques to explore under cover rocks.**
- **Drilling of priority targets to commence immediately following geophysical surveys.**
- **Company plans to drill five priority targets considered to have favourable characteristics for hosting large uranium deposits, of >100Mlb U3O8.**
- **Stage 1 of CSIRO collaboration research project completed in May, highlighting new techniques for targeting uranium mineralisation.**
- **Northern Territory Geological Survey to co-fund up to \$147,000 for drilling on the Mamadawerre Project area and the geophysical surveys at Tin Camp Creek.**

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

Access to the Myra Camp on the Tin Camp Creek (TCC) project area has been re-established and road access for drill rig access is currently being re-established. Access to date has been limited due to heavy rain in April and subsequent elevated river levels.

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ASX Code: AGE

Number of Shares:

206M Ordinary Shares  
15.2M 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)

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Consistent with the Company's strategy, Alligator plans to drill test five priority target areas during 2014, each of which is considered to have favorable geological, geochemical and spatial characteristics for hosting large uranium deposits (>100Mlb U3O8 ).

### **Phase 1 Geophysics**

A helicopter-supported Sub-Audio Magnetics/MMR geophysical survey will be undertaken during late June/Early July. The survey will cover a significant part of the sandstone covered areas of the TCC project area, including the primary target areas of **Mintaka, Orion North, Orion East, Northeast Myra** and **South Orion**.

The Company, in conjunction with survey company, GAP Geophysics, will apply a configuration designed to maximize signal response from basement rocks underlying the Kombolgie Sandstone. The ability to target through the Kombolgie Sandstone has been a key challenge for previous explorers in the Alligator Rivers Uranium Province, and exploration has historically been limited in this area.

In contrast, significant exploration has been undertaken in the equivalent Athabasca Basin, in Canada, to depths of up to 800 metres. This has resulted in the discovery of numerous high grade uranium deposits including the Cigar Lake and McArthur River Deposits. This exploration success was due in large part, to the effectiveness of the Electro-Magnetic Survey technique in this type of terrain.

In the Alligator Rivers Uranium Province, mineralisation shows different lithological and alteration associations, with graphite being less prevalent. In addition the overlying Kombolgie Sandstone is generally more resistive than its Athabasca counterpart. Following a detailed review, the Company considers that SAM/MMR techniques (using a specific configuration that maximizes the response from targeted basement rocks) are the most effective for the specific characteristics of the deposits in the region.

If this specific configuration of the survey technique is successful, it will provide a significant advance in the Company's exploration under the Kombolgie Sandstone. The survey is expected to be completed, and data available for drill targeting, within two to three weeks of commencement.

### **Phase 1 Drilling**

Drilling is planned to commence immediately following completion of the SAM geophysical survey.

Priority targets for the 2014 field season are the Mintaka, Orion East, Orion North, North East Myra and Orion South prospect areas (see Figure 2). These targets have been selected on the

basis of having favourable host rocks, structure and known presence of strong uranium and pathfinder element anomalism and will be further prioritized by the results of the SAM survey.

### **Stage 1 of CSIRO Collaboration Research Project Complete**

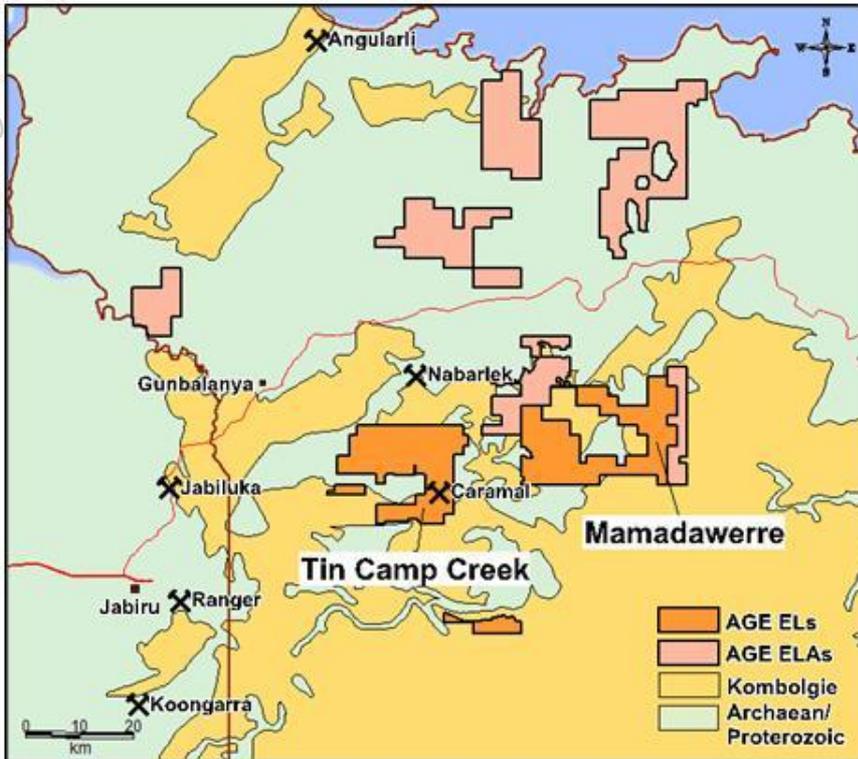
The Company also advises that Stage 1 of the CSIRO collaboration research project has been completed. The objective of the project was to develop and trial geochemical and geophysical techniques to improve exploration targeting for unconformity style uranium mineralisation in the ARUP.

The study has so far provided important insights into the nature of alteration and geochemical halos surrounding the Caramal and South Horn areas. The study indicates the potential to recognise halos up to 1km from mineralisation, using a combination of geochemical and hyper-spectral analysis. The results are considered proprietary knowledge of Alligator, but in broad terms they indicate that specific geochemical and isotopic signatures define the alteration surrounding uranium mineralisation, which provides a larger target footprint for drill testing under cover rocks.

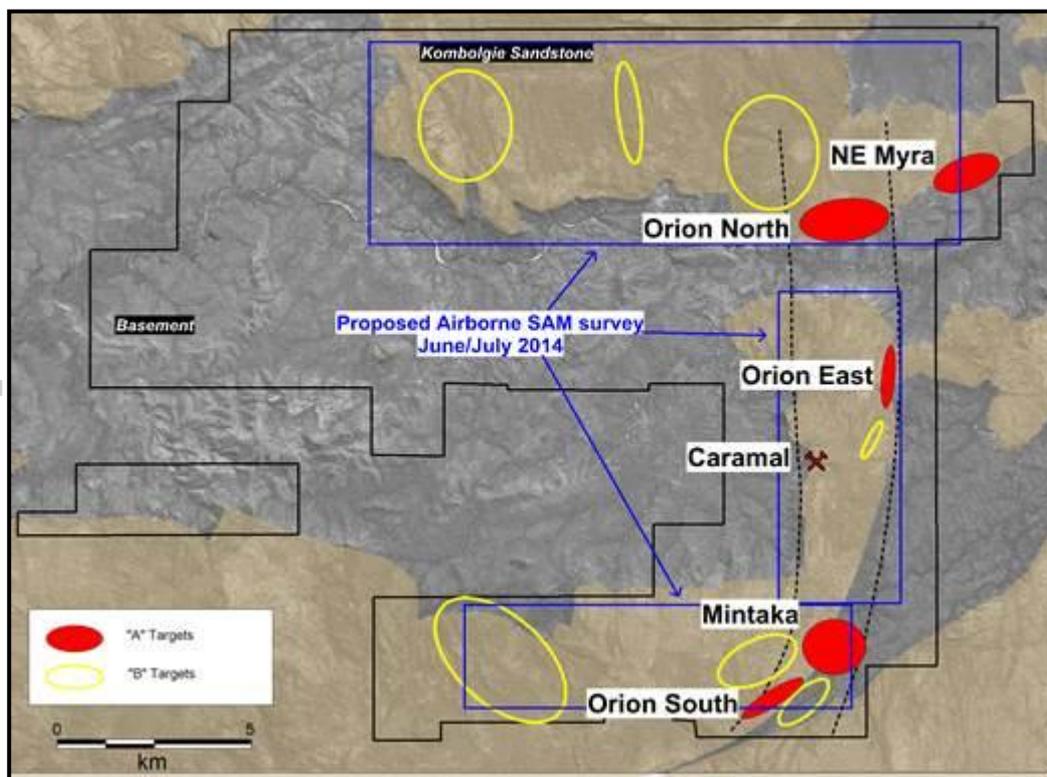
The Company plans expand the scope of the research project to trial the newly developed techniques from the CSIRO collaboration project to its 2014 drilling program, and will also re-sample and re-analyze historic drill core from the project area.

### **Northern Territory Geological Survey to co-fund Drilling and Geophysics**

The Northern Territory Geological Survey (NTGS) has agreed co-funding up to a total of \$147,000 for drilling at the Mamadawerre Project and the airborne Sub Audio Magnetics geophysical survey at the Tin Camp Creek project area. The co-funding arrangement is part of the NTGS Collaborations Program which provides co-funding assistance to successful applicants for selected exploration drilling and geophysical acquisition projects in greenfields areas where there is a paucity of geological information.



**Figure 1- Project Location**



**Figure 2- Tin Camp Creek Drill Target Locations**

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## 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

### FOR FURTHER INFORMATION, PLEASE CONTACT

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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.