

## Samphire Uranium Project - Retention Lease Application for ISR trial Lodged for Assessment

Alligator Energy Limited **ASX: AGE (Alligator or the Company)** is pleased to advise that it has lodged its Retention Lease (RL) application for the purposes of conducting a pilot Field Recovery Trial (FRT) at the Samphire Uranium Project (Blackbush Deposit), in late 2023. The application was lodged with the South Australian Department for Energy and Mining (DEM).

The DEM have now advised that the application has been accepted subject to some detail formatting updates and additional information on baseline descriptions and data on the groundwater characteristics and flow dynamics of aquifers in the application area. This latter additional data is being finalised by the Company for an updated submission.

The Samphire Uranium Project Field Recovery Trial (FRT) is planned as follows:

- Trial of up to three In-Situ Recovery (ISR) extraction and injection drill hole rings
- 3 to 4 months duration of trial, planned for late 2023 (subject necessary approvals)
- Trial of in-situ and ion exchange (IX) uranium recovery to verify bench scale test data
- Small, containerised pilot process plant will produce uranium into clean eluate solution only, with no final uranium oxide product to be produced at the site
- Data to be obtained will feed into a planned Feasibility Study for Samphire in 2024, in conjunction with further resource drilling updates during this year
- Pilot plant site will be rehabilitated after required testwork and subject to next steps on progressing the Project.

Alligator understands the assessment phase for the RL application may take some months. This will involve the Department for Energy and Mining and other State agencies and will include an invitation for stakeholders and public to review the application and make submissions on the proposal.

Under South Australian legislation, an RL is required for the purposes of conducting the FRT, which will involve a small pilot trial of the In-Situ Recovery (ISR) method of uranium extraction using solution mining. The trial will cover around 2 hectares, being a small portion of the total Samphire Project area - located around 20km south of Whyalla.

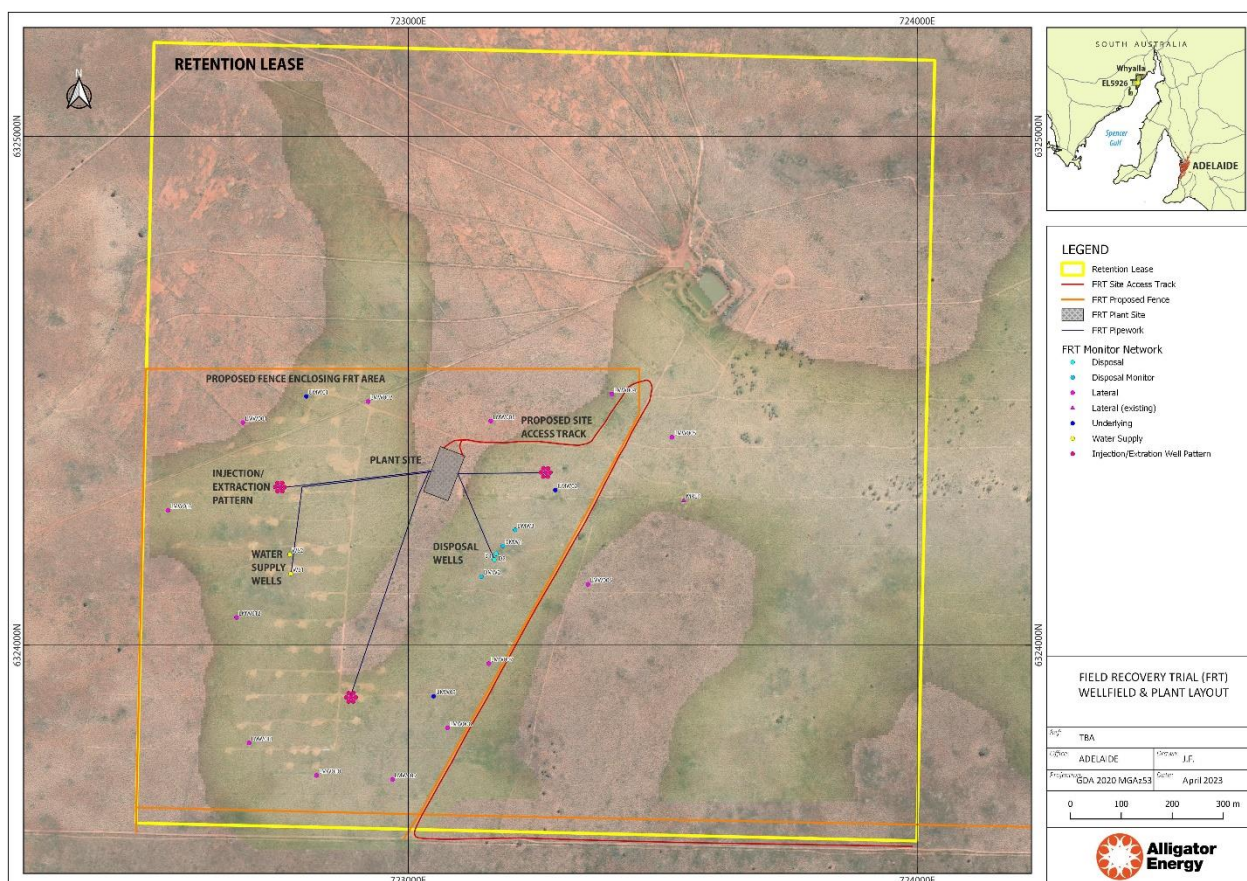
**Alligator Energy CEO, Greg Hall**, said *'Subject to the additional information requested, we are pleased the DEM will commence their assessment of our application for a Retention Lease (RL), which is a precursor to the proposed Field Recovery Trial (FRT) planned for late 2023. We anticipate an extensive assessment of the application will occur across Government agencies, which will assess our ability to deliver the trial according to our plans and in a manner which does not have any adverse impacts on the environment'.*

Further, Mr Hall said, *'The pilot FRT is an important next step for Samphire as it will confirm many of the previously bench-scale tested and modelled technical, hydrogeological and environmental*

aspects of the Project. This will provide the Company with a deeper knowledge of the deposit and its amenability to the ISR mining method, which is the mining method successfully and safely applied at other uranium mines in South Australia since 1998.'

The small-scale short-term (approximately 3 – 4 months) FRT would see the Company consecutively apply the ISR mining method at up to 3 separate sites within the Blackbush Deposit ore horizons (Figure 1). These sites will have one central extraction well (cased drill hole) surrounded by injection wells (4 to 6) sited approximately 10m away. These wells will be 60 to 80m deep to access the ore horizons hosted within confined and compacted sand beds. Solution from the ISR wells will be piped to a small pilot process plant, contained within two 40 ft mobile containers within a bunded site area. This will extract uranium from the wellfield solution through an ion exchanges (IX) process into final uranium eluate. No uranium oxide final product will be produced during the FRT.

Additional surveillance groundwater wells will be installed to demonstrate that oxidant dosing of the hypersaline groundwater from which the uranium is extracted, returns to background pH levels through natural neutralisation within a short distance of the FRT extraction and injector wells. A wider ring of monitor wells will be installed and frequently sampled during and after the FRT to demonstrate no adverse impacts to groundwater outside of this network due to FRT operations.



**Figure 1:** Field Recovery Trial wellfield, monitor well network, plant layout and related infrastructure.

Mr Hall said 'South Australia is an experienced and globally recognised uranium mining jurisdiction and Alligator is pleased to be working in this supportive framework. We are highly confident that should our Retention Lease (RL) application be approved, we can deliver the FRT within all regulatory requirements placed upon us'.

In recent weeks AGE released a Scoping Study into the Samphire Project which confirmed the potential for development of the Blackbush Deposit as a globally competitive low-cost uranium operation using the in-situ recovery (ISR) process.

Mr Hall said 'The Scoping Study provides a high-level economic assessment of what a potential full-scale operation could deliver, however this should not be confused with the current RL application and proposed FRT, which is scheduled for late 2023. The RL would only provide the necessary approvals to conduct the proposed small-scale short-term FRT, not a full-scale mine. If the trial is successful, AGE will then undertake a full Feasibility Study, and any progression to a full mining operation would require further State and Federal Government approvals, along with the securing of project financing, amongst other matters'.

AGE has been undertaking stakeholder engagement activities since 2020 following its acquisition of the Samphire Project. Mr Hall said 'We have greatly appreciated the questions and feedback we have received from stakeholders during our meetings with local leaders, and the broader community during our community presentations and drop-in sessions. We will continue to provide further opportunities to meet with the AGE team who bring vast experience in uranium mining, the In-Situ Recovery (ISR) mining method and environmental management practices.'

To date, AGE has spent over \$800,000 with more than 30 local businesses and has recruited 4 local employees to support development of the Project.

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

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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

