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Honeymoon Uranium Project, South Australia

Production ramp-up hits key milestone as first NIMCIX column achieves nameplate capacity

Commissioning of second NIMCIX column underway, ensuring Honeymoon remains on track to meet FY25 production target of 850,000lbs of U₃O₈ as set out in Feasibility Study

Highlights

Operations

- Commissioning and ramp-up to steady-state production proceeding to plan, with key production metrics meeting Feasibility Study forecasts
- First NIMCIX production column achieves nameplate uranium production
- A total of 72,516lbs of uranium produced in the months of July and August
- Preliminary updates on costs to be provided once the second and third IX circuits (NIMCIX columns) are commissioned

Construction

- NIMCIX production column 2 constructed with hydrotesting completed
- Wet commissioning and sequence testing of column 2 underway, on target for production in September 2024 as scheduled
- Second wellfield being flushed in preparation to supply Pregnant Leach Solution (PLS) to column 2
- RO Plant 2 commissioned and operating in line with expectations
- Construction of NIMCIX column 3 on target for commissioning and production in December quarter, 2024

Boss Energy Limited (ASX: BOE; OTCQX: BQSSF) is pleased to provide an update on the strong progress being made as part of the commissioning and production ramp up at its Honeymoon Uranium Mine.

Boss Managing Director Duncan Craib said: "We continue to meet or exceed all of our key targets and are comfortably on track to meet our production guidance.

"The first IX circuit is now operating at nameplate capacity, proving that the technology works at the rate and scale forecast in the Feasibility Study. This is a pivotal point in the project's development.

"Commissioning of the second IX circuit is underway and construction of the third is advancing rapidly.

FOR FURTHER INFORMATION PLEASE CONTACT:

Boss Energy Limited
ABN 38 116 834 336

Level 1, 420 Hay Street, Subiaco
Western Australia 6008

Duncan Craib - Managing Director/ CEO
+61 (08) 6263 4494

Paul Armstrong – Public Relations
+61 (08) 9388 1474

ASX: BOE
OTCQX: BQSSF

www.bossenergy.com
X@Boss_Energy

“Supplies of the pregnant leach solution, grades and extraction rates are meeting or exceeding our targets and overall uranium production rates are rising in line with the schedules in the Feasibility Study”.

Honeymoon Production Results for months of July and August 2024

On 22 April 2024, the Company was pleased to announce a major milestone with production of the first drum of uranium at its 100 per cent-owned Honeymoon Uranium Project in South Australia.

As expected, and in-line with Feasibility Study forecasts, Honeymoon’s production continues to increase as set out in the results for the combined months of July and August 2024.

In August 2024, NIMCIX column 1 achieved nameplate production.

Bringing each new NIMCIX production column online will result in a proportional increase in production and lower the cost per pound produced.

Table 1: Operational physicals for the June 2024 Quarter and combined July and August 2024

Process	Unit	June Quarter 2024	July & August 2024
Wellfields online		1	1
Wells online		16	16
IX Columns operational		1	1
IX Flow (total) ¹	(m ³)	327,066	480,311
PLS to IX tenor (weighted average) ²	(U ₃ O ₈ mg/l\L)	80	70
IX Recovery (weighted average) ²	(%)	99.7	98.0
IX Production (total) ¹	(lbs)	57,364	72,516
U ₃ O ₈ Drummed (total)	(lbs)	28,844	51,863

Notes: (1) Conversions: There are 1,000 litres per m³ and 0.0000022 lbs per mg. (2) The weighted average is calculated based on total flow for the quarter.

Plant recovery continues to improve with production optimisation. The variance between IX Production and U₃O₈ drummed is due to a build-up of inventory in circuit as well as losses from the circuit. During commissioning and ramp up, losses from the precipitation and dewatering circuits were higher than design which has been a focus for the operations team over the previous month. Losses have been reduced to circa 3.5% in August as improvements were, and continue to be, implemented.

It is important to note that while the tenors being achieved from initial wellfields exceed the average LOM tenors forecast in the Feasibility Study¹, the project is still in the ramp-up phase and therefore these tenors should not be extrapolated across the LOM. Boss’ production guidance remains based on the forecast tenors contained in the Feasibility Study.

Given the time taken to ramp-up wellfields in ISR projects, preliminary cost updates will be provided once columns 2 and 3 are commissioned.

Since acquiring Honeymoon in December 2015, Boss has invested significant time and capital in making technical improvements to the project. Boss has now been able demonstrate that the first NIMCIX column can operate at nameplate uranium production which adds confidence that the Company will meet its FY25 production target of 850,000 lbs of U₃O₈ as set out in Feasibility Study.

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

Honeymoon Ramp-up Activities

Construction of NIMCIX column 2 is complete and will commence production towards the end of September. NIMCIX column 3 remains on track for completion and production in December quarter 2024.



Figure 1: From left to right, NIMCIX columns 1, 2 and 3

As hydrotesting is now complete on column 2, Honeymoon will finalise the control circuits and sequence testing, and run the system with RO water followed by PLS in September 2024.

Columns 4, 5 and 6 will be commissioned in 2025 to enable ramp-up to continue to be in line with Feasibility Study forecasts, to achieve Honeymoon's nameplate capacity of 2.45Mlb/annum of U_3O_8 .

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

For further information, contact:

Duncan Craib
Chief Executive Officer
P: +61 (8) 6263 4494
E: boss@bossenergy.com

For media enquiries, contact:

Paul Armstrong
Read Corporate
P: +61 (8) 9388 1474
E: info@readcorporate.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.