

ASX:AGE



Advancing Samphire Uranium Project and Exploration Success



Alligator Energy

Alligator Energy – Annual General Meeting 2024

Forward Looking Statements

This presentation contains projections and forward-looking information that involve various risks and uncertainties regarding future events. Such forward-looking information can include without limitation statements based on current expectations involving a number of risks and uncertainties and are not guarantees of future performance of the Company. These risks and uncertainties could cause actual results and the Company's plans and objectives to differ materially from those expressed in the forward-looking information. Actual results and future events could differ materially from anticipated in such information. These and all subsequent written and oral forward-looking information are based on estimates and opinions of management on the dates they are made and expressly qualified in their entirety by this notice. The Company assumes no obligation to update forward-looking information should circumstances or management's estimates or opinions change.

Competent Person's Statement – Uranium and Previously Reported Information

Information in this report is based on current and historic Exploration and Resource Drilling Results compiled by Dr Andrea Marsland-Smith, who is a Member of the AusIMM. Dr Marsland-Smith is employed by Alligator Energy as Chief Operating Officer (COO) and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity she is undertaking (including 15 years working with ISR uranium development and operations) 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. Dr Marsland-Smith consents to the inclusion in this release of the matters based on her information in the form and context in which it appears.

In relation to Exploration results and Mineral Resource estimates referred to in the announcements referred to on slides 5,7,8,9,10,11,12 and 17 the Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. In relation to production target referred to on slides 10 and 12, the Company confirms that all material assumptions underpinning the production target, and the forecast financial information derived from the production target, in the initial announcement continue to apply and have not materially changed.

Competent Person's Statement – Nickel Cobalt exploration

Information in this report is based on current and historic Exploration Results compiled by Mr Geoffrey Chapman who is a Fellow of the Australasian Institute of Mining and Metallurgy. Mr Chapman is a Consultant Geologist with Alligator Energy Limited 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 Chapman consents to the inclusion in this release of the matters based on his information in the form and context in which it appears.

ESG in practice: Operating philosophy

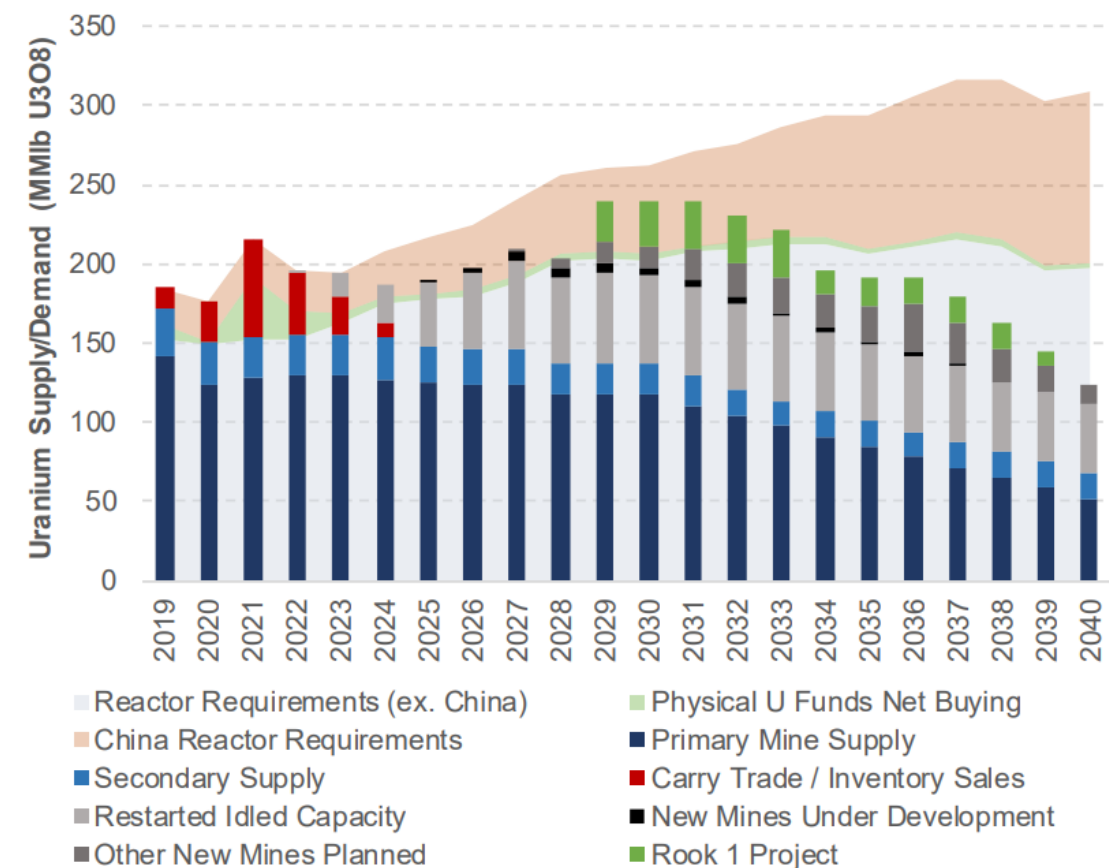
- We aim to add value in all of our decision-making for **shareholders**.
- We wish to provide an engaging, challenging, enjoyable and respectful workplace for our **employees**.
- We respect the rights of **landowners** and **communities** and seek to collaborate for our mutual benefit.
- We respect the cultural heritage and connection to country of **Traditional Owners** and wish to create mutually beneficial opportunities.
- We aim for a low impact on the **environment**, through innovation, use of latest technology, and responsible land management techniques.



Our aim is to discover, source and economically extract these needed commodities with an innovative approach, with either zero or minimal impact, and with positive value and experience for our stakeholders and communities.

Uranium and Nuclear Fuel market

Exhibit 1. Updated Supply/Demand Model



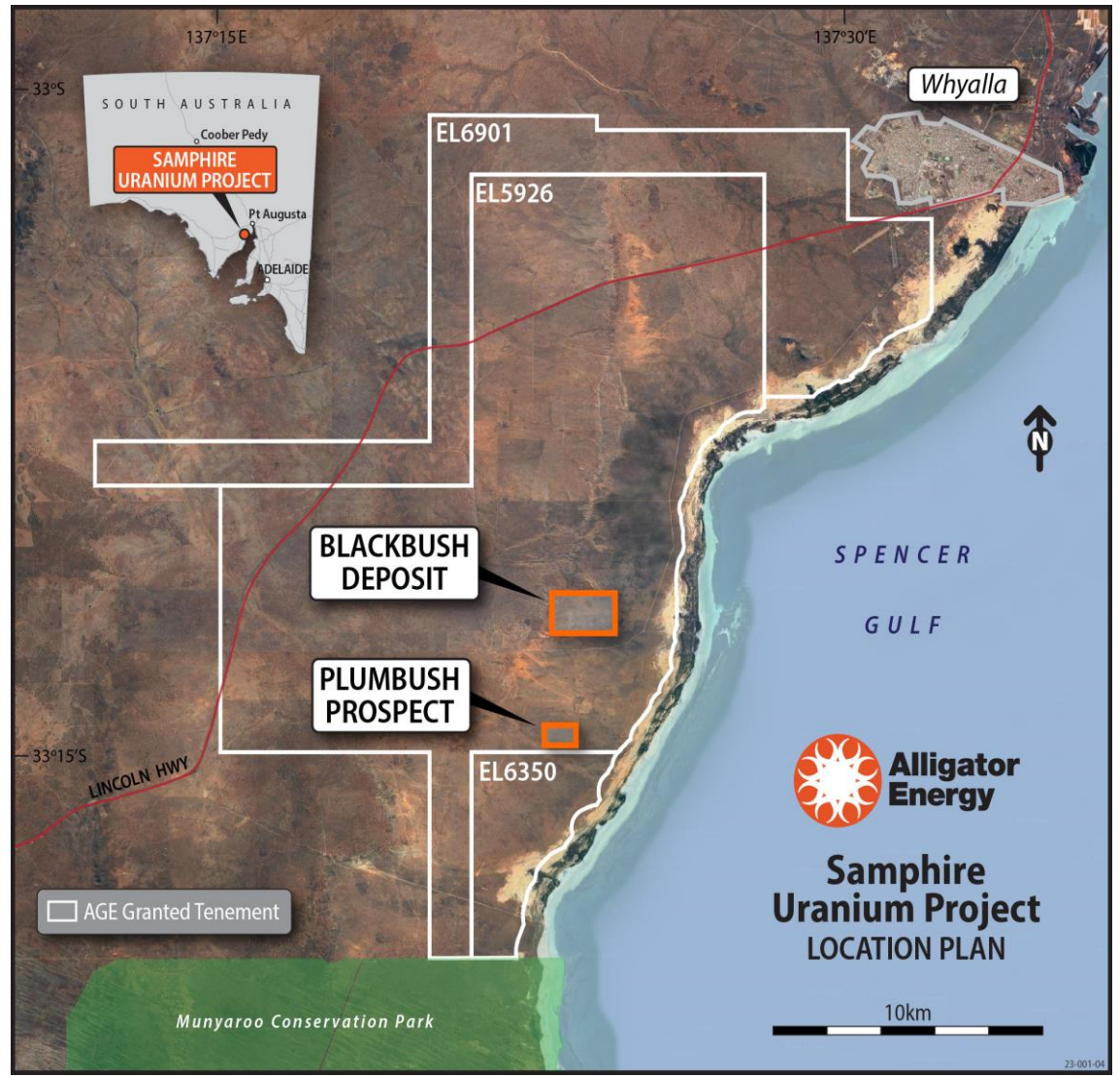
Source: Cantor Fitzgerald

- Primary mine supply, mine re-starts, new mines under development plus new planned mines still potentially not adequate for future supply.
- Re-start and new mines are experiencing delays due to approvals, typical / usual ramp up and commissioning issues, and lack of experienced development / design skills.
- Geopolitics impacting supply – US restrictions on Russian imports, and now Russia banning EUP sales to the US.
- Reliable nuclear power for AI driven data-centre expansion being targeted and supported
- Utilities now coming out for long-term U₃O₈ supply requests from 2028 onwards.
- Existing producers will find ways to extend mine life, however will also take time.
- Russian EUP exported into China, with China EUP sales to the US now under review.
- Faster to build a nuclear plant in China and India than it is to start a uranium mine in Australia.

2024 Highlights and achievements

- Dec 2023 – Samphire Resource update to 17.5 Mlbs with 75% indicated resource – Exploration target range
- Dec 2023 – Samphire Scoping Study update to 1.2Mlbs pa production
- Jan 2024 – Investment into EnviroCopper – copper ISR development company
- Mar 2024 – Samphire Retention Lease formal response to submissions document lodged with DEM
- May 2024 – Extensions to Samphire palaeochannel system by 50% from ground gravity survey
- May 2024 – Initial release of 2024 Samphire resource drilling results
- May 2024 – Inaugural aircore drilling program commences on Big Lake Uranium project
- June 2024 – Fabrication of Samphire pilot plant for field trial complete and delivered to AGE Whyalla yard
- Jul 2024 – High resolution airborne magnetic and radiometric survey completed over Nabarlek North
- Jul 2024 – Final Samphire Retention Lease response document submitted to the DEM post RFI's
- Aug 2024 – Targeted RC drilling program commences over Nabarlek North with 3,500m over 8 target areas
- Aug 2024 – Significant new uranium discovery at Big Lake project with U mineralisation in palaeochannel sands
- Oct 2024 – Assay results validate significant uranium discovery at Big Lake – Cultural clearance for 2025 drilling

Samphire Uranium project: South Australia – experience in uranium





20kms from Whyalla, SA

Excellent regional infrastructure and skilled labour-force



Robust Scoping Study- 1.2 Mlb / annum prod.

A\$131m capex, 42% IRR, and 2.45 yr payback

Refer ASX release 14 December 2023 "Scoping Study Update"



JORC compliant resource

17.5 Mlbs uranium resource with significant scope for further growth



Pilot plant planned

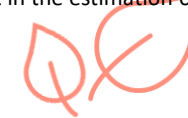
Fabricated and delivered to site. Construction in Q4 subject to approvals



Regional exploration opportunities

Exploration Target estimates additional 14 - 75 Mlbs

Note: the potential quantity and grade of the Exploration Target is conceptual in nature as there has been insufficient exploration to date to estimate a Mineral Resource and it remains uncertain whether further exploration will result in the estimation of a Mineral Resource



ESG

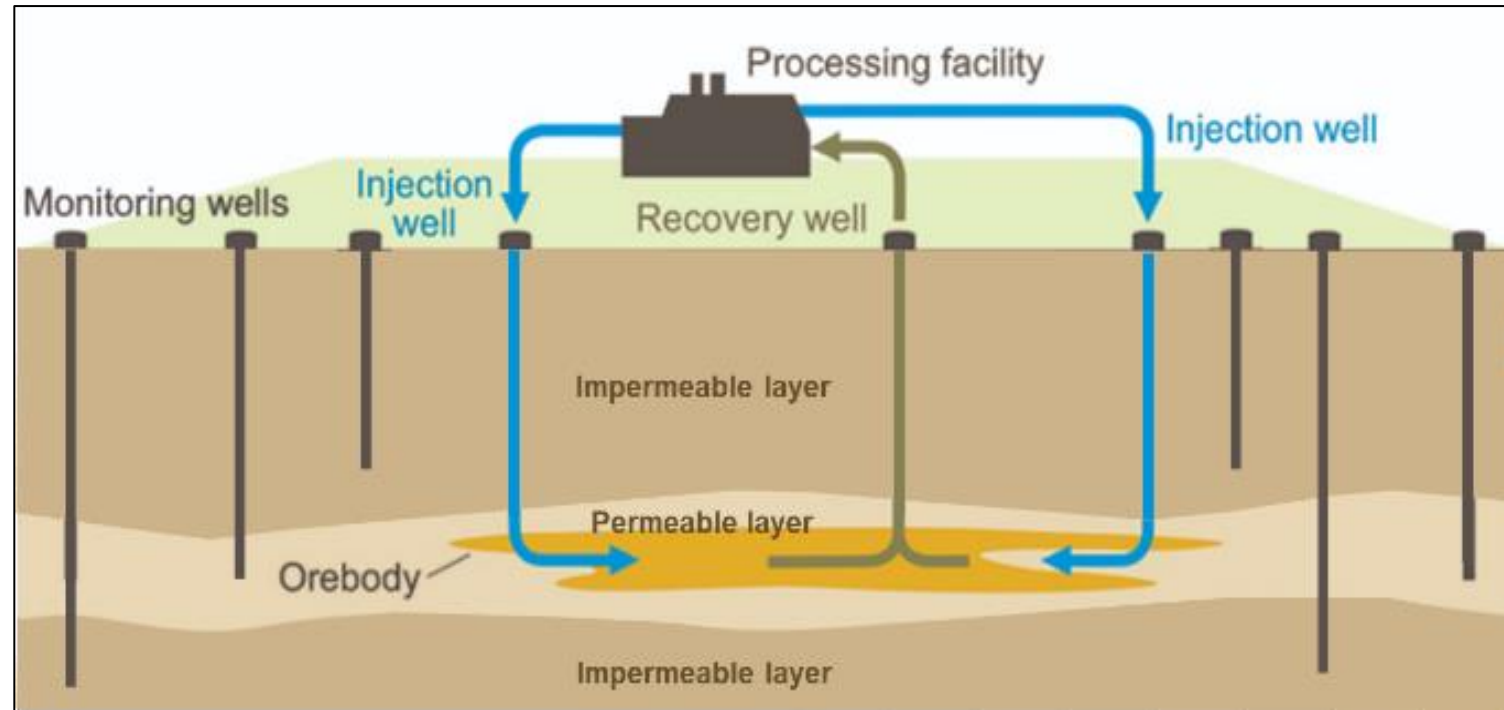
Strong ESG credentials, with environmental commendation awarded by SA government

Samphire Uranium project: A highly competitive In-Situ Recovery project

- **Initial capital cost estimate of A\$131 million is low**, despite significant contingencies and inflation totalling 35%.
- **AISC at the lower end of cost curve**, due to:
 - In-situ Recovery (ISR) amenable,
 - nature of the deposit, shallow depth, excellent formation porosity, and
 - high leaching dynamics.
- **Location** near Whyalla affords lower cost of key infrastructure, locally based workforce (i.e. no FIFO or camp), experienced mining services and business support.
- **Expansion potential** - Exploration Target Range (Dec 23) estimating an additional 14 - 75 Mlbs on top of 17.5Mlbs resource. Multi-year resource extension and step-out drilling to increase mine life and production rate.
- Field Recovery Trial on receipt of regulatory approvals (approx. Q4), to **de-risk project** and confirm parameters to be used in a full feasibility study during 2025

Refer ASX release 14 December 2023
"Scoping Study Update"

Conceptual Model of ISR



Samphire Uranium Project – Dec 2023 Scoping Study† : 1.2 Mlbs pa project

Study metrics* at US\$75 / lb uranium price



A\$131m

CAPEX
(including contingency)



2.45 years

Payback



42%

IRR*
(post-tax, real,
ungeared)



A\$257m

NPV₈*
(post-tax, real,
ungeared)



US\$33.31/lb

AISC
(A\$47.58/lb)



US\$16.06/lb

Cash Costs
(A\$22.94 /lb)

Study metrics* based on analysts current long-term price projections of US\$90 / lb



A\$131m

CAPEX
(including contingency)



1.93 years

Payback



55%

IRR*
(post-tax, real,
ungeared)



A\$371m

NPV₈*
(post-tax, real,
ungeared)



US\$34.06/lb

AISC
(A\$48.96/lb)

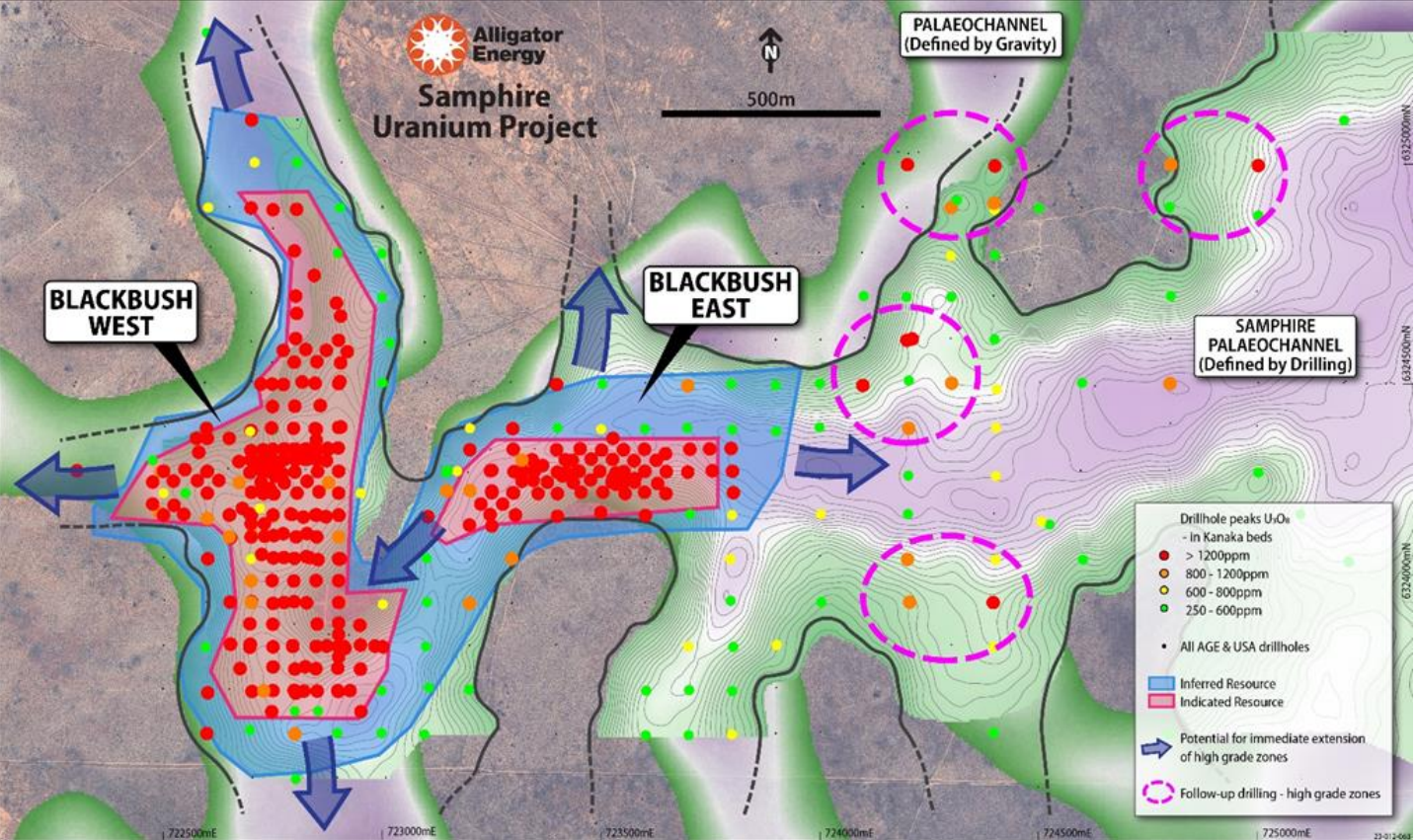


US\$16.06/lb

Cash Costs
(A\$22.94/lb)

† Ref ASX release 14 December 2023 "Scoping Study Update": Alligator confirms that all material assumptions underpinning the 'production target' or the forecast financial information derived from the 'production target' continue to apply and have not materially changed other than the outlook for the long-term uranium price as set out above; *Calculated using 0.70 US/A\$ exchange rate inclusion of significant contingencies and inflation of 35%.

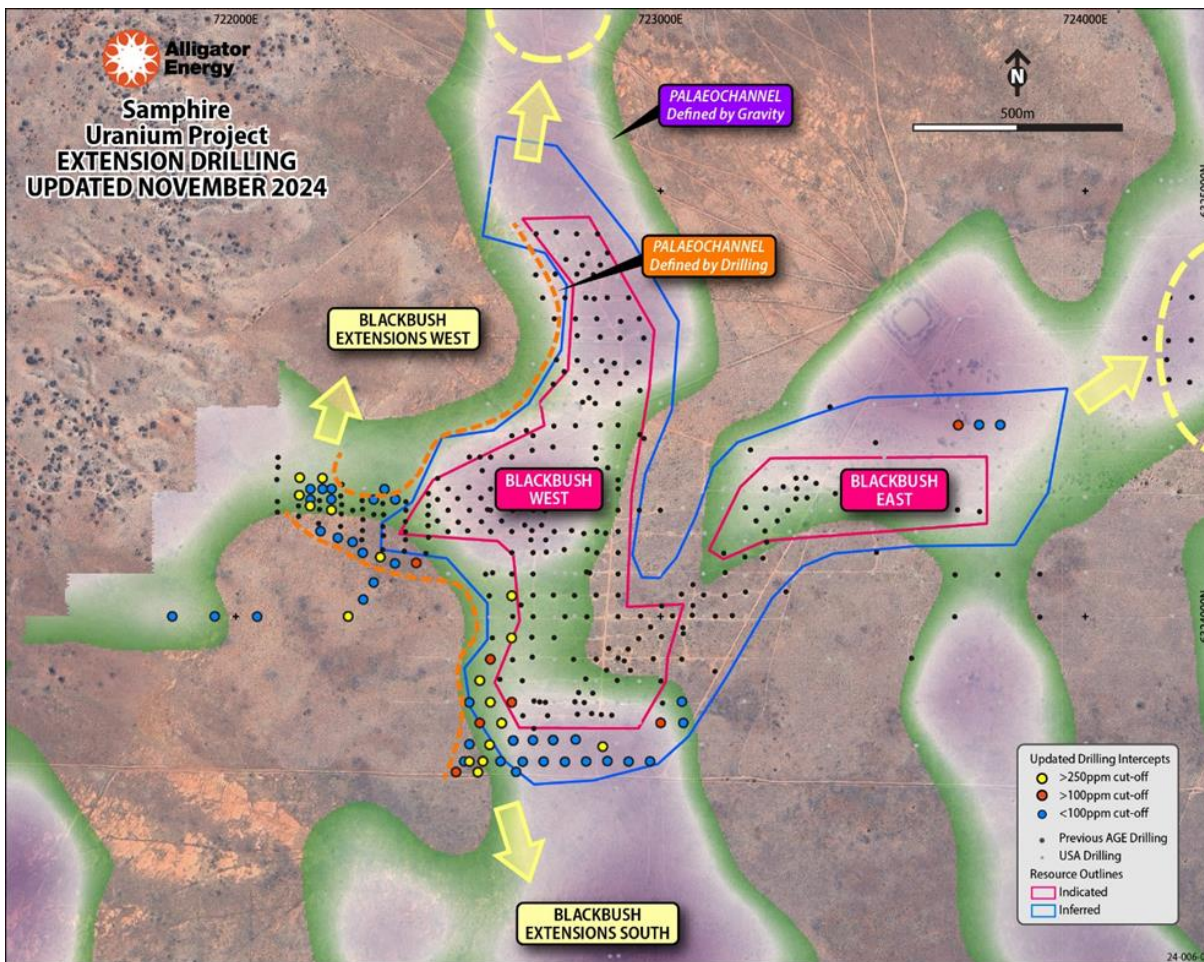
Samphire Uranium Project – Blackbush Dec 2023 JORC Resource



JORC Category	Mt	Grade (U ₃ O ₈ ppm)	U ₃ O ₈ Metal (KTonnes)	U ₃ O ₈ Metal (Mlbs)
Indicated	7.8	754	5.9	12.9
Inferred	4.6	447	2.1	4.6
Total	12.4	640	7.9	17.5

Ref: ASX Release 7 December 2023

Samphire Uranium Project – Blackbush 2024 Drilling



Significant uranium mineralisation intersections from Blackbush West uranium roll fronts has delivered further targets outside of the Inferred mineral resource. Announced in ASX release dated 21 Nov 2024:

- BBRM24-304: 1.3 meters at 1.94% (19,391ppm) pU₃O₈ from 62.6m (GT 25,208)
- BBRM24-278: 1.1 meters at 0.44% (4,392ppm) pU₃O₈ from 62.94m (GT 4,832)
- BBRM24-338: 2.4 meters at 0.20% (1,948ppm) pU₃O₈ from 56.7m (GT 4,675)
- BBRM24-321: 1.1 meters at 0.36% (3,633ppm) pU₃O₈ from 58.59m (GT 3,996)
- BBRM24-282: 1.7 meters at 0.23% (2,314ppm) pU₃O₈ from 63.1m (GT 3,934)
- BBRM24-283: 0.8 meters at 0.45% (4,506ppm) pU₃O₈ from 65.03m (GT 3,604)
- BBRM24-318: 0.7 meters at 0.36% (3,566ppm) pU₃O₈ from 59.1m (GT 2,497)
- BBRM24-330: 0.8 meters at 0.18% (1,791ppm) pU₃O₈ from 63.1m (GT 1,433)
- BBRM24-314: 0.6 meters at 0.17% (1,734ppm) pU₃O₈ from 59.14m (GT 1,040)

An update of the JORC Resource Estimate, inclusive of the January to mid-April drill results to be completed in Q1, 2025, targeting both resource expansion and category conversion from inferred to indicated

Note: pU₃O₈ denotes that the grade has been determined by Prompt Fission Neutron downhole logging

GT= grade(ppm) x thickness(m) – divide by 10,000 for m% GT

ASX release 1 May 2024 – Extension of Uranium Mineralisation at Samphire, and ASX release 21 Nov 2024 – Significant Drilling Results – Samphire Uranium Project Update

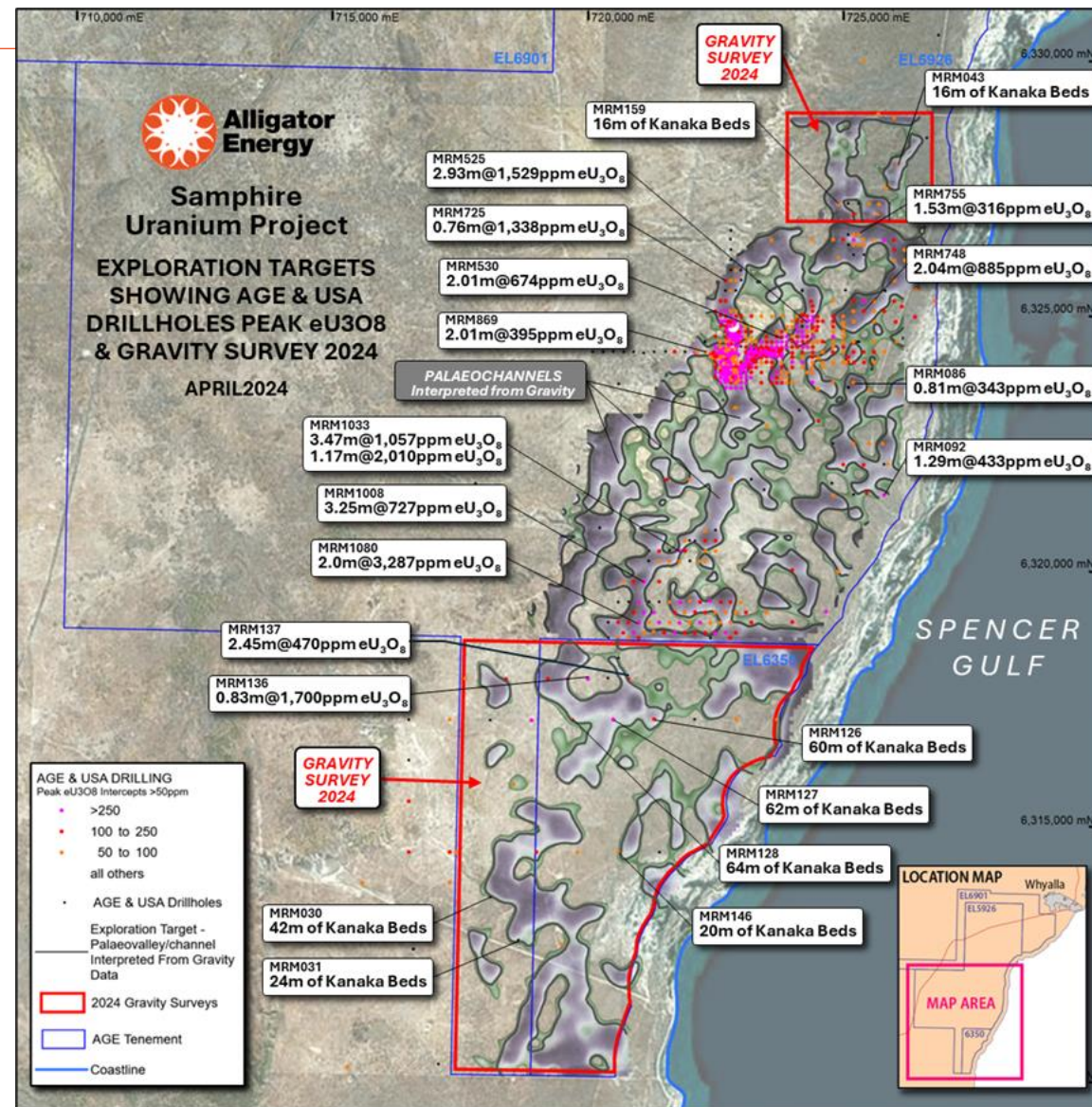


Further Extensions outside the Exploration Target Range Envelope

Ground Gravity Survey- April 2024

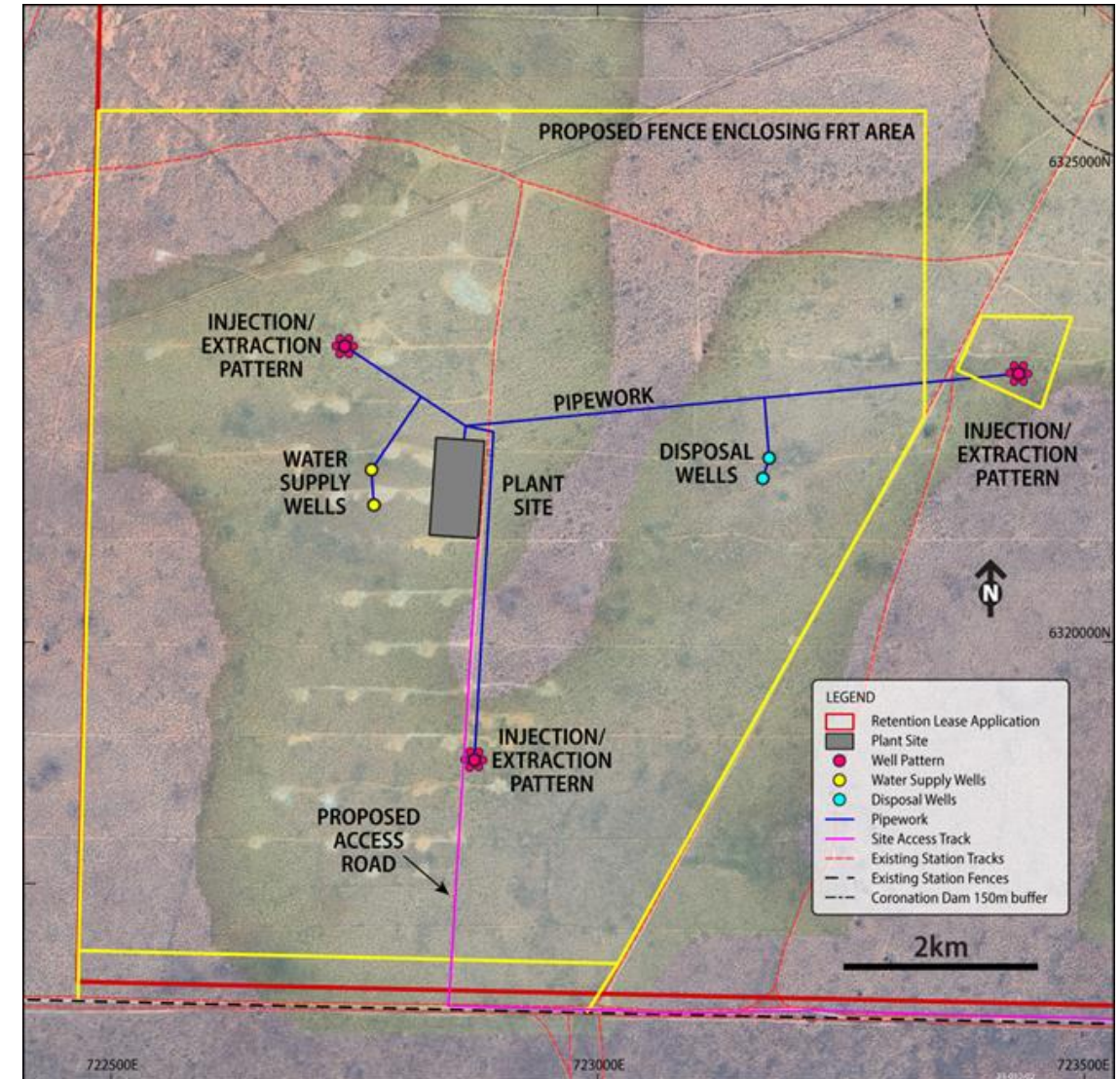
- Exploration target range – additional 14 to 75 Mlbs
- Ground gravity data shows outstanding continuity of the Samphire palaeochannel system by 34 lineal km's.
- 50% increase to the existing palaeochannel strike length to ~over 90kms.
- Historical drillholes confirm that extensions contain the same thick sequences of Kanaka Bed sands which host the Blackbush Mineral Resource .
- Multiple historical drillhole intersections (above 250ppm eU3O8 cutoff) confirm that uranium is ubiquitous throughout this system.
- 72% (over 70km) of the prospective areas of the entire Samphire palaeochannel system remain completely untested by drilling.
- Significant potential for new discoveries and resource growth in the Project area.

Refer ASX Announcements 7 December 2023 and 2 May 2024



Samphire Uranium Project – Field Recovery Trial (FRT)

- Field Recovery Trial (FRT) construction targeted for end Q1 2025, pending regulatory approvals. Plant fully fabricated and delivered to AGE’s Whyalla yard.
- Post construction – FRT in operation for 3-4 months and consists of three producing well patterns and a containerised pilot plant.
- FRT is designed to confirm key operating parameters and marks an important step toward development.
- Parameters to be assessed include in-situ chemistry, hydrogeology, uranium recovery, reagent usage, and other environmental and economic factors.
- Data and learnings further de-risk the Project and provides the necessary inputs to a full feasibility study and Mining Lease Application during 2025.



Samphire Uranium Project – Field Recovery Trial Plant

- Fabrication of the containerised FRT processing plant completed - delivered to AGE's Whyalla yard in June 2024.
- Expressions of Interest to five Whyalla based companies for onsite civils and pilot plant construction evaluated. Preferred company to be announced in coming weeks.
- Plant control system being set up and tested. Commissioning and operating plans under development for initiation.
- Post-FRT and subject to any further testing, well infrastructure and plant to be removed, and area rehabilitated – pilot plant available for future satellite field testing.
- Samples of final clean eluate solution containing extracted uranium oxide to be further processed into U_3O_8 concentrate offsite for Converter quality samples.

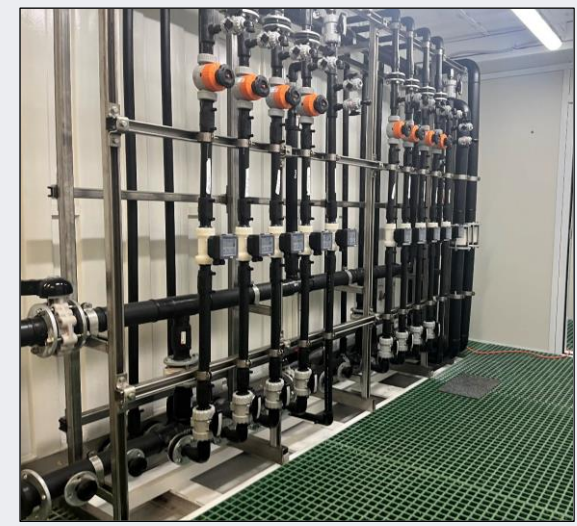
Pilot plant layout



Ion Exchange Module



Wellhouse Module (pipe room)



Delivered to site



Exploration projects



NT, AUSTRALIA

**Alligator Rivers
(ARUP)**
High Grade U

SA, AUSTRALIA

**Big Lake
(Cooper Basin)**
ISR style U

SA, AUSTRALIA

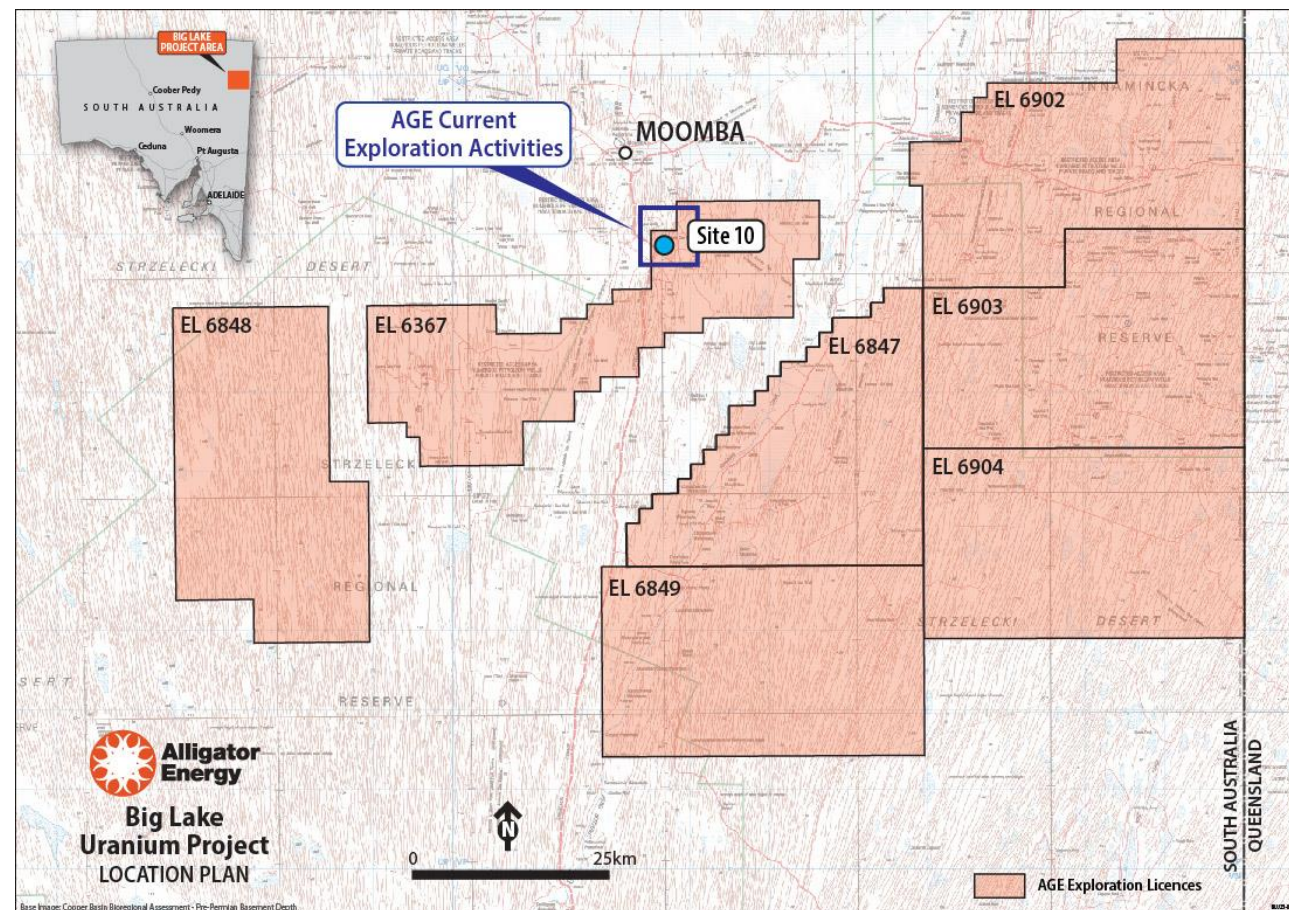
Investment in
EnviroCopper Ltd
Copper ISR

Big Lake Uranium Project, SA

- Overlies Cooper Basin in NW SA – under-explored for uranium despite geological analogies to world-class ISR fields in hydrocarbon basins - Kazakhstan, Wyoming, Texas.
- Several potential uranium sources including; weathering / leaching of underlying ‘hot’ granite suite or distal migration of uranium bearing fluids toward basin depo-centres.
- EM results and analysis of publicly available 2D seismic data indicated potential presence of paleochannel systems.

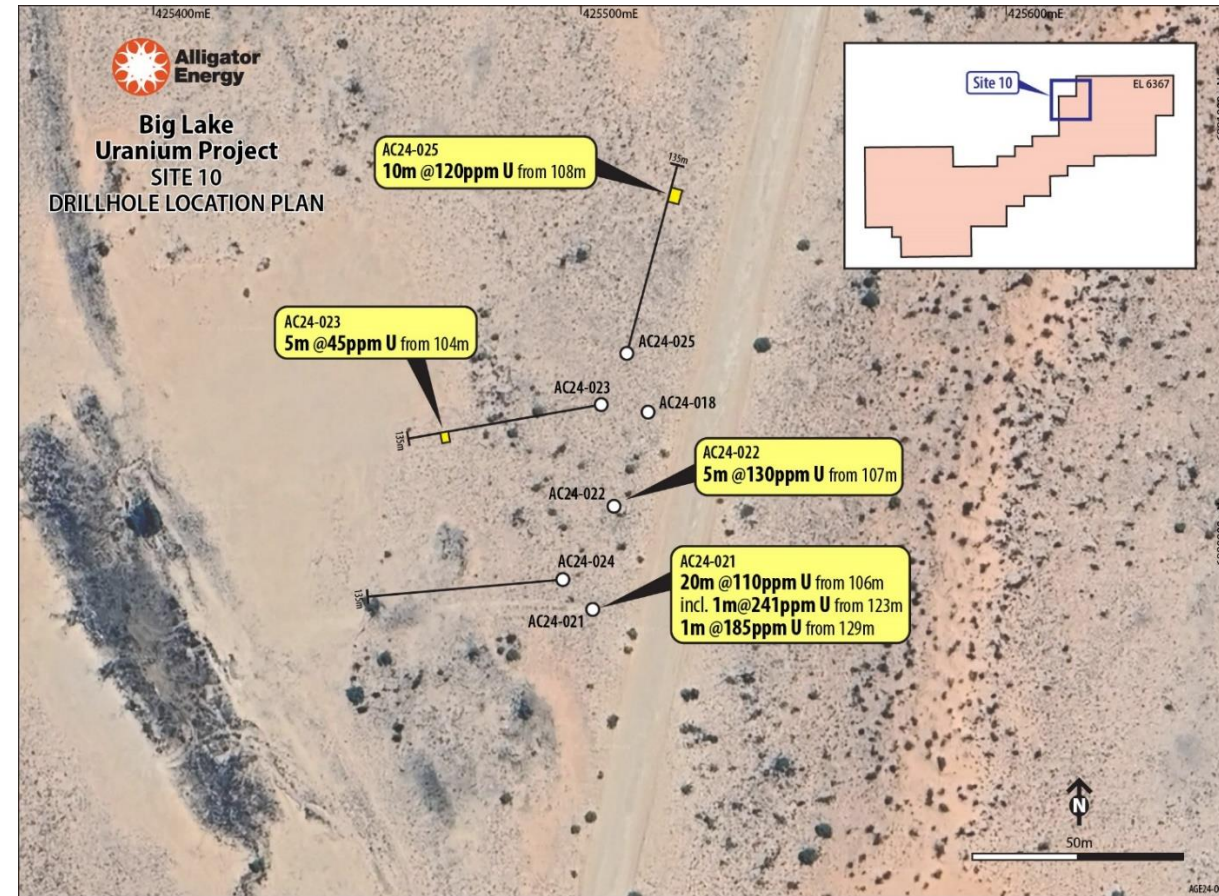
2024 Big Lake Drilling Program:

- Interpretation of seismic and other datasets towards a full 3D basin model across the entire basin.
- Selection of ~20 drill sites to test stratigraphy, paleochannel model and qualities of U-trap rocks
- Traditional Owner clearances for drill lines.
- Engagement with other key stakeholders
- Remote logistics considerations, including access to fuel, water, accommodation and emergency support



Big Lake Uranium - Inaugural Drilling Program Discovery Success

- Inaugural drilling program intersected significant thicknesses of anomalous uranium mineralisation within interbedded palaeochannel sand units in the Namba Formation.
- Discovery is first proof of concept that significant uranium is present within Lake Eyre basin sediments above the hydrocarbon-rich Cooper Basin within potentially ISR amenable host and depths.
- Laboratory chemical assay results validate the in-field XRF measurements for contained uranium. These include:
 - AC24-021 20m @ 110 ppm U from 106 m
 - AC24-022 35 m @ 117 ppm U from 93 m
 - AC24-023 5 m @ 47 ppm U from 104 m
 - AC24-025 10 m @ 138 ppm U from 108 m
- The indicative grade-thickness of two intersections is at or near the economic cut off used at the Company's Samphire ISR uranium project near Whyalla, SA.
- Cultural heritage clearance complete for expanded drilling program in early 2025 – to include rotary mud drilling allowing detailed down-hole logging.

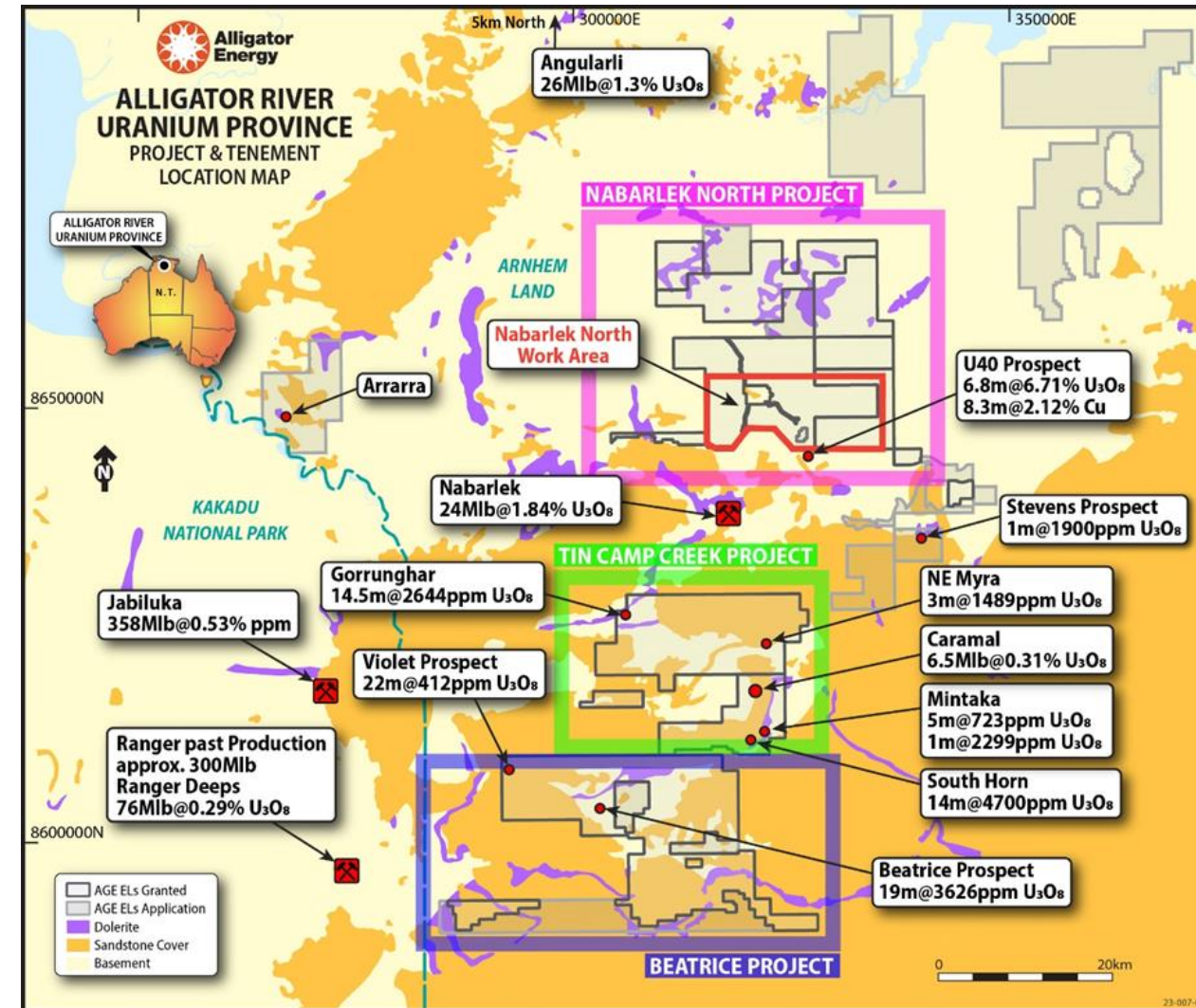


Refer ASX releases 13 August 2024 and 23 October 2024

Alligator Rivers Uranium Province, NT

- Three projects: Nabarlek North, Tin Camp Creek and Beatrice, in Australia's premier **high-grade** uranium province.
- Province is host to existing high-grade deposits including Jabiluka (358Mlb @ 5,300ppm U₃O₈).
- Multiple uranium targets in well-defined regional uranium bearing zone including the Caramal Resource 6.5 Mlbs U₃O₈ @3,100ppm.
- Nabarlek North is the current focus of exploration program – including northerly extensions to the U40 Prospect*, based on 2023 results (AGE and 3rd party).
- A small field program will be carried out on the Tin Camp Creek project in 2024 to revisit preferred targets for future work.

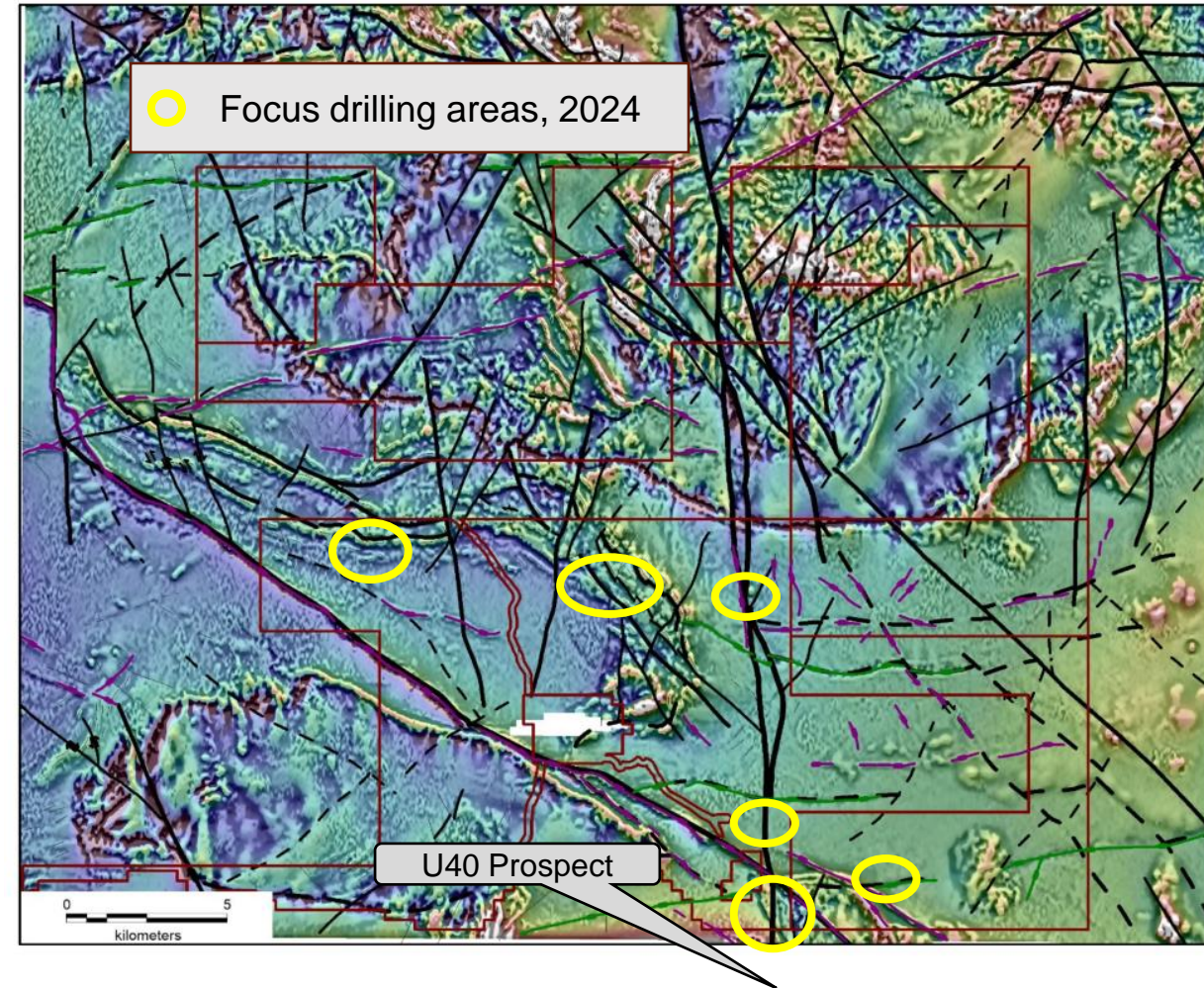
* Includes 6.3m at 7.23% U₃O₈ and 8.3m @ 2.12% Cu (Uranium Equities Ltd now DevEx Resources Ltd release – 4 October 2017).



Alligator Rivers Uranium Province, NT

2024 Work Program at Nabarlek North:

- New high resolution airborne magnetic / radiometric survey to better define key structures and host stratigraphy across the entire tenure (*completed July 2024*)
- Reconnaissance mapping of outcrop throughout northern half to 'truth' regional stratigraphic knowledge and tie geophysical data.
- An RC drilling program of ~ 3,500m focussed on 8 target areas across the tenement (*completed Sept 2024*).
- Includes further work at U40 North – to follow up last year's intercept and 'chase' system to the north.
- Awaiting assays on samples collected
- Drilling / geophysics programs co-funded with NT Govt as part of their 2024 'Resourcing the Territory' Program



Investment into EnviroCopper Ltd ISR copper, SA

- Alligator expanded energy minerals interests with \$0.9M strategic investment in private group, EnviroCopper (ECL).
- This investment and resultant collaboration is extremely complimentary to our existing and substantial in-house ISR expertise.
- Provides exposure to ISR copper project portfolio (over 200kt Cu resource) and experienced ISR and research team.
- Advancing ISR trials at Kapunda copper project - similar plans for Alford West copper project. BHP funding field trials at Kapunda for IP access.
- ISR successfully used to extract copper in projects in Australia and the US - offers distinct advantages and environmental benefits.
- ECL has now undertaken successful push-pull lixiviant trial at Kapunda to extract copper – awaiting approval for SELT trial within ring of holes circulating lixiviant for copper extraction.
- Significant in-house Cu ISR modelling expertise for shallow fractured rock aquifer hosted oxide copper deposits.



2025 Key aims, targets and tasks

- **Estimated Dec 2023 – Samphire Retention Lease approval (subject to final Ministerial decision) – information finalised in July 2024, we understand internal documentation and final administrative matters underway.**
- **Estimated Feb 2025 – Submission of Field Recovery Trial (FRT) – Program for Environmental Protection and Rehabilitation (PEPR) for the FRT operations**
- **Q1 2025 – Samphire Blackbush deposit updated JORC resource – input from 2024 extensional and infill drilling, plus detailed re-logging of historical holes for more accurate host lithology.**
- **Feb 2025 – Re-start of Blackbush extensional drilling**
- **Early Mar 2025 – Big Lake second drilling program start up**
- **Apr / May 2025 – FRT construction followed by operations**
- **1H 2025 – Discussion and negotiation of pastoral access arrangements for drilling southern extension of Blackbush, and infill drilling of Plumbush prospect.**
- **1H 2025 – EOI and selection for Feasibility Study management – 2H Feasibility Study execution**
- **Q1 2025 – Alligator Rivers data review and workshop on next steps and targets – 2025 exploration plan**
- **2H 2025 – Heritage clearance and third drilling program for Big Lake project**
- **2H 2025 – Document development and finalisation of Mining Lease application for Samphire project**

ASX:AGE



**Alligator
Energy**

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Board & Management



Paul Dickson | Non-Executive Chairman

Paul is a finance and corporate advisory professional with more than 30 years' experience in the finance services industry. He was a Founding Director at Paradigm Capital, a boutique corporate advisory firm specialising in junior and mid-tier ASX listed resources companies, and a Director of Proserpine Capital a private equity firm for circa 4 years. Paul has been an AGE Board member since inception and Chairman for 3 years.



Callum McIntyre | Alternate Director

Callum has extensive experience in the finance and technology industries, both in Australia and overseas. He is currently Director Business and Investment at Labonne Enterprises, a private investment company. He is also Business Operations Manager at Macallum New Energy, a private Company focused on the exploration and production of gas in the Perth Basin. He holds a BSc from the University of WA, a Graduate Diploma of Applied Finance, and is a Graduate Member of the Australian Institute of Company Directors (GAICD).



Gregory Hall | CEO & Managing Director

Greg is an experienced mining engineer and CEO with 35+ years' experience in uranium and other mine management. He previously held roles at WMC Olympic Dam & nickel mines, LKAB Iron Ore (Sweden), ERA Ranger & Jabiluka Uranium and international commodities marketing with Rio Tinto (ERA) Uranium, and Bauxite & Alumina groups. Greg was also founding CEO of Toro Energy Ltd.



Mike Meintjes | CFO & Company Secretary

Chartered Accountant/CFO/Company Secretary. Over 30 years professional services principally with a Big Four accounting firm and recently in part-time contracting and consulting roles. Extensive exposure to mining, oil & gas sectors in WA, QLD and South Africa. CFO and Co Sec for AGE for 11 years



Peter McIntyre | Non-Executive Director

Peter is a civil engineer and experienced CEO. He previously held GM roles with WMC Ltd, including development of major mining projects. Peter was the founding MD of Extract Resources during the discovery and pre-feasibility of Husab Uranium mine in Namibia, sold for US\$2.2 billion.



Dr Andrea Marsland-Smith | COO

Andrea was previously at Heathgate Resources with roles over 15 years covering technical and field positions in Geology, Head of Geology, Head of Regulatory & Compliance, Head of Operations and Head of Government Relations and Indigenous Affairs. She holds a PhD in Economic Geology and was the recipient of Exceptional Women in Resources in 2016.



Fiona Nicholls | Non-Executive Director

Fiona has 30 years of experience working across a range of business functions including strategy, planning, ESG and operations, multi-country project development and approvals and due diligence processes. Fiona was previously on the Board of Rössing Uranium and alternate director for ERA uranium.

Management and operating team with extensive uranium mine operations experience, particularly with In-Situ Recovery (ISR), including stakeholder engagement, approvals, operations, uranium marketing and contracting, environmental and sustainable production.



Company Snapshot

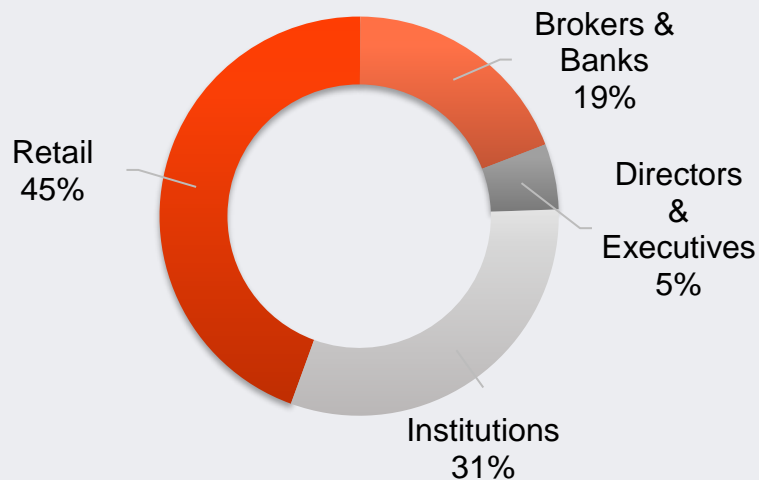
Greg Hall (CEO), Andrea Marsland-Smith (COO), Paul Dickson (Chair), Fiona Nicholls (NED)

Capital Structure (as at 24 Oct 2024)

Share Price	\$0.048
Ordinary Shares	3,869.8 M
Perf Shares, Listed & Unlisted Options	461.6 M
Cash as at 30 June 2024	\$ 28.7 M
Market Cap	\$186 M



Top 50 Shareholders



Samphire Uranium Project: Opportunity for a near carbon-free energy project

- Lower power consumption as ISR method has no rock / material movement, nor crushing / grinding of rock. Renewable power with backup may be adequate?
- Distance to Whyalla may allow all electric vehicles, light trucks, cranes etc to be used?
- Advances in battery on-highway prime movers may support the level of logistics and product transport needed?
- This potential opportunity aligns with SA Government Hydrogen Hub for Whyalla region and extensive potential renewable projects.
- We will be scoping this opportunity in parallel with our feasibility and economic studies.

