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ASX Announcement

14 December 2023

Cautionary Statement: SAMPHIRE UPDATED SCOPING STUDY

The Scoping Study referred to in this ASX release has been undertaken for the purpose of initial evaluation of a potential **1.2 Mlb U_3O_8 per annum in-situ recovery ('ISR') mining operation (12.3Mlb U_3O_8 total Production Target over 12 years)** of the Blackbush uranium deposit which forms part of the Samphire Project near Whyalla, South Australia. The study is a preliminary technical and economic assessment of the potential viability of the Project and builds on an initial study conducted in early 2023 (ASX release 14 March 2023). The Scoping Study outcomes, Production Target and forecast financial information referred to in this release are based on low accuracy level technical and economic assessments that are insufficient to support estimation of Ore Reserves. While each of the modifying factors was considered and applied, there is no certainty of eventual conversion to Ore Reserves or that the Production Target itself will be realised. Further exploration and evaluation work and appropriate studies are required before Alligator Energy will be in a position to estimate any Ore Reserves or to provide any assurance of an economic development case.

Of the JORC compliant Mineral Resource scheduled for ISR extraction in the Scoping Study production plan, 74% is categorised as an Indicated Mineral Resource and 26% is Inferred. There is a low level of geological confidence associated with Inferred Mineral Resource and there is no certainty that further exploration work will result in the determination of Indicated Mineral Resources or that the Production Target itself will be realised. The Inferred Mineral Resource has been modelled in the mine plan to cover the last ~3 years of the 12-year operation. Alligator Energy notes that the style of mineralisation and the experience to date in converting Inferred Mineral Resources to the Indicated category provides a reasonable basis for inclusion in these later years.

The Mineral Resources underpinning the Production Target in the Scoping Study have been prepared by a competent person in accordance with the requirements of the JORC Code (2012). The Competent Person's Statement is found on page 27 of this ASX release. For full details of the Mineral Resource Estimate, please refer to Alligator Energy's ASX release dated 7 December 2023; Successful upgrade of Indicated Mineral Resource for the Blackbush Deposit.

This release contains a series of forward-looking statements. Generally, the words "expect," "potential", "intend," "estimate," "will" and similar expressions identify forward-looking statements. By their very nature forward-looking statements are subject to known and unknown risks and uncertainties that may cause our actual results, performance or achievements, to differ materially from those expressed or implied in any of our forward-looking statements, which are not guarantees of future performance. Statements in this release regarding Alligator Energy's business or proposed operations, which are not historical facts, are forward-looking statements that involve risks and uncertainties, such as Mineral Resource Estimates, market prices of metals, capital and operating costs, changes in project parameters as plans continue to be evaluated, continued availability of capital and financing and general economic, market or business conditions, and statements that describe Alligator Energy's future plans, objectives or goals, including words to the effect that Alligator Energy or Management expects a stated condition or result to occur. Forward-looking statements are necessarily based on estimates and assumptions that, while considered reasonable by Alligator Energy, are inherently subject to significant technical, business, economic, competitive, political and social uncertainties and contingencies. Since forward-looking statements address future events and conditions, by their very nature, they involve inherent risks and uncertainties and are not guarantees of future performance. Actual results and future events could differ materially from that anticipated. These and all subsequent written and oral forward-looking statements are based on estimates and

opinions of Alligator Energy on the dates they are made and expressly qualified in their entirety by this Statement. The Company assumes no obligation to update forward-looking information or statements should circumstances or estimates or opinions change. Investors are cautioned not to place undue reliance on forward-looking statements, which speak only as of the date they are made.

Alligator Energy has concluded that it has a reasonable basis for providing these forward-looking statements and the forecast financial information included in this ASX release. This includes a reasonable basis to expect that it will be able to fund the development of the Samphire Project upon successful delivery of key additional evaluation and regulatory milestones. The supporting reasons for these conclusions are set out in the ASX release of 14 March 2023. Alligator confirms that the assumptions on which it considers there is a reasonable basis to expect that it will be able to fund the development of the Samphire Project (as set out in the release) continue to be relevant and have not materially changed. While Alligator Energy considers all of the material assumptions to be based on reasonable grounds, there is no certainty that they will prove to be correct or that the range of outcomes indicated by the Scoping Study will be achieved.

To achieve the range of outcomes indicated in the Scoping Study, pre-production funding (inclusive of working capital estimate) of approximately A$170M to A$200M will likely be required. There is no certainty that Alligator will be able to source that amount of funding when required. It is also possible that such funding may only be available on terms that may be dilutive to or otherwise affect the value of Alligator Energy's shares. It is also possible that Alligator Energy could pursue other value realisation strategies such as a sale, partial sale or joint venture of the Samphire Project. These could materially reduce Alligator Energy's proportionate ownership of the Samphire Project.

Given the uncertainties involved, investors should not make any investment decisions based solely on the results of the Scoping Study.

No Ore Reserve has been declared. This ASX release has been prepared in compliance with the current JORC Code (2012) and the ASX Listing Rules. All material assumptions, including sufficient progression of all JORC modifying factors, on which the production target and forecast financial information are based have been included in this ASX release.

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Alligator Energy

ASX Announcement

14 December 2023

Scoping Study Update - Samphire Uranium Project, South Australia

Alligator Energy Limited (ASX: AGE (Alligator or the Company)) is pleased to announce the results of an update to the initial Samphire Project Scoping Study[1] (released 14 March 2023) which now incorporates the increased confidence level in the Mineral Resource Estimate for the Blackbush Deposit (released on 7 December 2023[2]) and a consequent lift in the annualised Production Target from 1Mlbs pa to 1.2Mlbs pa.

Updated Scoping Study Highlights

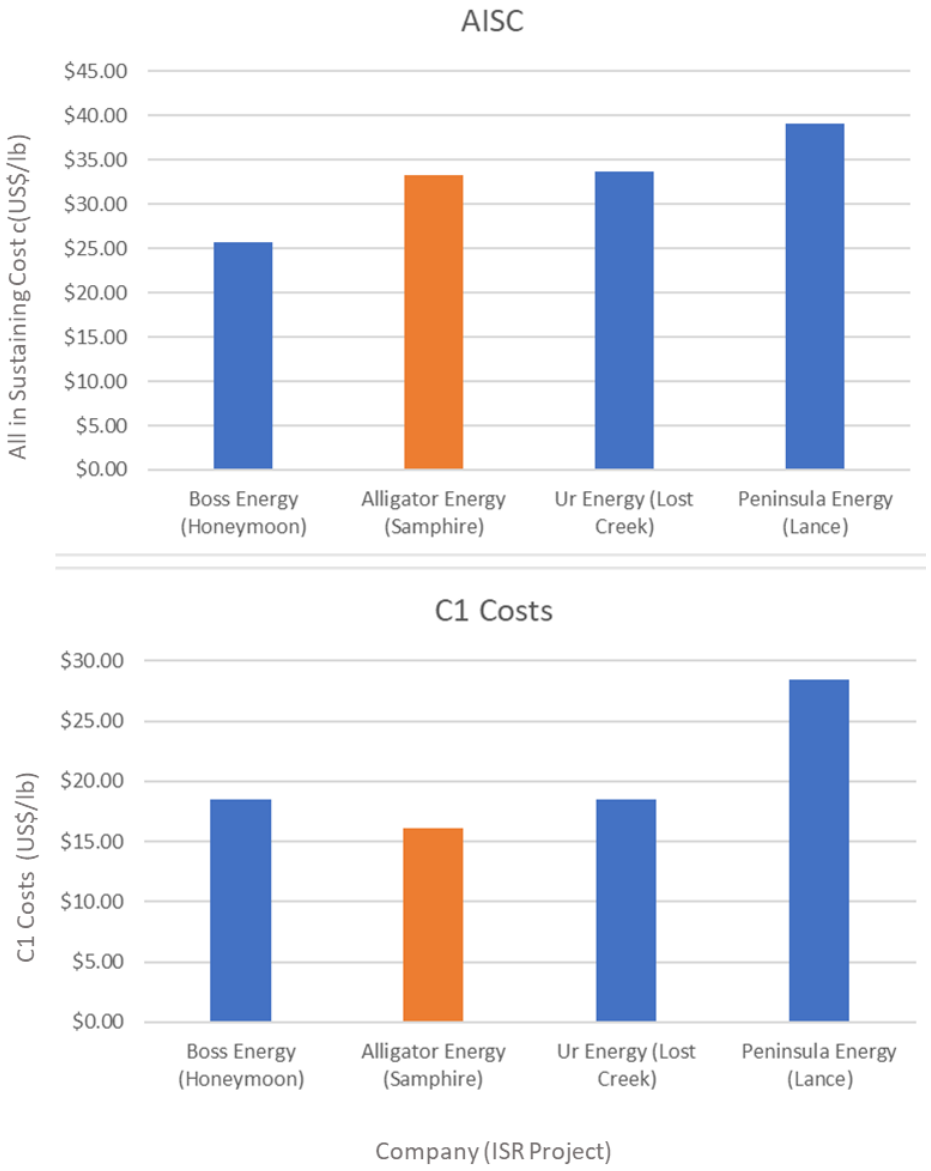
- **Updated Scoping Study delivers a 69% increase to the post-tax NPV_8 to A$257M.**
- Total uranium mining inventory at Samphire is 17.5 Mlbs U_3O_8, with 74% from the updated Indicated Resource category and an assumed recovery of 70%.
- LOM Production Target increased from 10.0 Mlbs U_3O_8 to 12.3 Mlbs over the same 12-year period, **with annual Production Target increasing 20% from 1.0Mlbs pa to 1.2Mlbs pa**.
- Enhanced Project economics at a forecast **US$75/lb U_3O_8 realised sales price** (previously US$65/lb) and an unchanged A$:US$ exchange rate of 70 cents:
  - **Ungeared, real post-tax NPV_8 of A$257M** (A$244 M - A$270M) up from A$152M
  - **Post-tax internal rate of return (IRR) of 42%** (40.0% - 44.1%) up from 29%
  - **Reduction in payback period by 30% to 2.45 years from start of production**
  - **Forecast net project cashflow (post Capex and tax) increase of 52% to A$467M** (A$443M - A$490M).
- Low initial capital expenditure forecast of **A$131M** (A$124M-A$138M) being an increase **of 2% to achieve the 20% step-up in the steady state annual Production Target -** including consistent application of contingency (30%) and a 5% escalation assumption (down from 10% previously) due to improved ability to estimate costs.
- Favourable average cash operating costs (C1) of **A$22.94/lb U_3O_8 (US$16.06/lb U_3O_8)** with a range of A$21.79/lb - A$24.09/lb) and **AISC (including transport, shipping, royalties and sustaining capital) of A$47.58/lb U_3O_8 (US$33.31/lb U_3O_8)** with range of A$45.20/lb to A$49.96/lb when compared to other ISR operations and restart projects.

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[1] *AGE ASX Release 14 March 2023, https://wcsecure.weblink.com.au/pdf/AGE/02643151.pdf*
[2] *AGE ASX Release 7 December 2023; 02751141.pdf (weblink.com.au)*

The increased confidence in the uranium mining inventory (lift in Indicated category) and improved financial outcomes continue to highlight the opportunity for a competitive low-cost uranium operation at Samphire using the low environmental impact In-Situ Recovery (ISR) method.

Samphire Project has similar AISC and C1 costs when compared to other ISR operations and restart projects as shown in the figure below.



Comparison of AISC and C1 Costs for ISR uranium mine development or restart projects (Data sourced from most recent published economics data by each Company).

The **Updated Scoping Study delivers a 69% increase to the post-tax NPV$_8$ to A$257M** driven by:

- An increase in the annualised Production Target which lifts revenues and free cashflows over a similar life-of-mine (LOM) assumption.

- Improved knowledge base and understanding through AGE progressing with field recovery trial (FRT) planning, procurement, resource modelling and refinement of process design leading to some modifications to the original design criteria.

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- Updating of other key inputs, principally commodity price and major component costs to reflect current market indicators.

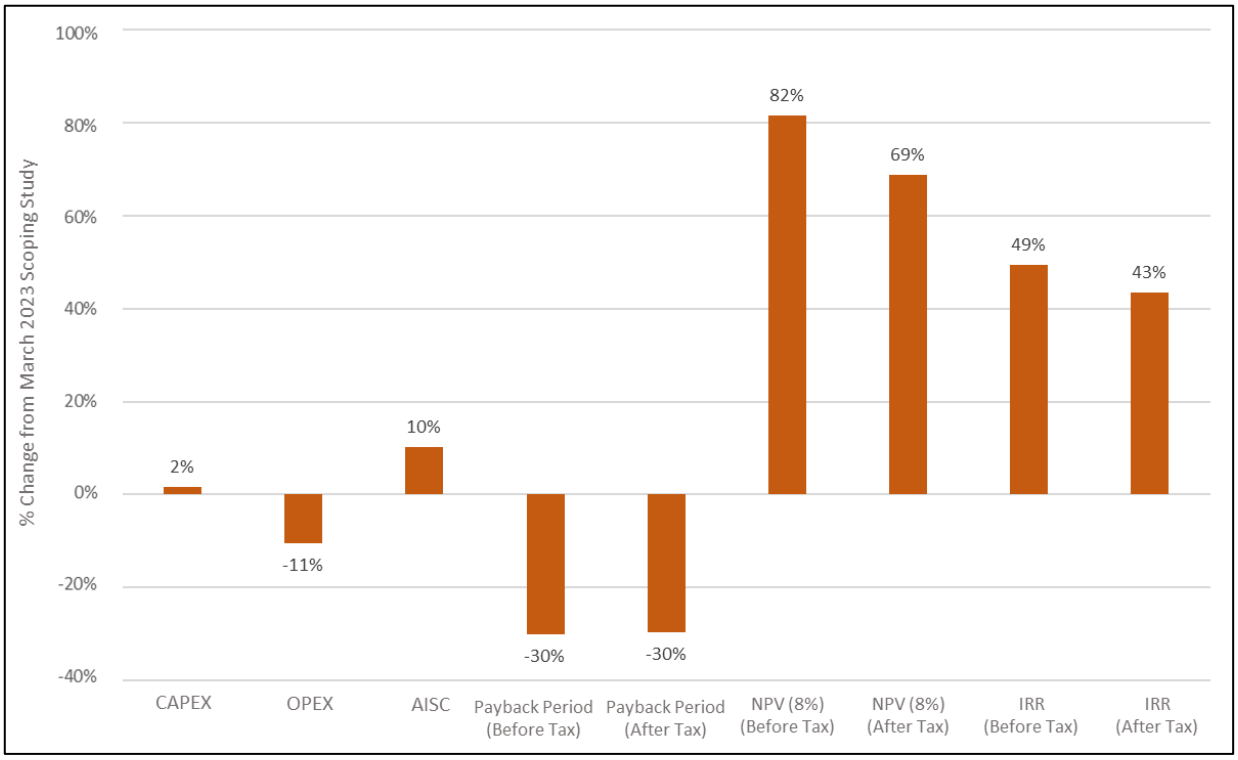


Chart of changes in Key Project Drivers from March 23 Scoping Study vs Updated Scoping Study (Dec 23).

Next Steps

- AGE's planned 2024 Field Recovery Trial (FRT) will assist in further de-risking and optimisation of the technical aspects of the Project. **Timing of the commencement of FRT site construction now appears likely to commence in the middle of 2024 (subject to receiving all approvals) due to the required approval processes for this important exploration / evaluation testwork.**

- Resource growth on Samphire will be targeted from the significant exploration potential as outlined in the recent Samphire Exploration Target Range (released 7 December 2023) - hence leading to the opportunity for an extended LOM and further growth in the annual Production Target.

- Several optimisation studies (water, power, roads, product transport and logistics, lowering emission, environment and social impacts etc.) to be concluded prior to commencement of a Feasibility Study targeted for the second half of 2024.

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Key opportunities to enhance project economics include:

- Field Recovery Trial in 2024 to:
  - Optimise field recovery rates, reagent make-up, plant feed grade, optimal ion exchange (IX) and elution chemistry and production well spacing/number requirements.
  - Optimise elution volumes and flowrates to reduce operating costs.
- Assessment of recycling chlorides for use in elution to reduce reagent costs.
- Assessment of application on single column elution to reduce IX CAPEX.
- Trade-off and optimisation studies covering logistics and utilities (power & water).
- Further exploration targeting additional uranium mineralisation, including the potential for the Plumbush prospect to be a future satellite deposit to the proposed Blackbush plant.
- Investigating the potential application of a low-cost/ low-impact drilling technique.

Alligator's CEO Greg Hall stated: *"The Updated Scoping Study outcomes have shown a continued improvement in Samphire Project economics as we increase resource mineralisation quality, increase production rate and refine the processing flowsheet and costs. An improving forward price assumption is also of great benefit.*

As major capital items were generally sized for a higher throughput in the initial Scoping Study, the relatively small capital increases were offset by reduced resource drilling during project construction, resulting in only a minor capital increase for this Updated Scoping Study. More accurate wellfield design parameters resulted in increased wellfield costs (sustaining capital) and hence an increased AISC. More detailed modelling of process parameters refined and reduced reagent costs, and further analysis work has reduced other C1 costs.

We will re-commence our resource expansion drilling around late January 2024 with a dedicated drill rig all year. Drilling will be initially focussed on Blackbush deposit resource expansion to the east, north and west, which has the greatest impact on future Project economics. This will be followed by a multi-year program of work to evaluate the 30% of palaeochannels which have some mineralised drill intersections, and the ~60% of known palaeochannels that have no drilling."

Our intent through the Field Recovery Trial, expanded resource, feasibility study and in time mining lease approvals is to have a robust economic project ready to feed uranium into the growing long-term market later this decade."

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Updated Scoping Study - Overview

1.0 Background

The Samphire Uranium Project (**'Samphire Project' or 'Project'**) is located 20km south of Whyalla in regional South Australia (**Figure 1**). The proposed Project in this updated Scoping Study is focused on the Blackbush Deposit only, based on ISR production of uranium oxide and encompasses:

- Establishment of access roads, power and ancillary infrastructure.
- Installation of production wellfields.
- Reverse osmosis (RO) plant to reduce the salinity of groundwater prior to ISR mining – required for improved Ion Exchange (IX) loading.
- ISR of uranium from wellfields.
- IX recovery of uranium from leaching solution using high-capacity Strong Base Anion (SBA) (salt tolerant) resin[3].
- Precipitation, calcining (drying) and packaging of Uranium Oxide Concentrate (UOC) into drums for transport from site and shipping from Port Adelaide.
- Environmental management and rehabilitation of mining areas.

The updated Scoping Study process design and engineering was undertaken by Wallbridge Gilbert Aztec (WGA), the independent consultant involved in the Scoping Study released on 14 March 2023. WGA applied the AusIMM Scoping Study Class 5 requirements in which the range of estimation accuracy is +/- 50%. Alligator Energy has been able to obtain updated costings for items such as reagents, production wells and some mechanical equipment items likely indicating a 30% to 50% range of accuracy.

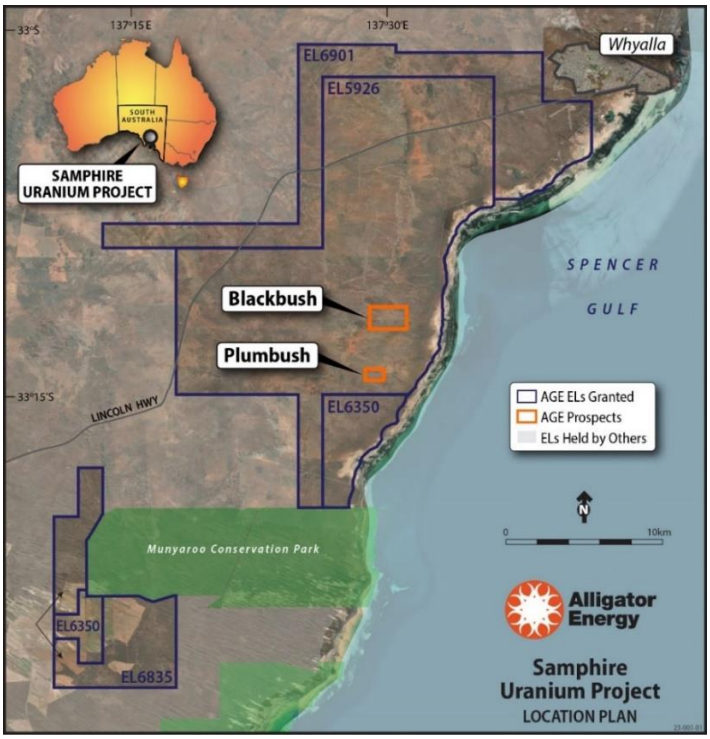


Figure 1: Samphire Project Location Map

[3] *Refer AGE ASX Release 9 December 2022, "Highly Successful uranium leach and extraction tests for Samphire Uranium Project" https://wcsecure.weblink.com.au/pdf/AGE/02610588.pdf*

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2.0 Key Modifying Factors

This release contains requisite information with respect to the select modifying factors and outcomes that have changed as part of the Updated Scoping Study. Relevant information pertaining to all other unchanged parameters from the Scoping Study (March 2023) can be found in Alligator Energy Ltd ASX release dated 14 March 2023, *Scoping Study confirms potential for a low cost ISR uranium operation at the Samphire Project".*

2.1 Revised Mineral Resource Estimate and Production Target

The first Mineral Resource Estimate (MRE) for the Blackbush deposit based on ISR was established in September 2022[4] and revised in March 2023[5] with the inclusion of additional drilling which was the basis of the March 2023 Scoping Study targeting 1Mlbs U_3O_8 production p/a with a ramp up and ramp down for a total Production Target of 10.0 Mlbs U_3O_8.

Resource infill drilling conducted during 2023 successfully converted an additional 2.2MLbs into an Indicated Mineral Resource category[6]. At 250ppm cut-off grade the MRE now stands at an Indicated Mineral Resource of 12.9Mlbs at 754ppm and an Inferred Mineral Resource of 4.6Mlbs at 447ppm, totalling 17.5Mlbs at 640ppm U_3O_8 (refer Mineral Resource Estimate table on page 27 of this report).

The Indicated portion of the MRE now comprises 74% of the total Blackbush Mineral Resource allowing the Update Scoping Study to draw on additional Indicated Resource for the proposed ISR mining schedule targeting an increased annual production rate of 1.2 Mlbs U_3O_8 production p/a for a total Production Target of 12.3 Mlbs U_3O_8 over a 12-year period (**Figure 2**). Annual Production Target of 1.2M/lbs U_3O_8 per annum is forecast to be achieved in year three of the Life of Mine and a decline will occur in the last two years of production.

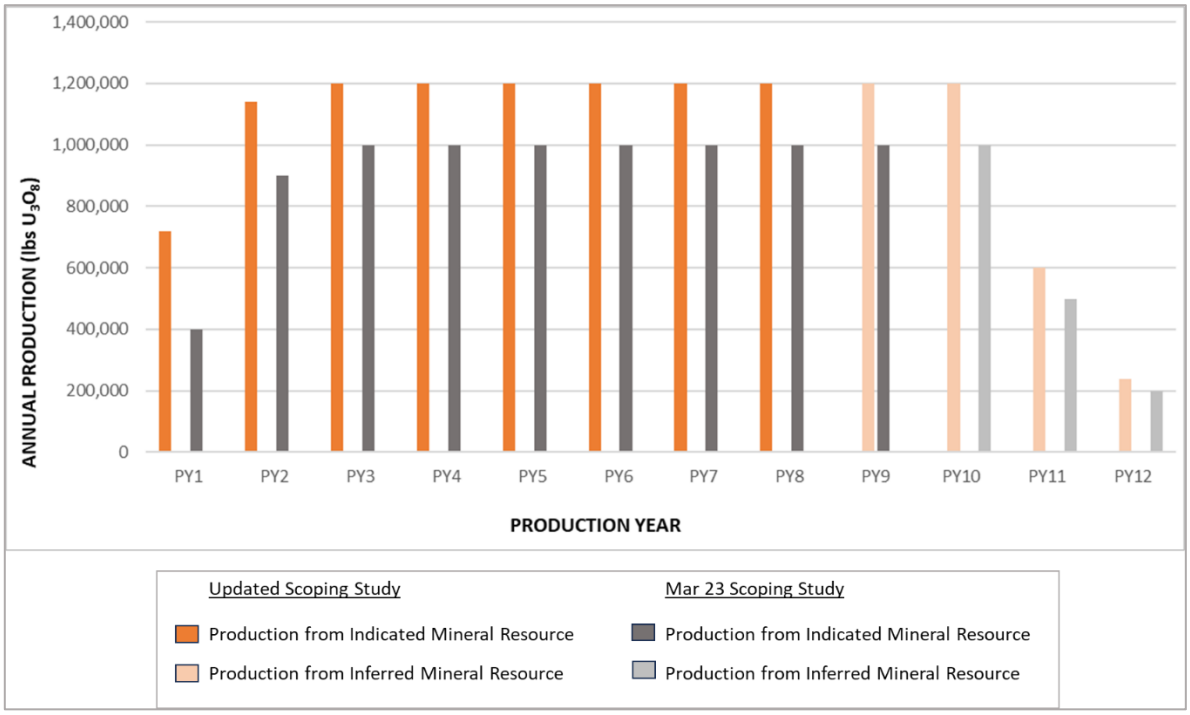


Figure 2: Production profile comparison (Updated vs Mar 23 Scoping Study).

[4] *AGE ASX Release 1 September 2022: 2022-08-31 Resource-ASX announcement FINAL (weblink.com.au)*
[5] *AGE ASX Release 2 March 2023: 02639068.pdf (weblink.com.au)*
[6] *AGE ASX Release 7 December 2023: https://wcsecure.weblink.com.au/pdf/AGE/02751141.pdf*

2.2 Key Physical Parameters

The key changes in parameters compared to the March 2023 Scoping Study are summarised in Table 2 below.

Table 2: Comparison of Key Scoping Study Physical Parameters (Dec 2023 vs Mar 2023 Scoping Studies).

Key Physical Parameters	Unit	Updated Study (Dec 2023	Scoping Study (Mar 2023)	Change
Operations				
Construction period	months	18	18	-
Annual production rate	lbs U_3O_8 pa	1,200,000	1,000,000	200,000
Initial production life	years	12	12	-
Processing				
Average grade of Mineral Resource	ppm U_3O_8	640	720	(80)
Estimated plant feed grade from wellfield (PLS)	ppm U_3O_8	110	100	10
Forecast overall uranium recovery[7]	% / Pore Volumes	70 / 30	70 / 100	- / 70
Output				
Total Production Target	Mlbs U_3O_8	12.3	10.0	2.3

2.3 Revised CAPEX Estimates for Increased Annual Production Target

A 2% increase in CAPEX (Table 3) was driven by resizing and recosting of equipment due to increased or decreased size or flowrates. Commensurately, changes in the IX configuration and sizing and the elution process chemistry required a commensurate increase in tank capacity.

Substantial savings drivers include:

- Reduction in wellfield delineation drilling in the first 3 years was included as minimal further drilling will be required to site location of production wells due to the current drill density nearing 'fit for purpose'.
- Optimisation of wellhouses design to a portable modular design.
- Decrease in wellfield conditioning volume, sequencing and duration, reduced the number of wellhouses required.

The opportunity to include updates based on improved understanding of project parameters were included along with several equipment additions (e.g. in-house laboratory, disposal water treatment plant, on-site waste facility). The table below identifies changes to major items over $1M with all CAPEX changes summarised in **Figure 3**.

[7] *This parameter change governing wellfield recovery was based on additional theoretical scenario modelling undertaken by AGE.*

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Table 1: CAPEX changes to items over $1M (Dec 2023 vs Mar 2023 Scoping Studies).

Changes > $1m	A$ (M)
Previous Scoping Study (1Mlbspa plant)	**129.3**
- Major equipment items	3.5
- Water treatment plant (RO) - conditioning	1.0
- Water treatment plant (RO) - disposal	(1.5)
- Resin first fill	2.2
- Wellhouse	(2.0)
- Initial drilling	(4.5)
- Other items < $1m	3.3
Updated Scoping Study (1.2Mlbspa plant)	**131.3**

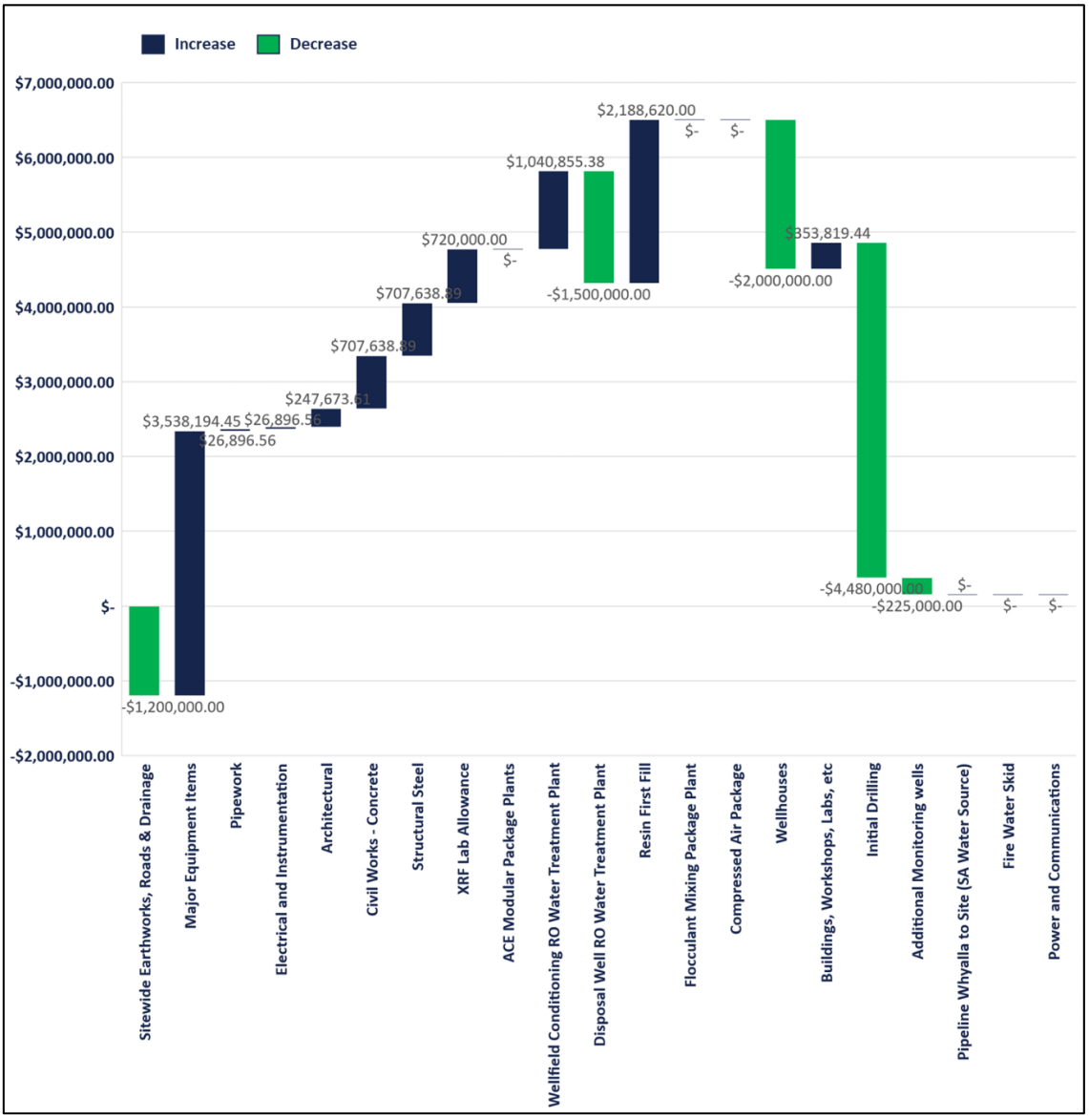


Figure 3: Waterfall chart of changes to CAPEX.

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2.4 Revisions to OPEX & AISC

An 11% decrease in the OPEX (C1) unit cost resulted from a revision of transport and shipping costs as the initial scoping study reflected costs more typical of a remote site as opposed to realised savings due to the proximity of the Project to Whyalla and the Port of Adelaide where permitted export routes exist and roads are mostly bitumen.

The 10% increase in AISC unit cost was driven by an increase in the number of production wells required because of the following:

- Improved understanding of the orebody resulting in a reduction of the open interval (screen size) from average of 5m to 2m for each production well in line with average thicknesses of mineralised intervals to achieve efficient lixiviant sweep across multi-levelled zones of mineralisation.
- The change above decreased well flow rates by 40% thus requiring an increase in the number of production wells online at any one time to achieve the production target (Note: the FRT will assist in optimising this for the feasability study).
- A change in the parameters governing wellfield recovery based on additional modelling by AGE from 70% over 100 pore volume exchanges[8] (PVEs) to 70% recovery over 30 PVE's meaning additional wells are reqiured due to recovery being achieved at a faster rate than contemplated in the previous study.

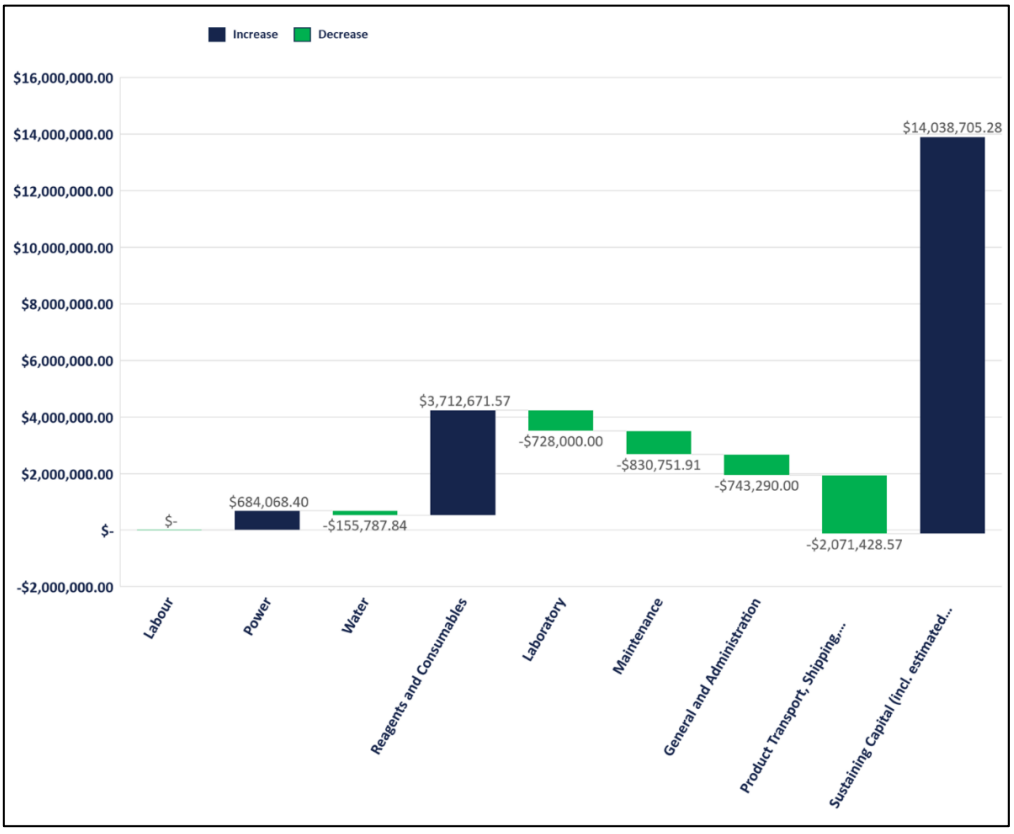


Figure 4: Waterfall chart of changes to Operating and AISC

[8] *Pore Volume Exchange is the volume of water contained within a given volume of porous media, in this case Kanaka sands. Pore Volume Exchange is the replacement of this volume of water with another fluid, in this case by RO permeate or mining fluid.*

3.0 Key Economic Outcomes

Projected economics for the Samphire Project from the Updated Scoping Study are outlined in **Table 4**[9]. A UOC sales price of US$75 per pound was applied (c.f. US$65 in the previous study). The spot uranium price at time of finalising this report was around US$82.75 per lb U_3O_8 and the long-term (LT) price published by market commentators had moved up to US$66 per lb U_3O_8. This LT price is based on industry information from some long-term contracts with structured formula prices that have a fixed price component in the mid to high US$60's per lb. Industry information also highlights that a LT pricing formula based on spot price with an increasing floor price, and high or no ceiling price are also being agreed. This puts the forward pricing curve for those LT contracts well above the current LT price.

It is against this improving supply-demand and uranium price backdrop that Alligator Energy is working through the necessary steps to determine the potential for our Samphire Project. Alligator has, through and with its uranium marketing agent, Kevin Smith of Traxys North America, met with and introduced the Company to a range of nuclear utilities in Europe and the US. All of these parties are interested in new future uranium supply. From these meetings, Alligator Energy is now on the tender list for Requests for Proposals for Uranium Supply from a range of nuclear utilities. Importantly the Company has engaged with a few utilities who are keen to put in place early offtake contracts conditional on project approvals and financing.

Based on the forward-looking curves for uranium supply / demand, the improving price, and the technical, approvals and development path for Samphire, we believe the base case price of US$75 per lb U_3O_8 used in this Scoping Study is realistic for offtake contracts in the time frame of the Project.

The financial estimates were prepared under the following assumptions:

- A real discount rate of 8%.
- An exchange rate of 1 AUD to 0.70 USD.
- Costs are quoted in real Australian Dollar September-November 2023 terms with minimal exposure of both the Capex or Opex costs to fluctuations in the A$:US$ exchange rate.
- Cash flow periods are expressed on an annual calendar year basis.
- Total Production Target over the Life of the Mine of 12.3M/lbs U_3O_8.
- Annual production target of 1.2M/lbs U_3O_8 per annum will be achieved in year three of the Life of Mine and a decline will occur in the last two years of production.
- Uranium sales revenue is assumed to be realised approximately three months after production.
- All costs are stated exclusive of GST.
- South Australian royalties of 5% have been applied to the pre-tax cashflows with no royalty holiday assumed.
- Australian corporate tax rate of 30% has been applied to pre-tax but post-royalty cashflows.
- The Company's current accumulated carried forward tax losses together with an estimate for additional eligible pre-production losses has been assumed as being available to offset against taxable income in the early years of the production profile.
- All uranium quantities are stated in pounds (lbs).
- A one-off closure / end-of-mine cost is included within year 12 of $5M.

[9] *Note this study is in accordance with the AusIMM Scoping Study Class 5 requirements in which the range of estimation accuracy is +/- 50%. Alligator Energy have updated costings for items such as reagents, production wells and some mechanical equipment items likely indicating a 30% to 50% range of accuracy.*

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- A contingency of 30% applied to direct costs (no contingency applied to operating costs), and
- Project escalation of 5% applied to direct costs.

Key economic attributes from the Updated Scoping Study include:

- Enhanced Project economics at a forecast US$75/lb U_3O_8 realised sales price:
  - Ungeared, real post-tax NPV_8 of A$257M (A$244 M - A$270M) from $152M.
  - Post-tax internal rate of return (IRR) of 42% (40.0% - 44.1%) from 29%.
  - Reduction in payback period by 30% to 2.45 years from start of production.
  - Forecast net project cashflow (post Capex and tax) increase of 52% to A$467M (A$443M - A$490M).
- A 69% increase to the post-tax NPV_8 (now A$257M) driven by:
  - An increase in the annualised Production Target which lifts revenues and free cashflows over a similar life-of-mine (LOM) assumption.
  - Improved knowledge base and understanding through AGE progressing with field recovery trial (FRT) procurement, resource modelling and refinement of process design leading to modifications to the original design criteria.

- Low initial capital expenditure forecast of **A$131.3M** (A$124M-A$138M) being an increase of **2% to achieve the 20% step-up in the steady state annual Production Target -** including consistent application of contingency (30%) and a 5% escalation assumption (down from 10% previously) due to more accurate basis for estimating costs.
- Average cash operating costs of **A$22.94/lb U_3O_8 (US$16.06/lb U_3O_8)** with a range of A$21.79/lb - A$24.09/lb) and **AISC (including transport, shipping, royalties and sustaining capital) of A$47.58/lb U_3O_8 (US$33.31/lb U_3O_8)** with range of A$45.20/lb to A$49.96/lb.

Table 4: Key Economic Outcomes (LOM)

Metrics	Unit	Updated Study (Dec 2023)	Scoping Study (Mar 2023)	Change
Price inputs				
LOM average uranium price	US$/lb U_3O_8	75	65	↑ 10
A$:US$ (revenue calculation only)	A$	70 cents	70 cents	-
LOM average uranium price – A$	A$	107	92	↑ 15
Valuation, indicative returns and ratios		**Mid-point**		
NPV_8 (post-tax, real, ungeared)	A$M	257	152	↑105
IRR (post-tax, real, ungeared)	%	42	29	↑ 13
Capex	**A$M**	**131.3**	**129.3**	**↑ 1.9**
Payback period (post-tax from first production)	**Years**	**2.45**	**3.5**	**↓ 1.05**
Cashflow summary				
Sales revenue (gross)	A$M	1,318	929.0	↑ 389
Cash operating costs	**A$M**	**297.5**	**268.0**	**↑29.5**

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Transport, shipping, marketing and royalties	A$M	(94.8)	(113)	↓18.2
Sustaining capital (incl. ongoing wellfield development) – net of residual	A$M	(205.8)	(62.7)	↑143.1
All in sustaining costs (AISC)	**A$M**	**598**	**433**	**↑ 165**
Pre-production Capex	A$M	(131.3)	(129)	↑ (2.3)
Tax Paid	A$M	(133.5)	(61)	↑ (127.5)
Net Cashflow (post-tax)	**A$M**	**467**	**306**	**↑ 161**
Unit operating costs				
Cash Operating Costs (ex-royalties)	**A$/lb U_3O_8**	**22.9**	**25.6**	**↓ 2.7**
AISC	**A$/lb U_3O_8**	**47.6**	**43.2**	**↑ (4.4)**
ASIC in US$	**US$/lb U_3O_8**	**33.3**	**30.2**	**↑ (3.1)**

Key highlights from the Scoping Study update include:

- Simple, low impact mining technique which reduces both capital and operating costs, reduces environmental impact, and is easier to rehabilitate.
- Robust project economics with expansion potential from resource extension and exploration upside.
- Low initial capital cost estimate, despite inclusion of significant contingency and escalation.
- Globally competitive operating cost profile.
- Significant optimisation opportunities.
- Field Recovery Trial (FRT) now likely to commence construction in mid-2024 (subject to receiving all approvals) to confirm parameters to be used in a full feasibility study.

4.0 Funding

Alligator believes that the Updated Scoping Study continues to provide reasonable grounds to believe that the Samphire Project will be an economically viable project to enable funding to be procured for development and operation. To achieve the range of outcomes indicated in this Scoping Study, pre-production capital funding of in excess of A$170M (including working capital) is expected to be required.

A prerequisite for Alligator to attract future funding, in the form of both debt and equity, will require the completion of a bankable feasibility study that demonstrates at a higher confidence level that sufficient financial and technical outcomes exist to satisfy the providers of such funding.

There is no certainty that Alligator will be able to source the required amount of funding. It is also possible that such funding may only be available on terms that may be dilutive to or otherwise affect the value of Alligator's shares. It is also possible that Alligator could pursue other value realisation strategies such as a sale, partial sale or joint venture. This could materially reduce the Company's proportionate ownership in the Project.

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5.0 Samphire Project: NPV Sensitivity Analysis

A sensitivity analysis was undertaken on several key variables – UOC sales price, A$:US$ exchange rate, Opex and Capex. In assessing the sensitivity of the post-tax Project economics each of the parameters shown has been varied independently of the others. As per the original study, the sensitivity analysis highlights that only in one instance within the selected ranges would the NPV be less than zero (**Figure 5**).



Figure 5: Sensitivity analysis

6.0 Development Schedule

A significant number of steps will be required to advance the Samphire Project through to first production (which has not changed from the previous study), including:

- Ongoing drilling to continue resource extension.
- Receipt of approvals for a Retention Lease and a Program for Environment Protection and Rehabilitation (PEPR) to commence FRT site construction and operation.
- Successful completion of a pilot FRT trial.
- State and Federal Government approvals to obtain a Mining Lease.
- Initial conditional offtake agreements.
- Completion of a Feasibility Study to a standard that satisfies potential lenders.
- Detailed design and procurement.
- Financing – leading to FID.
- Construction and commissioning, and
- Ongoing production (estimated to commence later this decade).

7.0 Next Steps

- A Retention Lease (RL) is required for the purposes of conducting the FRT. The South Australian Department for Energy and Mining (DEM) has accepted the RL application and was released for public consultation between 23rd August and 20th September 2023. At time of finalising this study Alligator was awaiting the DEM's formal advice on the public submission documents and the various SA Government Department's submission documents. Alligator will provide response to the public and Government submissions once this formal advice is received, which is the next step in granting of the Retention Lease. Once the RL is granted the Program for Environment Protection and Rehabilitation (PEPR) will be submitted for Government agency assessment and approval, which is likely to push the commencement of FRT construction to mid-2024.

- The FRT will greatly assist in further de-risking technical aspects of the Project. Fabrication of the FRT pilot plant is occurring at Adelaide Control Engineering workshops in Adelaide, with expected completion during January 2024, followed by initial wet commissioning and testing prior to shipment to the Company's Whyalla yard.
- Ongoing engagement with all stakeholders is occurring to obtain further understanding of their concerns, questions and issues around both the FRT and a potential future Project. The Company will acknowledge and take account of these and develop mutually acceptable solutions and outcomes in going forward. An important part of this is also developing an understanding by stakeholders of the benefits the potential Project will bring to the region, including; additional diversified business opportunities; local direct employment and training (already occurring); Company support for local community; mutually beneficial engagement with pastoralists related to our focussed rehabilitation and weed management work (already occurring); development of new and innovative techniques for operating the Project.
- Several optimisation studies (water, power, transport, logistics etc.) to be concluded prior to commencement of a feasibility study. In addition, AGE are looking for ways to develop a low emission, low environmental and social impact operation and will commence early work on these evaluations and extend this in parallel to the feasibility study.
- AGE's Exploration Target Range (announced 7 December 2023) has identified walk-up targets for multi-year resource extension drilling commencing late January 2024 to advance toward extending life of mine.

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Summary of Key Assumptions Materially Unchanged from March 2023 Scoping Study

Tenement Status

The Blackbush deposit is located on Exploration Lease (EL) 5926. The tenement is 100% owned by a subsidiary of Alligator Energy Ltd (S Uranium Pty Ltd). Alligator Energy is the operator of the tenement. The EL overlies a perpetual crown lease (Moonabie Pastoral Lease) over which Native Title is extinguished. Alligator Energy has an existing access agreement with the pastoral lease owner, which provides access and compensation for exploration, and provides the right for access to land for a future mining lease, subject to negotiation. A Native Title Mining Agreement (NTMA) for Exploration exists between S Uranium Pty Ltd (100% subsidiary of Alligator) and the Barngarla Determination Aboriginal Corporation (BDAC) under which Alligator executes its work programs.

Geological & Hydrogeological Setting

The has been no material change in the interpretation of the geological and hydrogeological settings.

Mining Method & Schedule

Both Scoping Studies consider the Blackbush Deposit to be mined using the ISR method. The life-of mine (LOM) Production Target in this updated Scoping Study differs from the March 23 Scoping Study (i.e. 12.3 Mlbs as opposed to 10 Mlbs over 12 years with ramp up and ramp down) which has changed the Capex, Opex and sustaining capital as described in the earlier body of this announcement. There is no change to the well pattern arrangement (i.e. 5-spot patterns) or sequencing of wellfield areas as described in the March 2023 Scoping Study.

Metallurgical Testwork

No further metallurgical testwork has been undertaken since the March 23 Scoping Study. Testwork undertaken by Australian Nuclear Science and Technology Organisation (ANSTO) included mineralogical analysis, leach tests and ion exchange (IX) resin loading studies using a Strong Base Anion (SBA) salt tolerant resin. The testwork results highlighted the following and were applied in the Process Design Criteria (PDC) in both Scoping Studies.

1) Uranium is present primarily as coffinite, with minor amounts of uraninite and uranophane. The only other minerals present in significant quantities were quartz, comprising 96.3% and pyrite (1.1%).
2) The highly saline groundwater at Samphire does not impact uranium leaching into solution, with diagnostic laboratory leach results of ≥ 98.6% extraction, showing a high level of leachable uranium present. A 70% recovery was thus applied in both studies in line with recovery rates published from other ISR operations.
3) The leaching performance of the uranium ore in an ISR scenario simulation over 33 days, using Samphire ground water from the mineralised zone adjusted to a pH of 1.5 showed high uranium extraction into solution between 92.9% and 96.3%.

4) Acid consumption was very low and a relatively low iron addition was required initially for effective uranium leaching.

5) IX testwork showed loading efficiency of uranium is negatively impacted by higher groundwater salinity. AGE is proposing that wellfield ground water pre-conditioning be utilised to lower chloride (Cl) levels from ~30g/L Cl to ~10 g/L Cl using reverse osmosis (RO) treatment of groundwater prior to ISR extraction.

Process Flowsheet

A comprehensive PDC was developed for the purposes of defining the key processing assumptions for both scoping studies to guide flowsheet, mass and water balance development to constrain plant requirements and forecast potential production outputs. The PDC was developed by WGA in consultation with Alligator Energy. Some minor changes to the PDC were applied in the updated Scoping Study as a result of the increased Production Target. Those material changes have been discussed in the body of this report and also highlighted in **Table 5** below. The process flowsheet (**Figure 6**) remains unchanged in the updated Scoping Study with the exception of to a reagent change to ferric sulphate for wellfield conditioning as opposed to ferric chloride in the original Scoping Study (to reduce chloride addition into the system).

Table 5: Process Design Criteria Summary – High Level Summary, Updated Scoping Study vs March 23 Scoping Study

Area	Item	Value (Updated Scoping Study)	Value (March 23 Scoping Study)	Units	Source
General	Uranium In Situ	17,142,857	18,100,000	lb U_3O_8	AGE
	% Uranium Recoverable	70	70	%	AGE / WGA
	Plant Recovery Target	98	98	%	AGE / WGA
	Plant Design Life	12	12	yrs.	AGE / WGA
	Form of Uranium Recovered	U_3O_8	U_3O_8	N/A	AGE / WGA
Wellfields, PLS and BLS	Plant Feed Grade in solution	110	100	ppm U_3O_8	AGE / WGA
	Product Grade	98 - 99	98 - 99	% U_3O_8	Assumed
	Target Production Rate	1,200,000	1,000,000	lb/annum	AGE / WGA
	Wellfield Pattern Type	5-spot	5-spot	wells	AGE / WGA
	PLS Nominal Flow	700	585	m^3/hr	Calculated
	Wellfield Conditioning Volume	1.5	3	Pore Volumes (PVs)	Assumed
	PLS / BLS Pond Residence Time	12	48	hr	AGE / WGA
	Target pH	1.5 – 1.8	1.5 – 1.8		ANSTO Testwork
	Target ORP	450 – 550	450 – 550	mV	ANSTO Testwork

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Area	Item	Value (Updated Scoping Study)	Value (March 23 Scoping Study)	Units	Source
	98% Sulfuric Acid Rate	0.3	0.24	m^3/hr	AGE
	70% Hydrogen Peroxide Rate	0.13	0.10	m^3/hr	AGE
IX	Resin Type	Lewatit TP107	Lewatit TP107		ANSTO Testwork
	Resin Loading	50	50	g U_3O_8 / L_{WSR}	ANSTO Testwork
	Configuration / Number of Columns	Lead (3) – Lag (3) – Elute (3)	Lead (3) – Lag (3) – Elute (3)	m^3/ m^2 h	ANSTO Testwork
	Column Volume / Resin Volume	39.4 / 21.9	25 / 17.4	m^3	Calculated
	Lixiviant Flow / Column	10.67	11.3	BV/h	Calculated
	Uranium Conversion (pre-elution) *	Na_2CO_3	Na_2CO_3		ANSTO Testwork
	Eluant Composition *	NaCl + Na_2CO_3	NaCl + Na_2CO_3		ANSTO Testwork
Precipitation	Hydrogen Peroxide Rate	0.26	0.26	kg/kg U_3O_8	Database
	Caustic Soda Dosing Rate	0.57	0.57	kg/kg U_3O_8	Database
Dewatering & Calcining	Centrifuge Solids Density	75	75	%	Assumed
	Dryer Temperature	800	800	C	Assumed
Reagents	Reagent Delivery Method	Bulk Tanker or Bulk Tipper	Bulk Tanker or Bulk Tipper		Assumed
	Onsite Reagent Storage Time (H_2SO_4, H_2O_2, Na_2CO_3, NaCl, NaOH, $FeCl_3$)	10	10	d	AGE/WGA
Groundwater	TDS	47000	47000	mg/L	AGE
	Cl	26000	26000	mg/L	AGE
RO Plant	Yield (to permeate)	40	40	%	Assumed

*The absolute values of these parameters are not shown as commercial in confidence.

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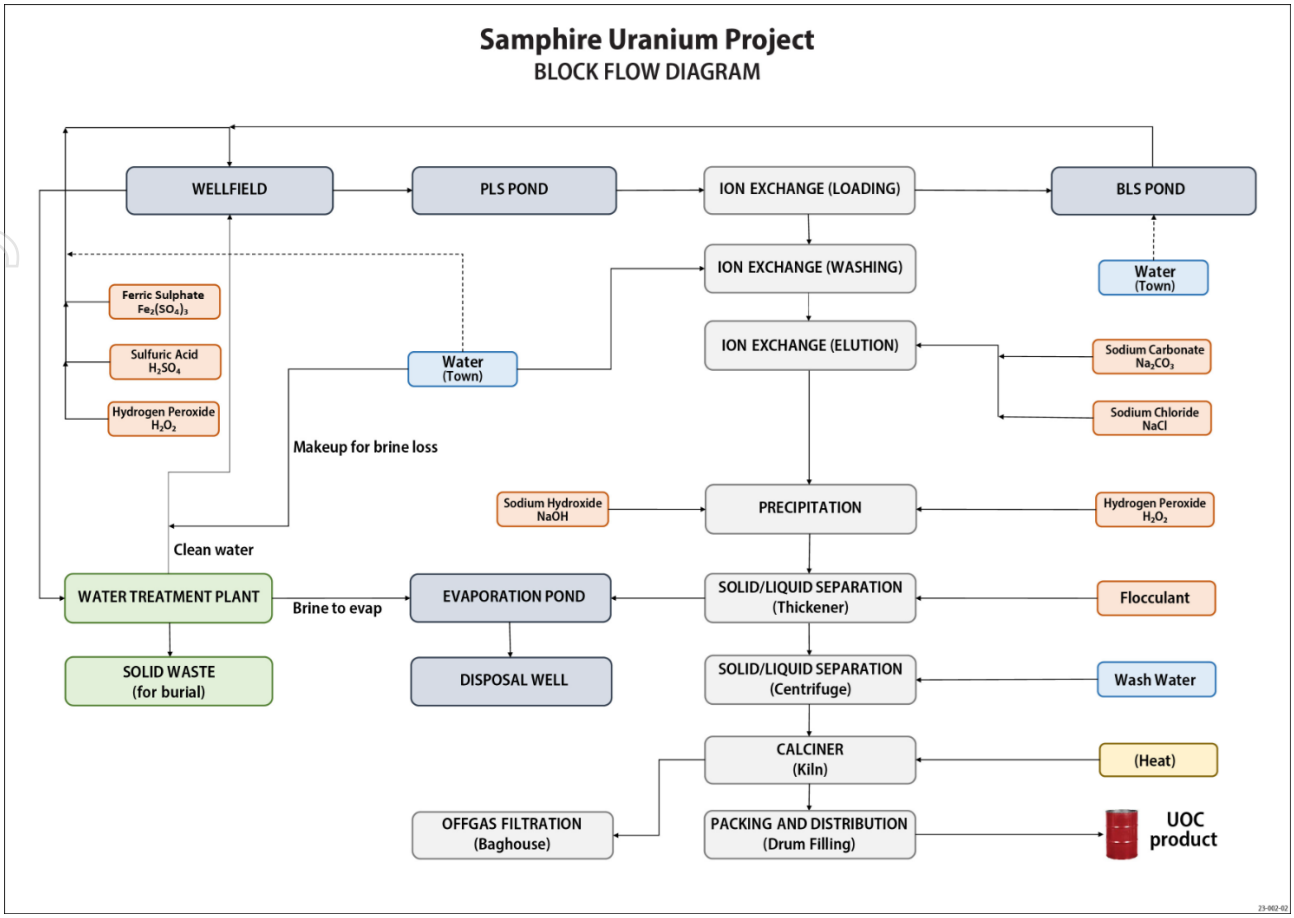


Figure 6: Process Flow Sheet Summary

Site & Plant Layout

There is no change to the site layouts presented in the March 23 Scoping Study.

Environmental Assessment

Numerous baseline studies (climate, flora, fauna, hydrology, soil, groundwater, seismicity, air quality, amenity, noise, heritage) have been undertaken since 2007 to support the previous owners draft Retention Lease (RL) Proposal in 2010-2011. In consultation with South Australian and Commonwealth Government regulatory agencies, Alligator Energy has updated these studies for an RL application (currently in progress) to undertake a small ~3 extractor FRT in 2H 2024. (Refer to ASX announcement on 25 October 2023 “Samphire Uranium Project – resource drilling complete and Mineral Resource Estimate underway”). Environmental baseline studies will continue through to the closure of the FRT and then expanded if a decision to proceed with a full-scale operation at Blackbush proceeds. Such studies will inform important inputs into a Mining Lease application and referral of the project under the Environment Protection and Biodiversity Conservation (EPBC) Act 1999 (Cwth).

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Stakeholder Engagement

Since announcing the acquisition of the Samphire Project in June 2020, Alligator has engaged frequently and transparently with many stakeholders. These stakeholder and community engagement activities have included (so far) 97 meetings and related correspondence with the local and adjacent landholders, over 20 individual meetings with Barngarla Native Title Holders, Federal and State local Members of Parliament, various State Government departments, Whyalla City Council and peak body and business representatives. Alligator has also held two public meetings and drop-in information sessions attended by approximately 60 people, comprising members of the public and a cross section of stakeholders.

During these interactions we have introduced Alligator Energy and the substantial uranium exploration, development, operations, environmental and rehabilitation, and marketing experience that the Company contains. We briefed stakeholders on our initial on-ground drilling and geophysics programs at the Blackbush deposit within Samphire, and more recently on the planned pilot Field Recovery Trial (FRT) and the requirement to apply for a Retention Lease (RL) from the DEM to enable a higher level of monitoring of the trial. Alligator's RL application process has included a public consultation on its application in which 13 submissions were received from the public. In total 85% of submissions were received from community members with the remainder from NGO's. AGE is now considering and will respond to public submissions as next steps toward granting of the RL.

The Project's proximity to the City of Whyalla, which currently provides the workforce for the extensive Whyalla steelworks, port and surrounding mines, is advantageous to Alligator in terms of current and future workforce resourcing. As well as engaging with the Whyalla business community about the Project, we have also utilised ~30 businesses in Whyalla for services and supplies to date and expended over A$1.6 million locally since late 2021.

In our discussions so far, in general the Whyalla community has been very supportive, with a recognition that diversification of Project and business opportunities is vital for the city, plus the 60 to 70 local jobs that the Project could create. South Australia is one of Australia's most uranium supportive States with established regulatory procedures, uranium transport logistics, and a number of operating/approved ISR projects. Many stakeholders have either worked in or had business interactions with uranium mining projects also.

A Heritage Survey was conducted over a wider area at Samphire on 29 August 2023 with representatives from the Barngarla Determination Aboriginal Corporation (BDAC). This survey now allows for further exploration drilling targeting potential additional roll-front uranium mineralisation outside of the existing Blackbush mineralisation envelope.

Closure

Staged mine closure and rehabilitation activities have been incorporated into the basis of estimate for the Scoping Study. Rehabilitation of resource and exploration drill holes is ongoing with that work. Commencement of wellfield rehabilitation will occur as soon as practical after the completion of mining of a wellfield (these may last from 12 to 24 months depending on quantity of contained uranium), with this continuing through the life of the Project. Final closure of mining operations will largely be limited to the most recent active mining area and the dismantling of plant surface facilities.

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Infrastructure

On-site

This Scoping Study includes the following on-site facilities to support both mining and processing operations with no significant change to the original study. Main processing and infrastructure components include:

- ISR Wellfields.
- Solution ponds.
- Groundwater & BLS bleed treatment plant.
- Reagent storage facilities.
- Processing plant (including ion exchange, precipitation and thickening).
- Dewatering, Calcining (drying) and packaging plant.

Supporting facilities/infrastructure include:

- Electricity transmission line.
- Groundwater monitoring network.
- Laboratory & workshops.
- UOC storage area
- Administration building.
- Messing facilities.
- Sewage treatment plant.
- Waste disposal facilities.
- Reverse osmosis (RO) plant, raw and potable water tanks.
- Site access roads.

Power

The average plant load continues to be estimated at 1.2 MW based on the mechanical equipment list. An allowance of up to 5 MW has been assumed to allow for contingency and future expansion.

Given the proximity of the plant to the city of Whyalla, and the relatively low power demand of < 5 MVa, the most viable power supply option appears to be a connection to the existing network. Both scoping studies includes a new 33kV power line from Whyalla to the site. This overhead line is expected to be approximately 35km in length along an existing easement for the majority of the route. The next phase of the Project (additional infrastructure study, or feasibility study) is expected to include:

- SA Power Networks initial investigation into source / start of power line and route.
- Investigate whether an 11kV or 33kV line is required.
- Pricing agreement investigation / capital split.
- Determine potential for access to renewable power from external future planned projects in the area (hydrogen, wind, solar).

Water

The most viable water supply identified is an existing pipeline that terminates on the Mullaquana Road just outside Whyalla. Preliminary calculations identified the need for approximately 25 - 50 m^3/hr of water. The pipeline allowed for as part of both scoping studies have significant latent capacity well in excess of mass and liquor balance requirements. A new pipeline approximately 20 km in length would be required to connect the plant to the existing water source. The new pipeline

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would be poly (HDPE) and is assumed at this stage to be installed above ground. This assumption will require further validation during the next phase of the Project.

As a part of the water supply study, SA Water was contacted to assess two key items; namely whether a new connection is possible and if the quantity of water required is available at the identified location. The preliminary assessment by SA Water found the following:

- A new connection to the end of the pipeline on Mullaquana Road is highly likely. A definitive answer requires a full assessment which will not be conducted until the Project is further into the planning phase.
- The 2022-23 water use price for commercial customers was used for Opex calculations with an appropriate price increase to allow for operation and maintenance of the pipeline, as well as minor upgrades to the upstream SA water system.
- The Alligator Energy – Samphire Project has been added to the list of potential clients that may need water in the region. Thus, the required supply is now considered as a possible future demand.

Roads

For site access, an existing Council maintained road extends along Mullaquana Road, becoming Eight Mile Creek Road, to the pastoral property gate through which access to the site is gained. Alligator will work with both the pastoralist whose property the Blackbush deposit sits on and the adjacent pastoralists, plus the Barngarla group to firm up preferred road access into the site. Currently Alligator and the pastoralist associated with the Blackbush deposit have agreed a 50m corridor for the planned pilot Field Recovery Trial and this may become the main access for a future production facility.

Road traffic numbers have been estimated, and while not excessive (this is a relatively compact operation), these will be subject to engagement with pastoralists and residents along Mullaquana and Eight Mile Creek Roads. There will be regular weekly truck movements delivering processing plant consumables, and approximately two trucks per month taking a 20ft shipping container each of drummed and packaged UOC from the site. Employees operating on the plant will mostly be Whyalla based, hence there will be a number of light vehicles (estimated at 8-10) and a mini-bus taking employees to and from the site each shift.

Product Transport and Shipping

The final product of a future potential ISR uranium operation as outlined in the Study is a Uranium Oxide Concentrate (UOC), containing approximately 89-99% U_3O_8. At the product packing section of the processing plant, the product will be drummed into 200 litre steel drums, sealed according to ASNO nuclear safeguards standards, and the drums packed and secured into a standard 20ft shipping container containing 20t of UOC. The production from the proposed 1.2 Mlbs U_3O_8 p.a. plant equates to approximately 454 metric tonnes of UOC, or around three (3) as opposed to the 2 containers per month of product calculated in the March 23 Scoping Study.

Following receipt of relevant approvals and permits required for the shipment and export of UOC, product will be transported by road train from the Samphire Project along Eight Mile Creek Road / Mullaquana Road, through Whyalla to Port Augusta, and then on to Port Adelaide along Port

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Wakefield Highway for shipping by third parties to a converter facility. The Port Augusta-Port Adelaide route is currently permitted and used to transport UOC from the Olympic Dam mine to Port Adelaide. Alligator will work with stakeholders to firm up preferred road access from site though Whyalla which will be incorporated into Alligator's Transport Management Plan that meets the Code of Practice for the Safe Transport of Radioactive Material 2019 and also the South Australian Radiation Protection and Control (Transport of Radioactive Substances) Regulations 2018, under the Radiation Protection and Control Act 2021.

Uranium Market Outlook and Product Marketing

The nuclear power industry has been under significant focus and growth for several reasons over the past three years or so, with major events including:

- Global concerns about climate change are directing Governments and companies to source low or zero emissions electricity generation – with 22 countries at COP28 declaring support for a tripling of nuclear power capacity globally, with over 100 global companies supporting this.
- New countries entering the nuclear power space, with around 30 new countries either developing projects, enacting legislation, or in the investigation/planning phase.
- Positive sentiment and support from both major parties in the US for the first time and have recently passed the Inflation Reduction Act which includes substantial support for nuclear power and US based nuclear fuel development and phasing out of Russian nuclear fuel supply.
- The Ukrainian conflict is pushing western nuclear countries and utilities to reduce their reliance on Russia as a nuclear fuel supplier. US Congress has this week voted in a Bill to ban the import (with some exceptions) of nuclear fuel from Russia.
- 12 European countries now aligned and supporting maintaining and enhancing their nuclear fleets or investigating nuclear power new builds for future energy sources alongside renewables. They are also advocating for nuclear to other EU countries.
- The European Union has included nuclear power in its 2022 taxonomy report which considers nuclear as a sustainable energy source.
- Continued build of new nuclear plants, with around 57 reactors currently under construction.

Since the improved uranium demand signals in late 2020 many existing uranium projects have initiated re-start plans and with some now under production recommencement plans. Nuclear utilities have increased the level of long-term contracting, with 122 Mlbs contracted during 2022, and already by the end of October 2023 more than 150 Mlbs have been placed under LT contract.

Project Risks

A risk assessment workshop was conducted as part of the March 23 Scoping Study and remains unchanged at the time of finalisation of the updated Scoping Study. These risks in conjunction with certain broader project development risks will be considered during the various studies associated with the Full Mining Approval and bankable feasibility study, namely:

1) Pregnant liquor grade assumption which if not achieved may lead to poor plant performance and reduced production capacity, cashflow and profitability. Whilst the Scoping Study

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assumption was benchmarked against other ISR deposits, the planned mitigation is to validate during the FRT.

2) High chloride levels in ISR wellfields have been shown to negatively impact resin performance (loading efficiency) reducing production capacity. Pre-treating the wellfield with reduced salinity water to lower chlorides will be tested during the FRT. Alligator will also investigate possible changes to the IX configuration to explore plant changes that can be made to eliminate the need for wellfield pre-conditioning.

3) Vehicle driving to and from the site, and heavy vehicle / light vehicle interactions may increase health and safety risks and could cause equipment damage. A detailed traffic management plan will be built into the detailed design phase to ensure road travel safety and minimise any interactions.

4) Supply chain risks including ability to procure, on a timely basis, the required high chloride tolerant resins. Early engagement with key known suppliers (including possible early procurement) is planned. Testing of alternate resin supplier samples is already underway..

5) Water and power supply options will require further evaluation, in particular where renewable power may be an option due to the overall low power requirement. New pipeline infrastructure will require various approvals notably with landholders and council.

6) Engagement conducted to date in the broader Whyalla community has identified high levels of support from the perspective of increased employment opportunities and diversification of business along with local economic benefits for suppliers. The engagement has also identified some stakeholder concerns in relation to saline ground water contamination and possible pastoral land impact. Ongoing consultation will be required to further understand the concerns raised and build confidence in the science and models developed, the testing of these (i.e. the FRT) and to ensure benefits are delivered in line with the community expectations.

7) Uranium oxide concentrate (approx. 2-3 containers a month) will be trucked to Port Adelaide via main arterial highways and therefore at risk of a traffic accident occurring on-route. All operating uranium mine sites are required to have a UOC transport plan in place prior to commencement of production. AGE will develop its UOC transport plan in consultation with the Australian Safeguards and Non-Proliferation Office, South Australian Police and Metropolitan Fire Service which will detail responsibilities and actions in the event of an accident, recovery and clean-up if a UOC spill occurs.

8) Successful negotiation of off-take arrangements will be required to underwrite a portion of the planned production for funding purposes and ongoing stability of returns.

9) Additional risk factors include changes in the A$:US$ exchange rate (principally sales revenues) and long-term uranium prices, changes to material and labour costs, appetite of equity and debt funders leading up to FID and supply chain risks associated with the construction phase.

Reasonable basis for funding assumption

The basis upon which the reasonable grounds for pre-production capital and working capital is established includes:

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- As the world looks for low emission energy sources, nuclear power is being seen as an important part of the energy mix. Many countries around the world are enhancing their existing nuclear fleets, investigating new builds, and in particular investigating the advent of Small Modular Reactors (SMR's). Along with this, nuclear utilities are preferentially sourcing nuclear fuel supply from stable and experienced jurisdictions – South Australia has >35 years of safe and stable uranium production and regulatory experience.
- The technical and financial parameters detailed in the Scoping Studies are sufficiently robust and globally competitive. This outcome along with the modest pre-production cost relative to global open-cut uranium operations and the Project's location in a stable and supportive jurisdiction provide a solid platform for Alligator to advance discussions with a number of potential funding providers.
- Subject to supportive pricing and the terms of future offtake arrangements (for a portion of the production profile), Alligator believes that an element of the pre-production capital funding could be sourced in the form of debt from sources such as banks, bond markets, specialist mine financiers and/or offtake partners.
- The Company has an agency agreement managed by Kevin Smith of Traxys North America LLC for U_3O_8 marketing services which has enabled early engagement with a number potential offtake nuclear utility customers, some who have expressed interest in early conditional long-term contracts.
- Global equity markets have continued to support funding of restarts for a number of mothballed uranium operations or final project studies.
- The Board and Management Team has extensive experience in the global uranium, and broader resources industry. They have previously played significant roles in project evaluation and development, including project financing.
- The Company has a successful track record of raising equity funds as and when required to further the Company's exploration efforts including the work conducted on the Samphire Project post-acquisition in late 2020. Alligator's most recent equity raising initiative was during September 2023 where a combined total of A$28.75M was raised from institutional investors, high net wealth individuals and the current Shareholder base.

The final funding mix will however depend on general market and resources industry conditions, specific counterparty appetite and terms, and the Alligator Board's prevailing views on optimal funding mix and balance sheet configuration.

While the Alligator Board believes there a reasonable basis that funding will be available as required, there is no assurance that the requisite funding for the Samphire Project will be secured.

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Competent Persons Statement - Resource

The information for the metallurgy, leaching, ion exchange and the Mineral Resource referenced in this report is extracted from the reports entitled "Highly successful uranium leach and extraction tests for Samphire Uranium Project created on 9 December 2022 and "Successful upgrade of Indicated Mineral Resource for the Blackbush Deposit, Samphire Uranium Project, South Australia" created on 7 December 2023.The latter is summarised in the table below. These are available to view on the Alligator Energy Limited website. Alligator Energy Ltd confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and, in the case of estimates of Mineral Resources, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. Alligator Energy Ltd confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements.

Blackbush Mineral Resource Estimate (Dec 2023) reported above a 250ppm U_3O_8 cut-off.

JORC Category	Mt	Grade (U_3O_8 ppm)	U_3O_8 Metal (Mlbs)
Indicated	7.8	754	12.9
Inferred	4.6	447	4.6
Total	12.4	640	17.5

The model is reported unconstrained and above a 250 ppm U_3O_8 lower cut-off grade for all zones in consideration of potential for recovery by in situ leach processes.
Estimation is by ordinary kriging for all mineralised zones.
Density is assigned as 2.05 t/m^3 based on limited test work.
The model assumes agglomeration of 12.5mE x 12.5mN x [variable]mRL panels for definition of well fields for production.
The model does not account for dilution, ore loss or recovery issues. These parameters should be considered during the mining study as being dependent on the treatment process.
Classification is according to JORC Code Mineral Resource categories.
Totals may vary due to rounded figures

Competent Persons Statements

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 on a full-time basis with Alligator Energy as Chief Operating Officer, and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration (including 21 years in ISR uranium mining operations and technical work) and to the activity she 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. 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.

The information in this announcement that relates to the Blackbush Mineral Resource estimate (uranium) is based on and fairly represents information compiled by and generated by Mr Ingvar Kirchner, a full-time employee of AMC Consultants. Mr Kirchner is a Fellow of the Australasian Institute of Mining and Metallurgy (the AusIMM) and a Member of the Australian Institute of Geoscientists (the AIG). Mr Kirchner has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which is being undertaken to qualify as a Competent Person as defined by the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC Code).

This announcement has been authorised for release by the Alligator Energy Board.

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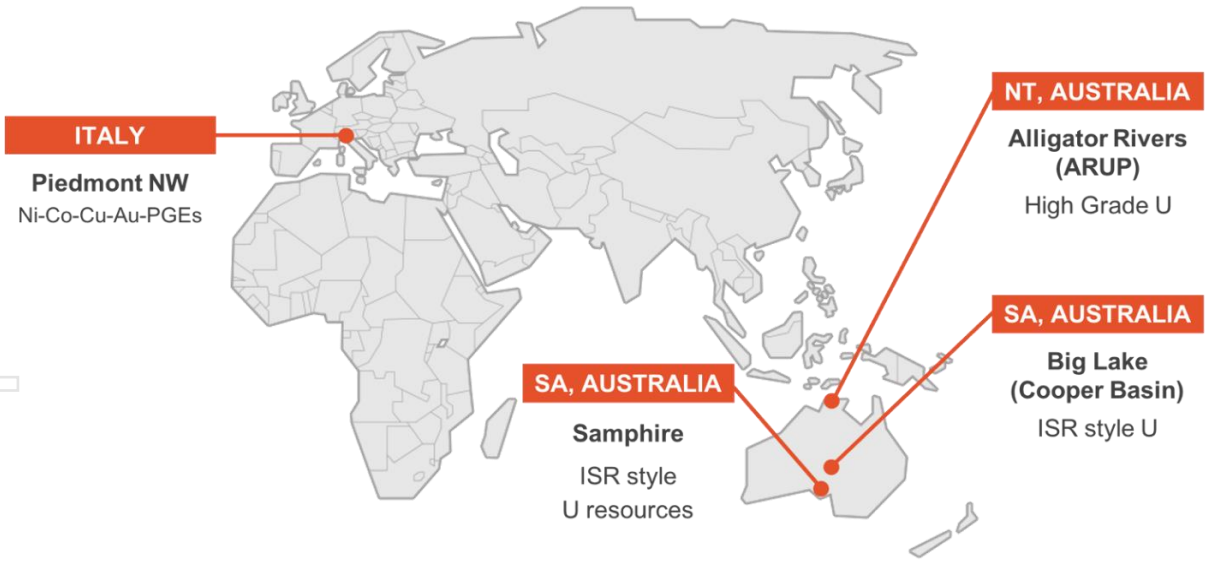
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About Alligator Energy

Alligator Energy Ltd is an Australian, ASX-listed, exploration company focused on uranium and energy related minerals, principally cobalt-nickel. Alligator's Directors have significant experience in the exploration, development and operations of both uranium and nickel projects (both laterites and sulphides).

Projects



Appendix A: Reasonable basis for forward looking statements

No Ore Reserve has been declared. This ASX release has been prepared in compliance with the current JORC Code (2012) and the ASX Listing Rules. All material assumptions on which the Scoping Study production target and projected financial information are based have been included in this announcement and disclosed in the table below.

Consideration of Modifying Factors (in the form of Section 4 of the JORC Code (2012) Table 1)

Criteria	JORC Code Description	Commentary
Mineral Resource estimate for conversion to Ore Reserves	• Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve. • Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.	No Ore Reserve has been declared as part of the scoping study. The Mineral Resource Estimate stands at Indicated and Inferred Mineral Resource categories at this stage details of which are discussed in recent AGE ASX release 7 December 2023 "Successful upgrade of Indicated Mineral Resource for the Blackbush Deposit, Samphire Uranium Project, South Australia".
Site visits	• Comment on any site visits undertaken by the Competent Person and the outcome of those visits. • If no site visits have been undertaken indicate why this is the case.	Site visit information and commentary pertaining to the Mineral Resource estimate are provided in the Mineral Resource estimate announcement of 7 December 2023.
Study status	• The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves. • The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.	No Ore Reserve has been declared. The Study is a scoping level study
Cut-off parameters	• The basis of the cut-off grade(s) or quality parameters applied.	Cut-off grade parameters for the Mineral Resource estimate are provided in the Mineral Resource estimate announcement of 7 December 2023.
Mining factors or assumptions	• The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design). • The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc. • The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc), grade control and pre- production drilling. • The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate). • The mining dilution factors used. • The mining recovery factors used.	No Ore Reserve has been declared. The Mineral Resource Estimate stands at Indicated and Inferred Mineral Resource categories at this stage details of which are discussed in recent AGE ASX release 7 December "Successful upgrade of Indicated Mineral Resource for the Blackbush Deposit, Samphire Uranium Project, South Australia". Refer to the Executive Summary of the Company's Scoping Study announced to the ASX on 14 March 2023 along with confirmation that this has not materially changed in this updated Study Refer Section 3 (Mining Method and Schedule) of the Company's Scoping Study Summary Report announced to the ASX on 14 March 2023. The Mineral Resource Estimate on which the scoping study is based was separately and previously announced on 7 December 2023 "Successful upgrade of Indicated Mineral Resource for the Blackbush Deposit, Samphire Uranium Project, South Australia". .

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Metallurgical factors or assumptions	The metallurgical process proposed and the appropriateness of that process to the style of mineralisation. • Whether the metallurgical process is well-tested technology or novel in nature. • The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied. • Any assumptions or allowances made for deleterious elements. • The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole. • For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?	Refer Sections 4.1 (Metallurgical Testwork) of the Company's Scoping Study Summary Report announced to the ASX on 14 March 2023 along with confirmation that this has not materially changed in this updated Study.
Environmental	The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.	Refer Section 5 (Environmental Assessment, Stakeholder Engagement & Closure) of the Company's Scoping Study Summary Report announced to the ASX on 14 March 2023. together with details in this Announcement.
Infrastructure	The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.	Refer Sections 6 (Infrastructure) of the Company's Scoping Study Summary Report announced to the ASX on 14 March 2023 together with details in this Announcement.
Costs	The derivation of, or assumptions made, regarding projected capital costs in the study. • The methodology used to estimate operating costs. • Allowances made for the content of deleterious elements. • The source of exchange rates used in the study. • Derivation of transportation charges. • The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc. • The allowances made for royalties payable, both Government and private.	Refer to Section 3 (Key Economic Outcomes) and section 4 (Key Modifying Factors) of this Announcement. Refer to Section 3 (Key Economic Outcomes) of this Announcement.
Revenue factors	The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc. • The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co- products.	The derivation of the PLS (feed grade) estimate comes from the Mineral Resource Estimate in this announcement and was QAQC'd against PLS grades for analogous operations. Commodity price(s) exchange rates, transportation royalties etc. are discussed in the Company's Scoping Study announced to the ASX on 14 March 2023 together with updates detailed in this Announcement. The products to be sold is Uranium Oxide Concentrate (UOC), no other co-product is applicable. Refer to this Announcement for updated commodity price assumptions.
Market assessment	The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future. • A customer and competitor analysis along with the identification of likely market windows for the product. • Price and volume forecasts and the basis for these forecasts. • For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.	Refer to Uranium Market Outlook and Product Marketing in section "Summary of Key Assumptions Materially Unchanged from March 2023 Scoping Study" in this Announcement. N/A

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Economic	The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc. • NPV ranges and sensitivity to variations in the significant assumptions and inputs	Refer to Section 3 (Key Economic Outcomes) and section 4 (Key Modifying Factors) of this Announcement.
Social	The status of agreements with key stakeholders and matters leading to social licence to operate.	Environmental Assessment, Stakeholder Engagement & Closure of the Company's Scoping Study Summary Report announced to the ASX on 14 March 2023 together with details in this Announcement.
Other (incl Legal and Governmental)	To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves: • Any identified material naturally occurring risks. • The status of material legal agreements and marketing arrangements. • The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.	No Ore Reserve has been declared. No material naturally occurring risks have been identified but a risk assessment is presented in the "Project Risks" section "Summary of Key Assumptions Materially Unchanged from March 2023 Scoping Study" in this Announcement. There are no marketing agreements in place. The Project is located on Exploration Lease (EL) 5926. The tenement is 100% owned by a subsidiary of Alligator Energy Ltd (S Uranium Pty Ltd). Alligator Energy is the operator of the tenement. The Company continues to undertake relevant studies to support necessary government approvals processes to develop the Project.
Classification	The basis for the classification of the Ore Reserves into varying confidence categories. • Whether the result appropriately reflects the Competent Person's view of the deposit. • The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).	No Ore Reserve has been declared. The Mineral Resource Estimate stands at Indicated and Inferred Mineral Resource categories at this stage details of which are discussed in recent AGE ASX release 7 December 2023 "Successful upgrade of Indicated Mineral Resource for the Blackbush Deposit, Samphire Uranium Project, South Australia".
Audits or reviews	The results of any audits or reviews of Ore Reserve estimates.	No Ore Reserve has been declared. The Mineral Resource Estimate stands at Indicated and Inferred Mineral Resource categories at this stage details of which are discussed in recent AGE ASX release 7 December 2023 "Successful upgrade of Indicated Mineral Resource for the Blackbush Deposit, Samphire Uranium Project, South Australia".
Discussion of relative accuracy/ confidence	Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate. • The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to	No Ore Reserve has been declared. The Mineral Resource Estimate stands at Indicated and Inferred Mineral Resource categories at this stage details of which are discussed in recent AGE ASX release 7 December 2023 "Successful upgrade of Indicated Mineral Resource for the Blackbush Deposit, Samphire Uranium Project, South Australia". The Competent Person's Statement is found on page 27 of this Announcement.

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	technical and economic evaluation. Documentation should include assumptions made and the procedures used. • Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage. • It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	

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