

ASX Release May 8, 2024

Honeymoon Uranium Project, South Australia

Commissioning proceeding to plan as Boss prepares for first sales

Honeymoon is exceeding key feasibility study estimates; First uranium sales set for July

Highlights

- Commissioning process advancing well, with key metrics ahead of feasibility study (FS) estimates, including:
 - Wellfields averaging 80 - 100mg/L vs FS estimate of 47mg/L (~100% uplift)
 - Ion Exchange loaded resin recoverability is virtually 100%
 - Resin loading averaging 36g/L vs FS estimate of 27 g/L (~33% uplift)
 - Elution performance > 7g/L vs a targeted range of 3 – 5 g/L
- First uranium sale is expected to occur in July with cash to be received in Q3 2024
- Boss remains highly leveraged to rising uranium price, with sales contracts covering just 1.8Mlbs over eight years

Boss Energy Limited (ASX: BOE; OTCQX: BQSSF) is pleased to advise that the commissioning process at its Honeymoon uranium project is proceeding to plan, with key metrics exceeding feasibility study forecasts.

This outperformance is reflected in results of the uranium-rich Pregnant Leach Solution (PLS) from the wellfields, IX column resin loading and high grade IX column eluate.

The focus is now on optimisation of the ion exchange, elution and precipitation processes to achieve continuous operations.

Production update

Tenors from the individual wellfields into the PLS are 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.

The lixiviant chemistry, as proved during the field leach trial, is now demonstrating 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.

FOR FURTHER INFORMATION PLEASE CONTACT:

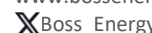
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The logo for Boss Energy, featuring a stylized 'X' symbol followed by the text "Boss_Energy".

A critical factor in resin performance is the actual loading of uranium from the PLS onto the ion exchange resin. Demonstrated loading rates of up to 36g/L are 33% higher than feasibility estimates. This means Honeymoon’s ion exchange circuit is currently making more uranium per cycle than designed. The cost of processing a cycle of ion exchange resin is fixed, which means that higher resin loading will drive a more efficient use of reagents.

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

Process		Historic	Design	Observed Actual
Uranium Leach Performance	Wellfield Grade	53 (Avg) mg/L	48 mg/L	80 to 100 mg/L
Resin Performance	Resin Loading	N/A	27 g/L (check)	36 g/L
Elution Performance	Precipitation Feed Grade	N/A	3 – 5 g/L	>7 g/L

First Sale of Product

Boss has sought from the outset to align its production strategy and timetable with the global uranium market, maximising its ability to capitalise on favourable supply and demand fundamentals.

As at 31 March 2024, Boss had ~\$300m in liquid assets, no debt and diversity of supply with no jurisdictional risk. This strong balance sheet has provided Boss with flexibility to choose when it enters into contracts and to select pricing mechanisms which maximise our exposure to market upside while limiting risk in softer market conditions.

To date, Boss has entered into two binding sales agreement to sell 1.8Mlbs U₃O₈ to major European / US power utilities over eight years from 2024 to 2032. The Company intends to enter into further as the uranium price rises.

Boss’s contracting strategy is to monitor the markets and layer in contracts, predominantly market related, to optimise future pricing and, in the near term, to ensure profitability and cash flow as production ramps up. First delivery into these contracts is planned to occur in July 2024 with payment expected in that quarter.

Boss Managing Director Duncan Craib said: *“We are very pleased with the commissioning progress to date. We are meeting or exceeding key feasibility study forecasts and the processing technology is performing as our extensive testwork showed it would.”*

“These early production results provide confidence that we are on-track to meet our ramp up targets. Ramp-up timing has been designed to align with a rising uranium market. We believe we will be hitting our straps as the uranium price rises in the near term”.

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.