



**Breakaway  
Research**

4<sup>th</sup> October 2011

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#### Company Information

ASX Code	AGE
Share Price A\$	0.09
Ord Shares	155.6m
Options	21.2m
Market Cap A\$	14.6m
Cash A\$	12.0m
Total Debt	-

#### Board of Directors

Chairman	Denis Gately
Chief Executive Officer	Robert Sowerby
Non-executive Director	Leigh Curyer
Non-executive Director	Paul Dickson
Non-executive Director	Andrew Vigar

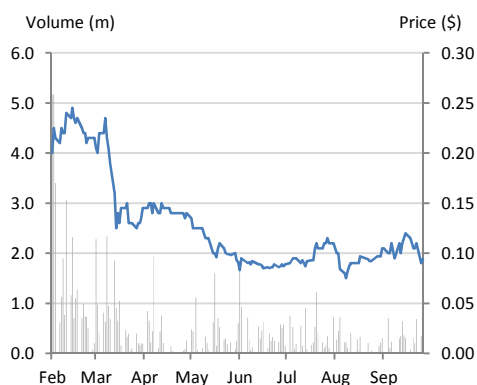
#### Substantial Shareholders

Macquarie Bank	11.3%
Lagoon Creek Resources P/L	4.5%
Robert Sowerby	3.6%
MO U Investments Co Ltd	2.6%

#### Company Details

Address	Suite 1 36 Agnes Street Fortitude Valley, QLD, 4006
Phone	+617 3852 4712
Web	www.alligatorenergy.com.au

#### Price Chart: Feb 2011 – Sept 2011



Source: Bloomberg

## Alligator Energy (AGE)

*Active Northern Territory uranium explorer with an advanced acreage position in one of the world's most prospective uranium provinces*

**Recommendation: Speculative BUY**

#### Key Points

- **Strategic exposure to the world-class Alligator River Uranium Province (ARUP) in the Northern Territory**
- **One of the world's top locations for large, high-grade uranium deposits (along with Canada's Athabasca Basin)**
- **ARUP hosts nearly 1 billion pounds of high-grade uranium resources and past production**
- **The region hosts the Ranger uranium mine and the Jabiluka deposit**
- **High-grade uranium mineralisation has been detected on Alligator's granted Tin Camp Creek tenements**
- **The project area and wider region remain under-explored due to historic access impediments**
- **The Northern Territory Government encourages responsible uranium exploration and provides for uranium mining**

*Alligator Energy is a cashed-up, aggressive uranium exploration company with a large strategic acreage position in one of the world's best uranium provinces, the Northern Territory's Alligator River region. The company derives its name from this highly prospective uranium address.*

*The company's sole focus is the search for uranium mineralisation in the Alligator River province. The reasons are simple: firstly, it's a proven uranium location, hosting large and high-grade deposits; and secondly the Northern Territory welcomes uranium exploration and development.*

#### Company Overview

Alligator Energy (ASX: AGE) is a uranium exploration company focused on the highly prospective Alligator River Uranium Province in Australia's Northern Territory. The region has a rich uranium production history dating back to the 1970s. The company listed on the ASX in February 2011.

Alligator has implemented an active strategy to assemble exploration assets in the Alligator River Province. Through the purchase of the Tin Camp Creek Project from Cameco and the acquisition of wholly-owned subsidiary, Northern Prospector, Alligator has secured a prospective land holding in the region and a potential pipeline of quality projects.

In total Alligator holds 283 sq km under three granted tenements and 415 sq km under eleven tenement applications. With \$12m cash on hand, the company is able to aggressively explore its acreage. The Tin Camp Creek Project area has excellent potential for the discovery of blind deposits.



## **Investment Review**

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*Alligator undertook a successful \$15m IPO in late 2010*

Alligator listed on the Australian Securities Exchange in February 2011 after a successful fully-subscribed IPO that raised the full subscription amount of \$15 million via the issue of 75 million Shares at \$0.20.

*Solely focused on uranium exploration*

Alligator Energy's primary focus and major attraction is its strategic exposure to a highly prospective uranium exploration tenement package situated within the world-class Alligator River Uranium Province (ARUP) in Arnhem Land, Northern Territory.

*The Alligator River uranium province is one of the world's most prolific*

Alongside the Athabasca Basin in Canada, the Alligator River province ranks as one of the world's premier uranium addresses in terms of hosting large, high-grade deposits. In fact the province hosts nearly 1 billion pounds of high-grade uranium resources and past production, including the operating Ranger mine and the nearby Jabiluka deposit.

*The region is vastly underexplored*

The Alligator River region however has had significantly less exploration attention than the geologically-similar Athabasca Basin, which continues to produce new discoveries. The likelihood of further significant discoveries within the ARUP though we believe is extremely good.

*The Tin Camp Creek tenements were purchased from established uranium player Cameco*

Alligator purchased its flagship Tin Camp Creek tenements from established uranium producer, Cameco Australia Pty Ltd, a subsidiary of Canada's Cameco. The project contains immediate drill targets, both to extend and validate known zones of uranium mineralisation, and to systematically explore prospects that have untested radiometric anomalies and/or limited previous drilling with positive results.

*High-grade mineralisation has been identified*

High-grade uranium mineralisation has previously been intersected at a number of prospects on Alligator's granted tenements, including the historic Caramal deposit. Some of the best high-grade intersections include 21 metres @ 0.5 %  $U_3O_8$  and 22.7 metres @ 0.38%  $U_3O_8$  at Caramal, 15 metres @ 0.47%  $U_3O_8$  at South Horn and 8.6 metres @ 0.33%  $U_3O_8$  at Gorrunghar.

*The geology is highly prospective*

Encouragingly from an exploration perspective, rocks of the Cahill Formation, which host in excess of 950Mlb  $U_3O_8$  in uranium endowment within the Alligator River Uranium Province, occur extensively throughout the company's main project area.

*The company has resolved historical access problems*

One of the major explanations for the lack of historical exploration in the company's project area and also the wider region relates to the fact that there were major historical access impediments. Importantly, these have now been resolved.

*Alligator's main project boasts full access agreements with the traditional owners*

The company's flagship project (Tin Camp Creek Project) on the Tin Camp Creek Tenements (SEL 24921, SEL 24922 and EL 25002) comprises granted tenements for which access agreements with the Northern Land Council on behalf of traditional owners are in place.

*The Northern Territory government is very supportive of uranium development*

Apart from its geological prospectivity and strong mining history, the other key factor that makes the Northern Territory the place to be from a uranium perspective is the fact that the Northern Territory Government actively encourages uranium exploration and project development.

*The Northern Territory has a strong production track record*

The Northern Territory has been a major exporter of uranium for over 30 years and consequently has an established regulatory framework for uranium exploration, mine development and export. The Territory and Federal Governments support uranium mining in the Northern Territory.



## ***The Outlook for Uranium***

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*The uranium sell-off in the wake of Fukushima was understandable*

In the wake of the Fukushima disaster during March this year there has been significant and understandable pressure on both uranium prices and uranium stocks over the past six months. In the week following the tragedy uranium prices fell by around 10% to US\$60.00/lb, with media headlines questioning the near and longer-term outlook for the world's nuclear industry.

*Maintaining perspective is important*

It's very important however to put things into their proper perspective. Uranium prices rose to a record US\$136/lb during 2007, before plunging to around US\$40/lb, but have since been recovering from around mid-2010 as China has increased its use of nuclear power to curb coal emissions.

*There are still 440 nuclear reactors operating globally producing 15% of the world's electricity*

Japan has 55 operating nuclear reactors, 11 of which have been shut down as a response to the earthquake and 4 of the 11 have been significantly affected by both these events. There are currently 440 nuclear reactors worldwide generating about 15% of global electricity. With 11 reactors off-line in Japan, this represents an approximate 2.5% decrease in reactors generating electricity.

*The world's major nuclear nations have recommitted themselves to a nuclear future*

Since the Fukushima tragedy, government officials from a host of key nuclear players including Russia, China, the USA, France and South Korea have reaffirmed their commitment to the sector and nuclear expansion. Germany is the only nation to announce it will end its production of nuclear power, but rather hypocritically it will instead utilise nuclear-generated energy from France.

*Nations are reassessing the integrity of their reactors*

What we can realistically expect is a reassessment on the part of nuclear energy nations of the security of their existing reactors, as well as those on the drawing board, with respect to their integrity in the face of potential damage caused by natural disasters and acts of terrorism.

*There are relatively few base-load power options*

The key is that there are relatively few options available to the world in terms of providing base-load power. Given the seeming international desire of countries to diversify away from coal-fired energy, this essentially leaves little choice other than to advance the use of nuclear power and LNG.

*The long-term health of the nuclear industry remains sound*

From our perspective the longer-term health of the nuclear industry remains sound, simply because there aren't many other serious energy options available. Uranium prices will most likely continue to suffer in the short-term, but this situation will realistically only be a temporary one.

*20% of US electricity comes from nuclear energy*

In the USA, 20% of the nation's electricity is supplied by 104 nuclear reactors. President Obama has previously sanctioned US\$36 billion in government-backed loan guarantees as a way of accelerating the nation's nuclear industry. The latest comments from US Energy Secretary Steven Chu have reaffirmed the country's commitment to nuclear power.

*China is set to be a big winner*

One of the biggest winners out of all of this is likely to be China, which always manages to focus on the bigger picture. In the wake of Fukushima, China National Nuclear Corp, which began operations at its first overseas uranium mine last year, plans to acquire more global atomic-fuel assets to meet rising demand.

*China is already active corporately*

The decision by China's biggest nuclear plant operator to potentially implement a detailed overseas uranium business expansion plan follows China Guangdong Nuclear Power Group Co's recent US\$1.2 billion bid for Kalahari Minerals Plc (which has a 43% stake in ASX-listed Extract Resources).



Historic Uranium Price Chart, Source: Ux Consulting

*There are uranium bargains emerging for China*

*China is ramping up its nuclear industry*

*The nuclear industry has shown over the past 30 years that it is robust*

*Supply tightness is a real danger*

*We are confident about the nuclear sector's future*

The gloom in uranium markets couldn't have been better timed as far as China Guangdong is concerned. More recently we've seen China's Hanlong Group bidding for fellow ASX-listed Namibian uranium hopeful, Bannerman Resources.

The Chinese recognize a bargain when they see one and we are confident that this will be the just the start of many corporate forays in the uranium space in the current relatively depressed market environment as they look to secure their nuclear future.

China National Nuclear aims to increase generation capacity to as much as 20 gigawatts by 2015, which would account for more than 50% of the country's total capacity. In fact China's National Energy Administration said back in July last year that China may have up to 39 gigawatts of reactors by 2015.

From a broader perspective, the history of the past 30 years in the uranium industry with respect to previous incidents at Three Mile Island in the USA and Chernobyl in Russia, demonstrated that base demand did not fall, as existing reactors in use worldwide were not shut down.

Older reactors will be reassessed and some will see early decommissioning, but the reactor-construction programs underway in places like Russia, China and India will continue. Modern-day reactors are much safer than the problematic older ones.

But even if there is a lower level of current and future investment in uranium development and nuclear power, this in turn could well generate higher prices due to supply tightness.

There is also no possible way that alternative energy such as wind, wave and solar can ever hope to accommodate the enormous base-load power needs of modern economies.

Accordingly, we remain confident with respect to the medium to longer-term nuclear energy picture and we anticipate that uranium prices and uranium equities should begin to recover from 2012 onwards.

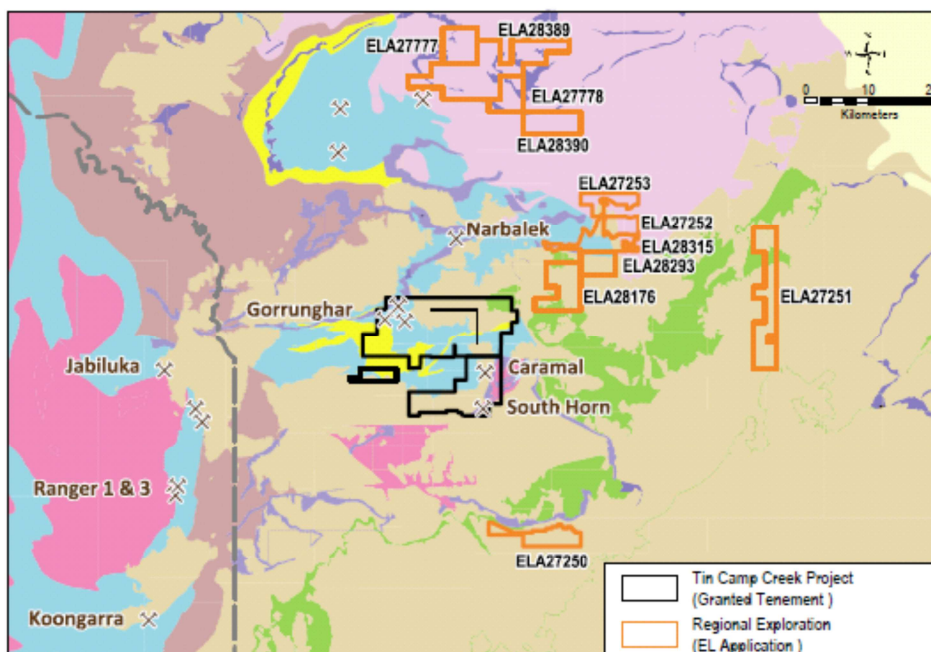


## Project Review

### Tin Camp Creek

Alligator's principal assets are its interests in the Tin Camp Creek Project, located within the Alligator River Uranium Province in the Northern Territory. Alligator has secured a prospective land holding in the region and a potential pipeline of quality projects. In total, Alligator holds 283 sq km under three granted tenements and 415 sq km under eleven tenement applications and are located 15km south of the historic Nabarlek mine site.

*Alligator holds almost 700 sq km of acreage under granted licences and applications*



Project Locations, Source: Alligator Energy

The Tin Camp Creek Project area has been explored intermittently since 1970, resulting in the discovery of the Caramal deposit, the South Horn prospect, the NE Myra prospect, the Two Rocks prospect and the Gorrunghar prospect. There are also a number of untested radiometric anomalies and the Razorback gold prospect, which has been subject to limited follow up work. Exploration potential exists for uranium (and gold) both at the known prospects and regionally with in the tenement package.

### Caramal Deposit

*One of the most prospective uranium locations within the ARUP*

The Caramal deposit and prospect is one of the more significant occurrences of uranium mineralisation in the ARUP outside of the Ranger-Jabiluka mining camp. The deposit was discovered in 1971 by QMPL, which undertook the initial resource drilling program. Significant uranium mineralisation has been identified in 20 drill holes in the broader prospect area. High grade mineralisation is associated with strongly chloritised meta-arkoses of the lower Cahill Formation.

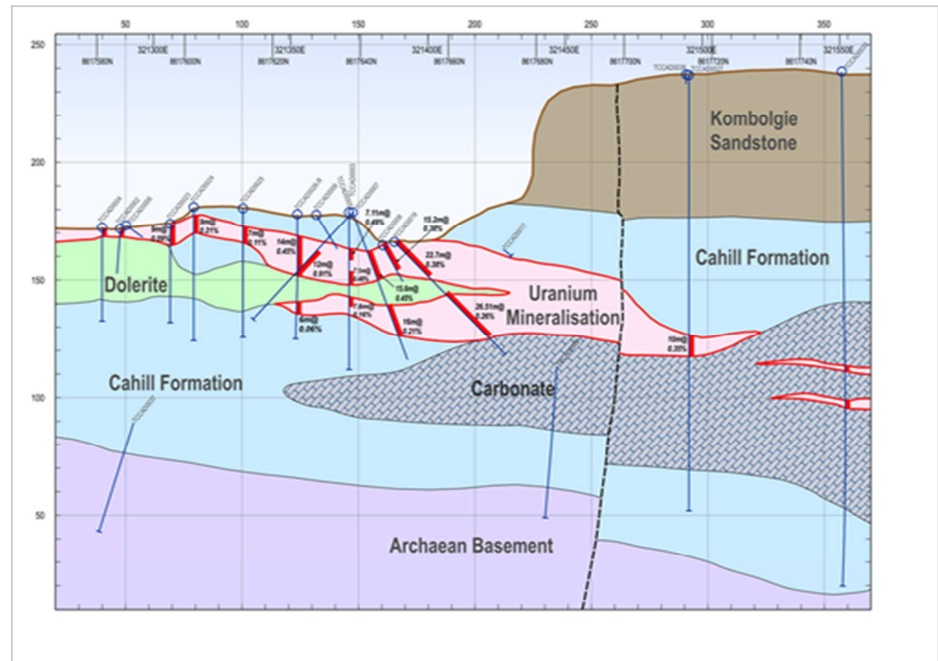
*Defined 200 metre strike length so far*

The Caramal deposit is a continuous body of mineralisation which appears to trend in a ENE direction over a defined strike length of approximately 200 metres. The mineralised zone occurs broadly in proximity to a generally barren dolerite intrusion. This zone is relatively well defined by close-spaced drilling. The western half of the deposit outcrops, whilst the eastern half of the deposit is overlain by Kombolgie Sandstone. To the east of this zone the drill spacing becomes wider.





Weaker uranium mineralisation has been identified to the northeast indicating that mineralisation may continue in this direction. In addition, anomalous thorium and rare earth mineralisation has been identified in drilling in the wider Caramal prospect area, although laboratory analysis has been limited to only a few selected spot samples.



Caramal Long Section, Source: Alligator Energy

*Clear strike extension potential*

There is potential to discover extensions to the known mineralisation at Caramal. Alligator's exploration model is based on a synthesis of past work and the geologists' own past experience in the ARUP. Mineralisation is interpreted to be structurally controlled, as is the case for other similar deposits in the region, including Narbalek, Koongarra and Ranger.

Mineralisation is associated with deformation zones within the meta-sediments that are semi-conformable with the north-west dipping basement contact, quartz chlorite zones mapped by previous workers and gross lithological layering.

The deposit and wider prospect area is cross-cut by major north-south trending faults. These faults are considered to post-date mineralisation and therefore displace the mineralised zone. The relative offset is interpreted from previous drilling results and airborne magnetic survey data.

The offset of the dolerite which intrudes the Caramal deposit is evident in airborne magnetic data. Mineralisation is interpreted to have been similarly displaced. The interpreted off-set continuation of this mineralisation has not been tested by drilling and is considered by Alligator to be a high-priority target.

*Jabiluka and Ranger show mineralisation can extend deep into the basement*

Furthermore, the occurrence of mineralisation at Jabiluka and Ranger demonstrates that mineralisation can extend deep into the basement. In the case of Jabiluka, the main deposit (Jabiluka 2) occurs some 500 metres down-dip of a relatively small, near-surface deposit (Jabiluka 1). Similar relationships may occur in the Caramal area.

*8,000m of drilling planned in first two years*

Alligator plans to drill approximately 8,000 metres of diamond drilling in the Caramal prospect area during the first two years of exploration, targeting deeper mineralised shoots and structural targets to the northeast, as well as interpreted mineralised offsets to the southeast.



Alteration along strike of known mineralisation could indicate a continuation of the broader hydrothermal system to the east, with concealed Jabiluka-style mineralisation potentially being present. Alligator therefore intends to target the area to the east of past drilling.

*Drilling will be balanced between resource definition and extension drilling*

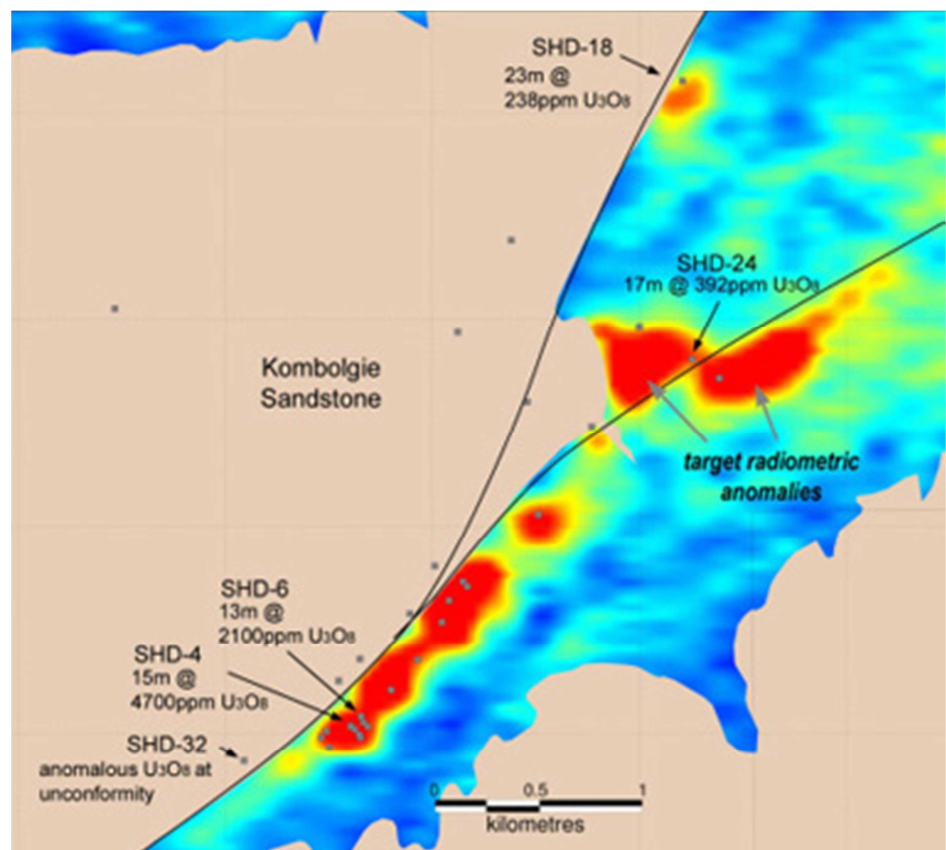
Drilling will be evenly divided between defining the resource in the known deposit area, testing for extensions to the known mineralisation (including the offset continuation) and finally testing for a Jabiluka-style occurrence to the east of historic exploration towards the Beatrice Fault.

Preliminary investigation of rare earth element potential will also be undertaken, including re-sampling of existing core and rock geochemistry of outcropping thorium rich quartzites to the immediate west of the Caramal deposit.

### South Horn Prospect

*4km long complex of radiometric anomalism*

The South Horn prospect occurs within a 4km long complex of radiometric anomalism located adjacent to the regionally significant Beatrice Fault. The area was originally discovered and explored by Afmeco during the late 1990's. A number of radiometric anomalies were tested initially by shallow geochemical drilling and then by deeper reverse circulation and diamond drilling.



South Horn Radiometric Anomalies and Drill Holes, Source: Alligator Energy

The best drill intersections included drill holes SHD-4 (15m @ 0.47% U3O8 from 63.0m) and SHD-6, (13m @ 0.21% from 30m). Anomalous uranium assays were also returned from drill holes SHD-18 (23m @ 238ppm U3O8 from 29m) and SHD-24 (17m @ 392ppm U3O8 from 7m), which are located 3.5km and 2.5km further to the north respectively.



### *Extensive zone of uranium anomalism*

A number of other drill holes have significant anomalous down-hole gamma responses but have not been assayed by chemical techniques. These holes include SHD-2, SHD-3 and SHD-32. The distribution of these drill intersections indicates an extensive zone of uranium anomalism.

### *Insufficient drilling work so far*

Uranium mineralisation and anomalism in the South Horn area is associated predominantly with dolerite located to the east to the Beatrice fault. The mineralisation is associated with fracture and breccias intervals dominated by quartz-haematite and chlorite alteration.

These zones are interpreted to be associated with splay zones from the Beatrice Fault; however there is insufficient drilling density in the prospect area to determine the geometry and extent of mineralisation.

### *Numerous high priority drilling targets*

A number of prominent radiometric anomalies remain untested along the South Horn trend. Priority targets for Alligator are two significant radiometric anomalies located in the northern part of the South Horn trend. A splay of the Beatrice Fault is interpreted to bisect these two anomalies. Drill hole SHD-24 (17m at 392ppm U3O8) occurs adjacent to these anomalies, however does not test either anomaly.

Drilling undertaken on the western side of the fault has been limited, however drill hole SHD-32, located on the southwestern tip of the South Horn area, intersected anomalous uranium as indicated by down-hole gamma surveys and strong chloritisation of Cahill Formation schists. The surrounding area remains untested.

Alligator intends to further drill the South Horn prospect to better define the structural orientation and continuity of known mineralisation in the vicinity of SHD-4 and to test prominent untested radiometric anomalies located adjacent to anomalous uranium drill intercepts in drill hole SHD-24.

Anomalous uranium indicated in SHD-32 within chlorite altered Cahill Formation equivalents is considered by Alligator to indicate broader potential for unconformity style mineralisation to the west of the Beatrice Fault. This area remains largely untested and will be evaluated by Alligator using geophysical techniques and diamond drilling.

An initial drilling program of 1,500 metres of diamond drilling is planned for the first year followed by a further 2,000 metres during the second year.

## **Two Rocks**

### *Prospective for uranium mineralisation*

The Two Rocks prospect area is considered prospective due to the presence of uranium mineralisation, intensive hydrothermal alteration and favourable host lithologies. Past exploration has delineated two small zones of copper and uranium mineralisation.

Best recorded intersections include 4m at 0.82% U3O8 from 71m MRD-101, 4m at 1821ppm U3O8 from 9m in MRR-47, and 12m @ 562ppm U3O8 from 6m in MRB093. Anomalous copper was also intersected in MRB-93 (12m at 1% Cu) and MRR048 (30m at 0.27% Cu).

Mineralisation at Two Rocks occurs in the "Two Rocks Unit" which is interpreted to be a sub-unit of the Cahill Formation and is comprised of calc-silicate gneisses, marbles, garnet-rich schists, biotite gneiss, mica schist, graphitic-pyritic schists, quartzites and amphibolites.



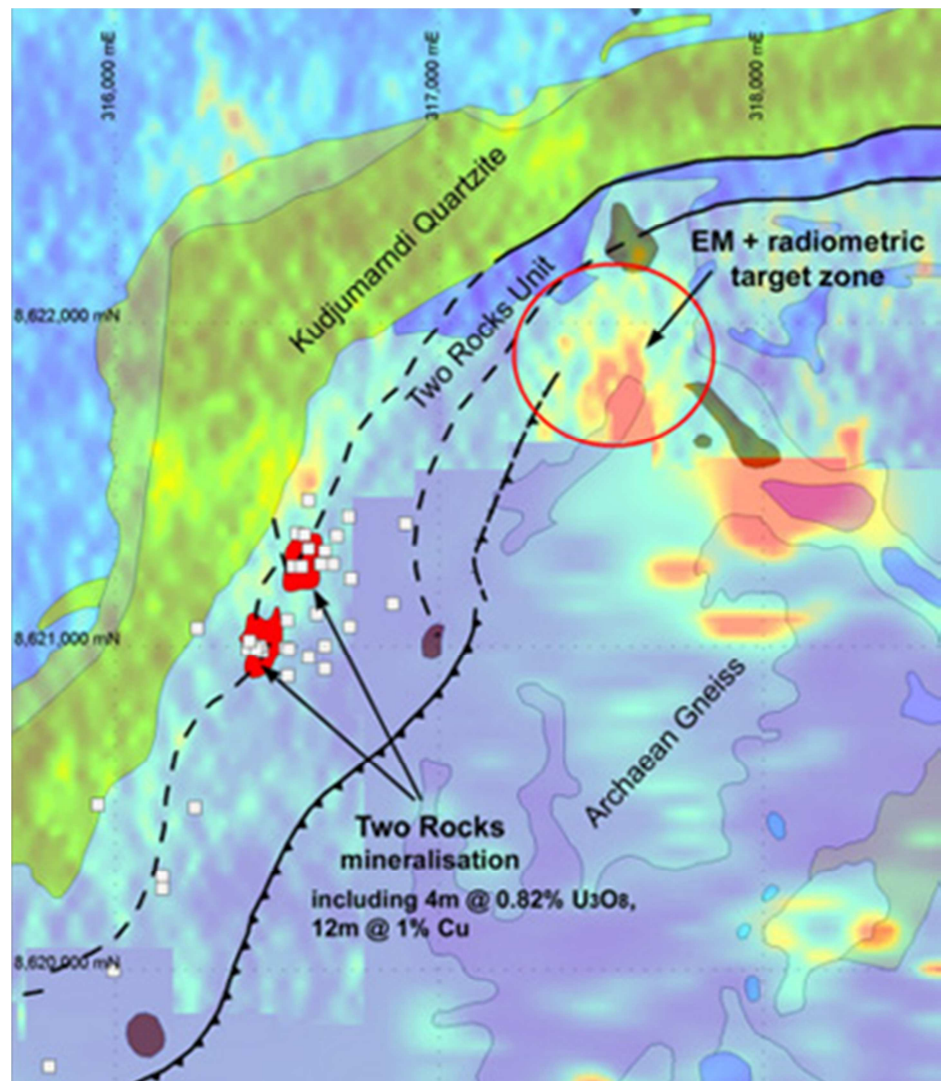


Mineralisation is associated with intense chlorite alteration. The local geology is interpreted to consist of a shallow-dipping recumbent fold that is bound to the east by an interpreted thrust fault. The intersection of this fault and the prospective horizon is considered by previous explorers and by Alligator to be highly prospective for uranium mineralisation.

*High priority drilling targets*

A high priority target for Alligator is a prominent radiometric anomaly which is broadly coincident with an electromagnetic conductivity anomaly located in the interpreted position of the target thrust fault zone. The conductive zone is interpreted to be graphitic material within the fault zone which would represent a highly prospective target for uranium mineralisation.

This target area occurs along strike and to the northeast of mineralisation intersected in previous drilling and remains untested.



Two Rocks Geology on Radiometric Image, Source: Alligator Energy

*Tin Camp has excellent potential for discovery of blind uranium deposits under cover*

Work will include detailed ground radiometric surveys along the Two Rocks trend. Data from previous electro-magnetic surveys undertaken in the area will be reprocessed and re-interpreted. An initial program of 500 metres of diamond drilling is planned to test the priority radiometric and electro-magnetic anomalies.

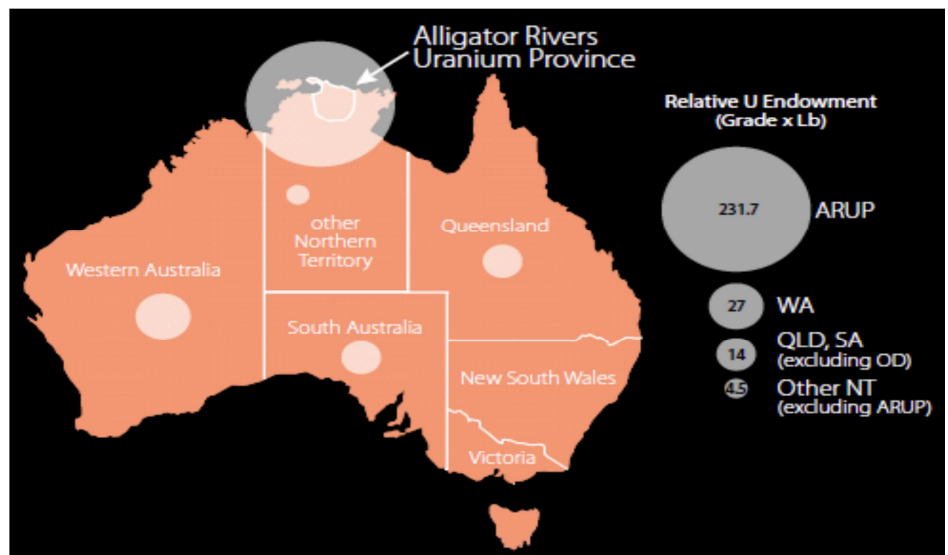
**Overall, the Tin Camp Creek Project area has excellent potential for the discovery of blind uranium deposits under shallow to moderate depths.**



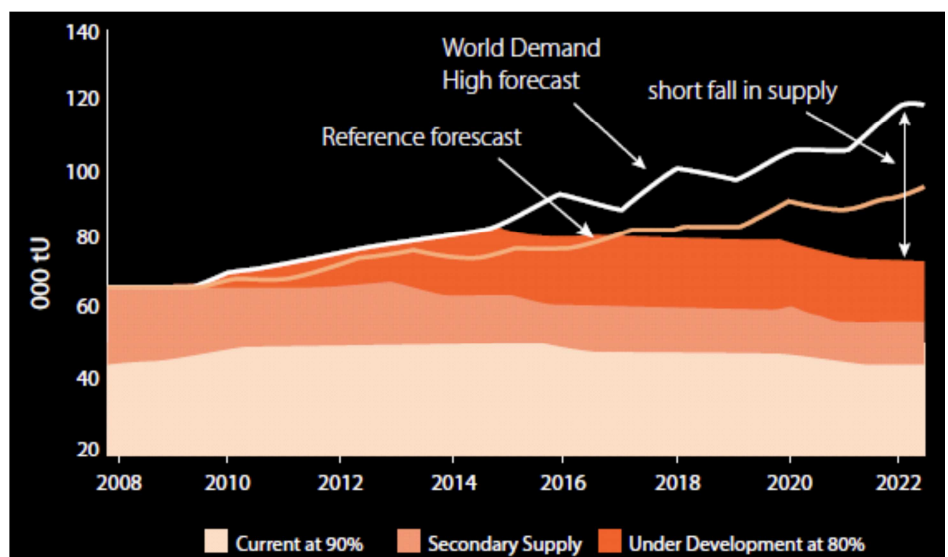
## Additional Images



Northern Territory Project Locations, Source: Alligator Energy



Australian States & Territories Relative Uranium Endowment, Source: Alligator Energy



Source: WNA, World Uranium Markets



## Directors

### Independent Chairman

**Denis Gately** has more than 30 years' experience in the energy and resources sector, encompassing on and off-market sales and purchases of assets and businesses in the minerals, oil and gas and energy sectors. He has advised on related corporate structuring, joint venture arrangements and foreign investment approvals.

### Chief Executive Officer, Director

**Robert Sowerby** has 23 years' experience in the resource industry. He has diverse experience in mineral exploration, project generation, evaluations and assessments, ore reserve estimation, and in stakeholder negotiations. His primary expertise is resource evaluation and assessment of uranium resources. He has worked for a number of major resource companies, including ERA at the Ranger mine and for North Limited / Peko Wallsend in the NT, WA, SA, NSW and Qld.

### Non-Executive Director

**Paul Dickson** has more than 20 years' experience in the finance services industry, having worked with a number of stockbroking firms including Ord Minett and Colonial Stockbroking and more recently has been a director of a number of corporate advisory boutiques.

### Non-Executive Director

**Leigh Curyer** was formerly a partner of Accord Nuclear Resources LP and Head of Corporate Development of Accord Nuclear Resources Management (Pty) Ltd. Leigh has worked for more than 15 years in the resources and corporate sectors, incorporating all aspects of merger and acquisitions from origination to successful execution.

### Non-Executive Director

**Andrew Vigar** has 32 years' experience in the minerals industry covering areas from regional exploration to mining, corporate and finance. He held company positions with Utah, Emperor, WMC and CRAE prior to commencing consulting in 1996 as Vigar & Associates, which became part of SRK Consulting. Andrew has been working on uranium projects for more than 15 years across a wide range of deposits in the Australasia/Pacific area. Andrew is aware of, and experienced in, the specialist skill areas required for operation in the uranium industry.

## Exploration Budget

CATEGORY	YEAR 1 A\$	YEAR 2 A\$	TOTAL A\$
Field Support Costs and Travel	330,000	350,000	680,000
Drilling & associated direct costs	1,523,000	2,573,000	4,096,000
Helicopter Support	850,000	890,000	1,740,000
Geologists & field assistants	60,000	330,000	390,000
Geophysics	195,000	95,000	290,000
Indigenous liaison	200,000	200,000	400,000
Exploration Field Costs Total	3,158,000	4,438,000	7,596,000
Corporate	945,000	945,000	1,890,000
<b>Totals</b>	<b>4,103,000</b>	<b>5,383,000</b>	<b>9,486,000</b>



### **Analyst Verification**

We, Gavin Wendt and Andrew McLeod, as the Research Analysts, hereby certify that the views expressed in this research accurately reflect our personal views about the subject securities or issuers and no part of analyst compensation is directly or indirectly related to the inclusion of specific recommendations or views in this research.

### **Disclosure**

Breakaway Investment Group (AFSL 290093) may receive consultancy fees and commissions on sale and purchase of the shares of Alligator Energy and may hold direct and indirect shares in the company. It has also received a commission on the preparation of this research note.

### **Disclaimer**

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