



June 2022 Quarterly Report

# Boss poised to capitalise on decarbonisation and global energy crisis

## **Ramp-up of construction at Honeymoon Uranium Project ensures Boss is able to take full advantage of the emerging strong nuclear market; Production set for December quarter, 2023**

Boss Energy (ASX: BOE; OTCQX: BQSSF) is pleased to report on another highly successful quarter during which it ramped up construction and generated significant exploration success at its Honeymoon Uranium Project in South Australia.

Boss Managing Director Duncan Craib said the Company was implementing the strategy it had outlined to shareholders three years ago. This will see Boss become Australia's next uranium producer by the December quarter of 2023.

"This was a pivotal quarter which demonstrated that we are executing our strategy on every level," Mr Craib said.

"Following our highly successful capital raising of the previous quarter, which ensured Honeymoon is fully-funded, we made the Final Investment Decision to develop the project.

"As a result, we are now ramping up construction, including the development of the wellfields, ordering key equipment and refurbishing the camp.

"We have no debt, cash of A\$130 million and a strategic 1.25 million-pound uranium stockpile valued at A\$83 million. The project has a capital cost of A\$113 million."

Mr Craib said global energy utilities were increasing their efforts to secure uranium supplies amid the energy crisis and the ongoing decarbonisation push.

"There has been a notable increase in the level of inquiry we are receiving from utilities over the past quarter," he said. "There is strong demand for new supplies, particularly from an Australian project such as Honeymoon, and we are very encouraged by utility interest in visiting our mine site.

"We expect these requests and discussions to intensify over coming months in parallel with the construction activity as we continue implementing our strategy for Honeymoon to enter production by Q4, 2023."

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## Key achievements in the June Quarter

### **Boss Makes Final Investment Decision to develop Honeymoon**

Following the Company's successful \$125 million equity raising (before costs) to fund the development of its Honeymoon Uranium Project, Boss announced on June 1, 2022, that it had made a Final Investment Decision (FID). The decision ensures Honeymoon remains on track for first production in the December quarter of 2023, ramping up to a steady-state rate of 2.45Mlb of U<sub>3</sub>O<sub>8</sub> a year.

The forecast A\$113 million capital cost of the development (including contingency) is fully-funded.

The Company also holds a strategic 1.25 million pound uranium stockpile valued at A\$83 million<sup>1</sup>.

Boss has no debt, ensuring it has maximum flexibility and pricing leverage in its offtake negotiations.

The FID followed a full updated briefing provided to the South Australian Minister for Infrastructure, Transport, Energy and Mining, Tom Koutsantonis, by Boss Managing Director Duncan Craib and Director Bryn Jones on May 27, 2022.

### **Drilling Strategy to Grow Production Rate and Mine Life**

On July 12, 2022, Boss announced strong results from infill and resource extension drilling which further strengthen the Company's strategy to increase the forecast production rate and mine life at Honeymoon.

The objective of the drilling was to extend Honeymoon's mine life and increase its production profile by upgrading known JORC Resources outside the Honeymoon Resource Area (HRA) and targeting greenfield exploration areas close to the known resources.

This strategy involves:

1. Targeting greenfield exploration targets to further advance current identified zones of potential high-grade mineralisation; and
2. Upgrading the satellite JORC resources of the Jason's and Gould's Dam Deposits.

It is envisaged that these new mineralisation target areas will form the basis of a study to assess and define production ramp up to produce more than 3Mlb/annum U<sub>3</sub>O<sub>8</sub> equivalent. Ramping up production does not form part of the current Honeymoon restart feasibility studies, but provision has been made in the plant design to incorporate this production. The Company believes that, with improving market conditions, it is prudent to progress with the exploitation of the known satellite deposits.

Substantial mineralisation intersected outside the current JORC Resource, with results including<sup>2</sup> (PFN results, ppm pU<sub>3</sub>O<sub>8</sub>):

- **6.00m @ 581ppm pU<sub>3</sub>O<sub>8</sub>**      **GT = 3,486**      BMR139 (Brooks Dam Ext) from 84.50m
  - **plus 2.50m @ 1,342ppm pU<sub>3</sub>O<sub>8</sub> from 98.75m (GT = 3,355)**
- **3.00m @ 678ppm pU<sub>3</sub>O<sub>8</sub>**      **GT = 2,034**      BMR153 (Brooks Dam Ext) from 86.25m
  - **plus 3.25m @ 525ppm pU<sub>3</sub>O<sub>8</sub> from 91.25m (GT = 1,706)**
- **3.00m @ 605ppm pU<sub>3</sub>O<sub>8</sub>**      **GT = 1,815**      BMR133 (Brooks Dam Ext) from 108.25m

<sup>1</sup> Strategic uranium stockpile valued at A\$83 million based on a spot price of US\$46.50/lb and US\$:A\$ exchange rate of \$0.70 as at 25 July 2022.

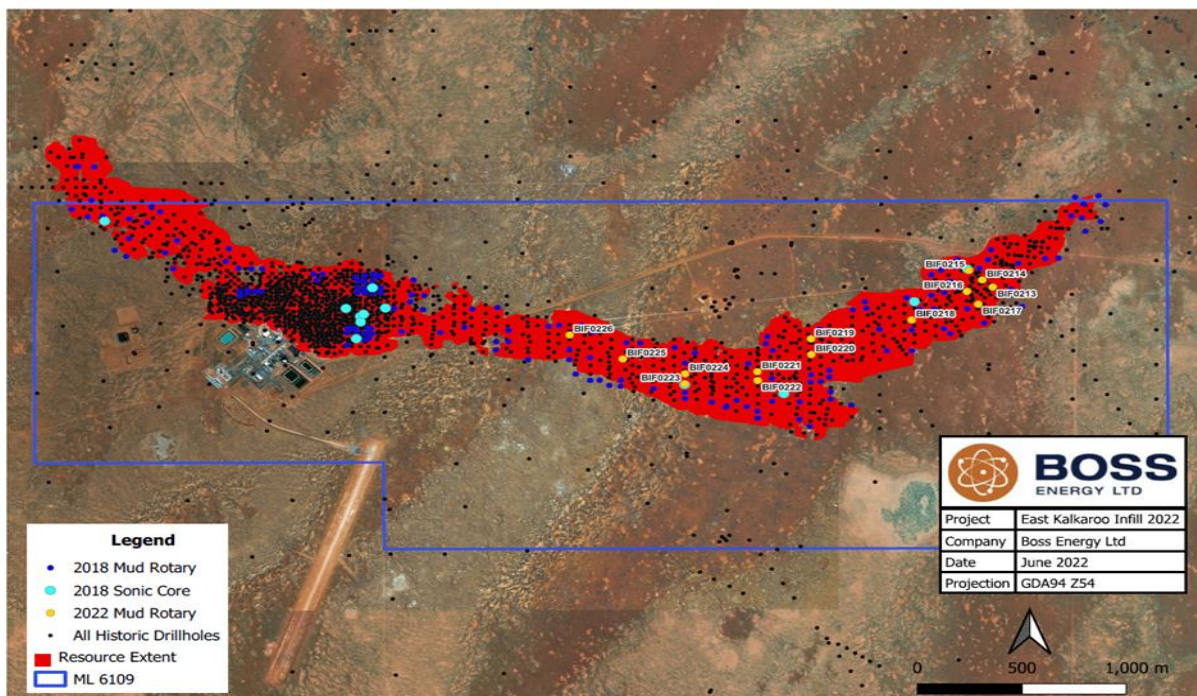
<sup>2</sup> Refer ASX announcement dated 12 July 2022 for further information.

- **3.25m @ 517ppm pU<sub>3</sub>O<sub>8</sub>**      **GT = 1,680**      BMR154 (Brooks Dam Ext) from 98.50m
- **2.00m @ 824ppm pU<sub>3</sub>O<sub>8</sub>**      **GT = 1,648**      BMR135 (Brooks Dam Ext) from 101.00m
- **3.00m @ 431ppm pU<sub>3</sub>O<sub>8</sub>**      **GT = 1,293**      BMR144 (Eaglehawk Dam) from 74.25m
- **2.25m @ 526ppm pU<sub>3</sub>O<sub>8</sub>**      **GT = 1,184**      BMR145 (Eaglehawk Dam) from 81.25m
- **plus 2.75m @ 430ppm pU<sub>3</sub>O<sub>8</sub> from 74.25m (GT = 1,183)**

In addition to the exploration drilling, delineation data was obtained on the eastern boundaries of the HRA ahead of wellfield development commencing in August 2022, in preparation for Honeymoon’s restart. Mineralised intersections including (PFN results, ppm pU<sub>3</sub>O<sub>8</sub>):

- **6.10m @ 2,640ppm pU<sub>3</sub>O<sub>8</sub>**      **GT = 16,051**      BIF0217 (HRA) from 103.30m
- **3.40m @ 1,700ppm pU<sub>3</sub>O<sub>8</sub>**      **GT = 5,712**      BIF0215 (HRA) from 106.70m
- **1.20m @ 3,500ppm pU<sub>3</sub>O<sub>8</sub>**      **GT = 4,270**      BIF0216 (HRA) from 110.80m

The drilling was completed in May 2022, comprising 28 rotary mud holes for 3,201m.



*Figure 1: Honeymoon East Kalkaroo drill campaign overview.*

## Appointment of CFO and growth of Operations Team

On July 18, 2022, Boss advised that Andre Potgieter had been appointed as Chief Financial Officer. Mr Potgieter is a highly experienced finance professional with more than 25 years’ involvement in mining operations and construction projects, including both EPCM-executed and self-perform projects.

He has held senior roles in the mining industry with leading global companies such as First Quantum Minerals Ltd (FQM) and Freeport-McMoRan Inc. In these positions, he has managed multi-billion-dollar budgets while providing financial guidance and support from initial feasibility through to capital reviews, mobilisation, construction, commissioning, and project close out.

Mr Potgieter held the role of Cost Control Manager for FQM's Cobre Panama Project where he led the entire cost control effort for the project and associated operations, which had a Project Construction budget of US\$6.7 billion.

Most recently, Mr Potgieter has been FQM's Business Development Manager, identifying and analysing all new investment opportunities and making appropriate recommendations. This role encompassed extensive due diligence processes, including the co-ordination of technical and commercial information to support sales and potential acquisitions, engaging with prospective counter-parties, negotiating and executing transactions, improving business development processes and streamlining the flow of information between the corporate offices in different international jurisdictions.

He replaces Mathew O'Hara, who has served as Chief Financial Officer and Company Secretary for the past three years. Mr O'Hara will remain as Company Secretary.

To further enable Boss' progression towards production, the Company also advised that it had appointed key members to its Adelaide-based operational team, including a Human Resources Manager and a Safety, Health, Environment and Radiation (SHER) Superintendent. Both are seasoned resources sector professionals with significant experience supporting construction and mining activities in their respective areas. In addition, Boss has recruited another Senior Manager Geologist and a Hydrogeologist, both of whom are both very experienced with in-situ recovery (ISR) uranium mining.

Boss has been successful in recruiting the Operational and Project teams based on well-referenced existing networks, forgoing the need for market-based recruiting.

## **Ramp-up of Key Construction and Development Work**

On July 25, 2022, Boss announced the ramp-up of key construction and development work at Honeymoon.

This development activity includes ordering key equipment, advancing the detailed engineering and undertaking the initial wellfield works and camp refurbishment. These early activities are being undertaken in line with the completed Front End Engineering Design study announced March 31, 2022.

The current construction activity involves three start-up wellfields. Specialised SMP contractors have mobilised to the Honeymoon site for the piping and electrical works, with wellfield drilling to commence in mid-August 2022.

A building contractor has mobilised to commence with the refurbishment and upgrade of the mine camp and administration areas. High speed data services have been connected and site access road upgrades are scheduled to commence in late August 2022.

All major long-lead tenders have been issued and are under evaluation. Orders for the following critical equipment items have been placed:

- NIMCIX fibreglass columns;
- Water Treatment Plant, including reverse osmosis and thickener upgrades;
- 5km of wellfield downhole fibreglass piping;
- 48 borehole pumps for wellfield extraction.

Detailed engineering is progressing well and anticipated to complete in Q4 2022, as supported by EPCM and specialist consultants.

All critical path items remain on track for scheduled delivery. To mitigate possible freight and logistic delays, Boss has focussed early engineering activities on getting the long lead procurement items ordered and delivered to site. Mobilisation of construction personnel for each aspect of the project will commence as soon as these materials are delivered to site.

## Uranium Market Analysis

The June Quarter of 2022 was less dramatic than the first quarter but the continuing war in the Ukraine has seen a hardening of attitudes towards trading with Russia. It has also highlighted the stranglehold Russia has on gas supply to Europe and the reliance on Russia as a global supplier of nuclear fuel.

The nuclear fuel market over the past two decades has become a global market and the goal has been to bring supply and demand into balance. A side-effect of this development is that Russian supply is a critical component and non-Russian supply of enrichment and conversion services are currently not adequate to fill the gap that would be created by terminating existing contracts with Russia. At the recent World Nuclear Fuel Market conference, industry experts estimated that it would take a minimum of two years to start to build up non-Russian enrichment and conversion capacity to meet non-Russian demand. In the interim period, enrichment facilities will only be able to increase output of enriched product by 'overfeeding' and increasing the ratio of uranium to SWU (measure of enrichment services).

The increasing focus on reducing carbon emissions, energy independence coupled with utilities desire to ensure security of supply and ESG compliance within their supply chain is resulting in higher uranium demand estimates than previously forecast particularly in the near to mid-term.

Reducing mobile inventories, lower levels of utility inventory, inflation, rising interest rates combined with prices which have risen to levels that will incentivise restarts but are not yet sufficient to incentivise new development projects, are creating conditions which could lead near term uranium supply deficits.

Some of the emerging issues that are likely to impact the market over the coming months are:

- The influence of macro market conditions on the spot price. While SPUT continues to be the most influential buyer in the spot market the spot price is likely to continue to be volatile and reflect the macro market rather than actual end user demand. This could delay the price signals necessary to bring on new production which will be needed before the end of the current decade; and
- Logistics – Uranium from Kazakhstan, which is currently transported from Russian ports, and Russian nuclear fuel could be vulnerable to supply disruptions as the war in Ukraine continues. Kazakhstan is currently exploring other transport routes.

Price volatility continued during second quarter 2022 with the spot price falling from US\$53/lb at the end of April to US\$48.50/lb at the end of May, before rising to US\$50.50/lb at the end of June. Utility demand is growing and much of this is being met by off-market purchases directly with suppliers.

In contrast the term price is slowly but steadily increasing. It rose from US\$50/lb to US\$52/lb at the end of April and to US\$53/lb at the end of June 2022. Recent contracting with restart projects demonstrates real interest by utilities to diversify supply by bringing back production from restart projects in stable environments.

This quarter has seen several positive developments for the nuclear industry:

- European Union lawmakers voted to allow natural gas and nuclear energy to be labelled as green investments, removing the last major barrier to potentially billions of euros of funding from environmental investors;
- Japan and South Korea recommit to nuclear power generation;
- the Dutch government announces plans for new reactors;
- New reactors have been connected to the grid in China and South Korea; and
- SMR development continues to attract funding.

## Appendix 5B disclosures

In line with its obligations under ASX Listing Rule 5.3.5, Boss notes that the only payments to related parties of the Company, as disclosed in the Appendix 5B (quarterly Cashflow Report) for the period ended 30 June 2022, pertain to payments for executive salaries, superannuation and non-executive director fees.

During the quarter ended 30 June 2022, the Company spent approximately \$1.79 million on project and exploration activities relating to its Honeymoon Project. These activities included completing the second and final phase of the Accelerated Drilling Initiative during April and May 2022 and associated geological modelling and analysis related expenses, completion of further technical studies, and commencement of development activities at Honeymoon following the Final Investment Decision made in June 2022. In addition to these activities the Company continued to incur costs relating to the ongoing maintenance activities required at Honeymoon. The expenditure represents direct costs associated with these activities as well as capitalised wages which can be directly attributable to Honeymoon.

This ASX announcement was approved and authorised by the Board of Boss Energy Limited.

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## Appendix One:

### Schedule of Mining Tenements

The following information is provided pursuant to Listing Rule 5.3.3 for the quarter ended 30 June 2022.

Tenement Name	Location	Licence Number	Interest
Yarramba	South Australia	EL6510	100%
South Eagle	South Australia	EL6081	100%
Gould's Dam	South Australia	EL6512	100%
Katchiwilleroo	South Australia	EL6511	100%
Ethiudna	South Australia	EL6020	100%
Gould's Dam	South Australia	RL83-85	100%
Honeymoon Mine	South Australia	ML6109	100%

There were no mining tenement acquisitions or divestments during the quarter. EL6512, 6511, 6020, 6510 and 6081 are subject to an earn-in agreement with FQM in respect to the base and precious metal rights. Refer ASX release dated 10 February 2022 for further information.

### Honeymoon's Mineral Resource (lower cut-off of 250 ppm U<sub>3</sub>O<sub>8</sub>)

Classification	Tonnage (Million Tonnes)	Average Grade (ppm U <sub>3</sub> O <sub>8</sub> )	Contained Metal (Mkg, U <sub>3</sub> O <sub>8</sub> )	Contained Metal (Mlb, U <sub>3</sub> O <sub>8</sub> )
Measured	3.1	1,100	3.4	7.6
Indicated	18.4	630	12.0	25.5
Inferred	30.9	570	18.0	38.5
<b>Total</b>	<b>52.4</b>	<b>620</b>	<b>32.5</b>	<b>71.6</b>

#### Reference to previous ASX announcements

In relation to the results of the Enhanced Feasibility Study announced on 21 June 2021, the Company confirms that all material assumptions underpinning the production target and forecast financial information included in that announcement continue to apply and have not materially changed.

Inventory has been valued at approximately A\$83 million based on a U<sub>3</sub>O<sub>8</sub> spot price of US\$46.5/lb and an exchange rate of A\$1:US\$0.70.

The mineral resource estimates in this announcement were reported by the Company in accordance with listing rule 5.8 on 25 February 2019. The Company confirms it is not aware of any new information or data that materially affects the information included in the previous announcement and that all material assumptions and technical parameters underpinning the estimates in the previous announcement continue to apply and have not materially changed.

The information in this announcement that relates to historical exploration results were reported by the Company in accordance with listing rule 5.7 on 12 July 2022 titled *Strong drilling results support strategy to grow production rate and mine life*. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

### *Forward-Looking Statements*

This announcement includes forward-looking statements. These forward-looking statements are based on the Company's expectations and beliefs concerning future events. Forward-looking statements are necessarily subject to risks, uncertainties and other factors, many of which are outside the control of Boss, which could cause actual results to differ materially from such statements. Boss makes no undertaking to subsequently update or revise the forward-looking statements made in this announcement, to reflect the circumstances or events after the date of this announcement.