

ASX Release July 4, 2024

Honeymoon Uranium Project, South Australia

Boss set to ship first U₃O₈ from Honeymoon

Ramp-up running ahead of Feasibility Study schedule, with more than 57,000lbs of uranium produced to date; Construction of NIMCIX columns 2 and 3 almost complete, paving way for ongoing production increases

Highlights

- Startup production exceeding ramp-up schedule per the feasibility study (FS) estimates
- NIMCIX columns 2 and 3 on target for commissioning in Q3 and Q4, respectively in 2024
- Commissioning continues to advance, with key metrics remaining ahead of FS estimates:
 - Wellfields continue to average 80 - 100mg/L vs FS estimate of 47mg/L (~100% uplift)
 - Ion Exchange loaded resin recoverability remains at 100%
 - Resin loading normalising at FS estimate of 27 g/L
 - Elution performance exceeding FS estimate at 7 – 9 g/L
- First uranium sale to occur with revenue being received this quarter
- Boss remains highly leveraged to rising uranium price

Boss Energy (ASX: BOE; OTCQX: BQSSF) is pleased to report strong progress in the commissioning and ramp up at its Honeymoon uranium mine in South Australia, with a total of 57,364lbs of U₃O₈ produced by June 30, 2024.

Boss will now make its first delivery to European nuclear utilities under its existing sales contracts, with revenue to be received in the current quarter.

With NIMCIX Column 1 performing to expectations and construction of Columns 2 and 3 on track for completion in the September and December quarters, 2024 respectively, Boss expects production to total at least ~850,000lbs of U₃O₈ by June 30, 2025, in line with its Feasibility Study schedule¹.

Boss Managing Director Duncan Craib said: "The start-up phase at Honeymoon is proceeding comfortably to plan, with all the key metrics running in line with, or exceeding, the forecasts contained in the Feasibility Study schedule.

"Construction of the second and third columns is also advancing well, ensuring we are on track to continue increasing our production rates. Total production in FY26 is set to meet or exceed our feasibility study forecasts at 1.63Mlb. The addition of columns 4, 5 and 6 are forecast to further increase the production rate to nameplate capacity of 2.45Mlb/annum by year three."

¹ Refer to ASX: BOE announcement dated June 21, 2021.

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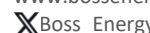
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Figure 1: Drummed uranium ready for first shipment



Figure 2: Construction of columns 2 and 3 nearing completion to increase Honeymoon's production profile

Production update

Operational focus over the coming months remains on optimisation of the ion exchange, elution, precipitation and drying and packing processes.

Wellfield performance continues to impress, with tenors from individual wellfields into the PLS averaging 80 - 100 mg/L. Honeymoon's feasibility study assumed PLS grade of 47 mg/L based on results from the project's previous operation. Boss is managing the grade of uranium being leached to maximise wellfield recoveries.

Consumption of reagents in the wellfields of sulphuric acid and ferric (pH and Eh) are normalising as per FS expectations. The lixiviant chemistry, as proved during the field leach trial, continues to demonstrate superior performance at commercial throughput rates. The increased leach efficiency leads to a more efficient loading on the ion exchange resin, effectively lowering operating costs as less reagents and power are required per drum of uranium.

Stripping of uranium from the loaded resin continues to be virtually 100%, also demonstrating that the ion exchange process is working as designed, resulting in a high-grade concentrated eluate greater than 7-9 g/L.

| Process | | Historic | Design | Observed Actual |
|---------------------------|--------------------------|----------|-----------|---------------------|
| Uranium Leach Performance | Wellfield Grade | 53 mg/L | 48 mg/L | 80 to 100 mg/L |
| Resin Performance | Resin Loading | N/A | 27 g/L | 27 g/L (normalised) |
| Elution Performance | Precipitation Feed Grade | N/A | 5 – 6 g/L | 7 - 9 g/L |

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

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About Boss Energy Limited

Boss Energy Limited (ASX: BOE; OTCQX: BQSSF) (**Boss Energy** or the **Company**), is ramping up uranium production at its Honeymoon Uranium Project in South Australia. Annual production at Honeymoon is forecast to reach 2.45Mlbs of U₃O₈. Boss also owns 30 per cent of the Alta Mesa uranium project in Texas, USA. Production at Alta Mesa is ramping up to 1.5Mlbs of U₃O₈ a year. For more information please visit www.bossenergy.com

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 Energy, which could cause actual results to differ materially from such statements. Boss Energy 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.

Reference to previous ASX announcements

In relation to the results of the Enhanced Feasibility Study announced on June 21, 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.