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September 2024 Quarterly Report

Ramp-up proceeding to plan as first production column hits nameplate capacity

Second column now operating and third column under construction, putting Honeymoon on track to meet FY25 production guidance; Plus, first shipment completed and cash received

Highlights

Honeymoon Uranium Project, South Australia

Operations

- 89,516 lbs of U₃O₈ drummed during the September quarter (June quarter 28,844 lbs)
- NIMCIX production column 1 achieved nameplate uranium production; NIMCIX 2 now operational
- Construction of NIMCIX 3 proceeding to plan and on target for commissioning in December quarter, 2024
- Achieved major milestone of first shipment of 57,000 lbs U₃O₈; The U₃O₈ met all converter quality metrics
- Receipts of \$23.4M from sale of 200,000 lbs U₃O₈ as part of an existing sales contract
- Preliminary update on costs to be provided once NIMCIX 3 is commissioned
- Honeymoon is on track to meet production guidance of 850,000 lbs of U₃O₈ in FY25

Alta Mesa Uranium Operation, South Texas (Boss 30%)

- Official opening on 3 October 2024, featuring George W. Bush, the 43rd President of the US
- Alta Mesa continues to dry, package and ship uranium yellowcake (U₃O₈)
- Alta Mesa expected to reach full operational capacity of 1.5M lbs of U₃O₈ a year by 2026. Boss' share of Alta Mesa production is 30 per cent (450,000 lbs U₃O₈ a year at nameplate capacity)

Corporate

- As at 30 September 2024, Boss held liquid assets of A\$244.9M; Boss has no debt
- Well-positioned to benefit from rising uranium prices with most of Honeymoon Life of Mine production and all of Alta Mesa production uncontracted
- Boss continues to strengthen its senior management team in line with the Company's growing status as a global uranium producer with the appointment of experienced COO Matt Dusci

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Boss Energy Limited (ASX: BOE; OTCQX: BQSSF) is pleased to report on a strong September 2024 quarter, during which the Company continued to ramp up uranium production at Honeymoon in line with its targets and saw first production at its 30 per cent-owned Alta Mesa Project in South Texas.

Boss Managing Director Duncan Craib said: “Our strategy is proceeding to plan on all fronts. Honeymoon’s key metrics are all in line with our targets and we are on track to meet our FY25 production guidance.

“The first production column hit nameplate capacity, the second column is now operational and the third is under construction.

“We made our first shipment from Honeymoon and we are generating cashflow from sales. As a result, we are in an extremely strong financial position with liquid assets of A\$245M and no debt.

“The recent start of production at Alta Mesa will also help drive ongoing growth in our production and cashflow as the project ramps up.

“The combination of this increasing production profile and the fact that most of it is uncontracted means we are ideally placed to capitalise on the strong outlook for uranium prices.

“The supply-demand fundamentals in the uranium market are increasingly favourable and long-term contract prices are rising.

“The growing demand for clean energy, particularly stemming from the rapidly expanding AI industry, further strengthens the outlook for uranium and supports our strategic decision to commit to contracts in a gradual manner, maximising our ability to capitalise on rising prices while maintaining financial security”.

Strong Balance Sheet

As at 30 September 2024, Boss has no debt and \$244.9M of liquid assets (being cash, liquid investments and physical uranium). The uranium inventory was valued at A\$145.4M, including 200,000lbs uranium loaned to enCore Energy Corp. ("enCore") (NASDAQ: EU) (TSXV: EU), which is repayable in cash or in kind.

Unrestricted cash and cash equivalents stood at \$66.6M (which excludes a fully cash-backed environmental bond of \$13.5M) and listed investments (including the Company’s investment in enCore) were valued at \$32.9M.

First shipment, sales and cash received

During the quarter, Boss sold 200,000 lbs U₃O₈ to a European nuclear utility under an existing sales contract, receiving cash of AU\$23.4M.

Honeymoon also celebrated its milestone first shipment of 57,000 lbs U₃O₈ to the Honeywell Uranium Hexafluoride Processing Facility in Metropolis, Illinois, USA. Feedback from the conversion facility, based on a representative sample, noted clean, quality U₃O₈ product, with approval granted for future bulk shipments to the facility.

Executive Appointments

During the quarter, Boss announce the appointment of highly experienced resources executive Mr Matt Dusci as Chief Operating Officer.

Mr Dusci has more than 25 years of experience in all facets of the mining industry, including technical studies, project development, operations, business development, strategy and executive leadership. His experience spans a diverse range of commodities, including battery metals.

For the past 10 years, Mr Dusci has held several executive positions at IGO Limited (ASX: IGO). These include Acting CEO, Chief Operating Officer and Chief Growth Officer. He has played a major role in the growth, development and transformation of IGO.

Mr Craib said: “With the ramp up at Honeymoon proceeding so well, we are advancing our strategy to grow the project’s inventory, production rate and mine life.

“As part of this strategy, we are committed to building a world-class team of highly skilled and experienced people who can help ensure we maximise our huge opportunities.

“We maximise our ability to generate the best possible results, including consistent reliable production and ongoing growth, if we have the best possible team.

“Matt’s knowledge and experience at both a project management level and as a senior resource industry executive will be immensely valuable as we implement our strategy”.

Honeymoon Production Results for the September 2024 Quarter

As expected, and in-line with Feasibility Study forecasts, Honeymoon’s production continues to increase as set out in the results for the September 2024 quarter.

In August 2024, NIMCIX 1 achieved nameplate capacity.

NIMCIX 2 is now operational as production ramp-up continues to perform inline with expectations, and construction of NIMCIX 3 is proceeding to plan and on target for commissioning in Q4, 2024.

Table 1: Operational physicals for the September 2024 Quarter as compared to the June Quarter 2024

Process	Unit	September Q1 FY25	June Q4 FY24
Wellfields online		1	1
Wells online		16	16
IX Columns operational		1	1
IX Flow (total) ¹	(m ³)	729,299	327,066
PLS to IX tenor (weighted average) ²	(U ₃ O ₈ mg/l)	71	80
IX Recovery (weighted average) ²	(%)	97.2	99.7
IX Production (total) ¹	(lbs)	110,050	57,364
U ₃ O ₈ Drummed (total)	(lbs)	89,516	28,844

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.

Initiatives to optimise plant performance are ongoing as learnings are 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.

Given the time taken to ramp-up wellfields in ISR projects, preliminary cost updates will be provided once NIMCIX 3 is commissioned.

The northern part of South Australia and far west New South Wales experienced an abnormal weather event on 16 and 17th October that affected power supply to these regions. The power supply to the Honeymoon project has also been impacted, with power restrictions imposed during the night. These impacts are being effectively managed with only limited impacts to the ramp-up plan. There is no change to forecast production of 850,000 lbs of U₃O₈ for FY25.

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

Honeymoon Construction Activities

NIMCIX 1 is producing at nameplate capacity, NIMCIX 2 has commenced production, and NIMCIX 3 is on track for completion in December 2024.



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

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 .



Figure 2: Wellfields 1 and 2 in operation

Boss Sales

During the quarter Boss secured its third binding sales contract, signing a market-linked deal with a US power utility. Sales agreements now total circa 3.5Mlbs of U₃O₈ from 2024 to 2033, providing Boss with further financial certainty while enabling it to retain ongoing exposure to increases in the uranium price

The sales agreements for the supply of uranium from its Honeymoon Project in South Australia, is based on market-related pricing with other terms and conditions of the agreement in line with industry standards.

Boss' contracting strategy is to monitor the markets and layer in contracts, predominantly market related for the uncommitted supply from Honeymoon and Alta Mesa, to optimise future pricing and, in the near term, to ensure profitability and cash flow as production ramps up.

Alta Mesa

Boss is currently the only multi-asset uranium producer on the ASX with the commencement of production during the quarter at its 30 per cent-owned Alta Mesa In-Situ Recovery ("ISR") Central Processing Uranium Plant and Wellfields ("Alta Mesa Project") in South Texas.

The Alta Mesa Project continues to dry, package and ship uranium yellowcake with the most recent shipment in the past week.

On 14 June 2024, Boss advised that Alta Mesa's uranium production is forecast to ramp up to a steady-state rate of 1,500,000lbs a year by 2026 with additional drying capacity of 500,000lbs a year. Boss owns the sale and marketing rights over its pro-rata share (450,000lbs at nameplate capacity). Please refer to enCore's announcement dated 13 June 2024 for further information.²

On 3 October 2024, the grand opening celebration of Alta Mesa took place on site in South Texas. The private event, attended by 300 guests, featured George W. Bush, the 43rd President of the United States. Please refer to enCore's announcement dated 8 October 2024 for further information.³

Furthermore, on 16 October 2024, Boss reported continued strong drilling results from Alta Mesa. The results were reported by Alta Mesa's 70 per cent owner enCore.

The results of the drilling, which was designed to expand the producing wellfield capacity, continue to significantly exceed the cut-off grade thickness requirements for ISR of uranium. enCore also reported that production from its first wellfield continues to progress with increases in the number of Alta Mesa production and injection wells on schedule for 2024 and continuing into 2025.

The Alta Mesa wellfield drilling operations, which commenced in March 2023, are advancing rapidly with 80 holes drilled since the previous update announced on 18 March 2024⁴. In total, 749 drill holes have been completed through mid-September 2024. At present there are seven (7) drill rigs in full operation at Alta Mesa, with plans to double that number over the next twelve (12) months.

Please refer to enCore's announcement dated 15 October 2024 for further information⁵.

² enCore Energy Corp. announcement titled 'enCore Energy Commences Uranium Production at its Second South Texas Project' dated 13 June 2024 <https://www.sedarplus.ca/csa-party/records/document.html?id=b5b37208e04209072f3a850b53c88385cc67adc9220730b1094ad5024299b241>

³ enCore Energy Corp. announcement titled 'enCore Energy Hosts Grand Opening of the Alta Mesa Uranium Plant with George W. Bush, the 43rd President of the United States' dated 8 October 2024 <https://www.sedarplus.ca/csa-party/records/document.html?id=7ab880664a35ef6b20bec1baf56d27352c9cf8dd3cf9bc437d8568a2065b6587>

⁴ enCore Energy Corp. Announcement titled 'enCore Energy Encounters Highest Grade Drill Results at Alta Mesa Uranium Project; Provides Status on South Texas Production Operations' dated 18 March 2024 <https://www.sedarplus.ca/csa-party/records/document.html?id=ce7cfbfb51537487f6e2afdf08ad57e975b307e414c9229afce2926422a4190f>

⁵ enCore Energy Corp. announcement titled 'enCore Energy Continues to Encounter High Grade Drill Results from the Alta Mesa Uranium Project.' dated 15 October 2024 <https://www.sedarplus.ca/csa-party/records/document.html?id=744fc68bc7324711050b527b28fee210b7280edc50dc28686e95c17c76bb4c2d>

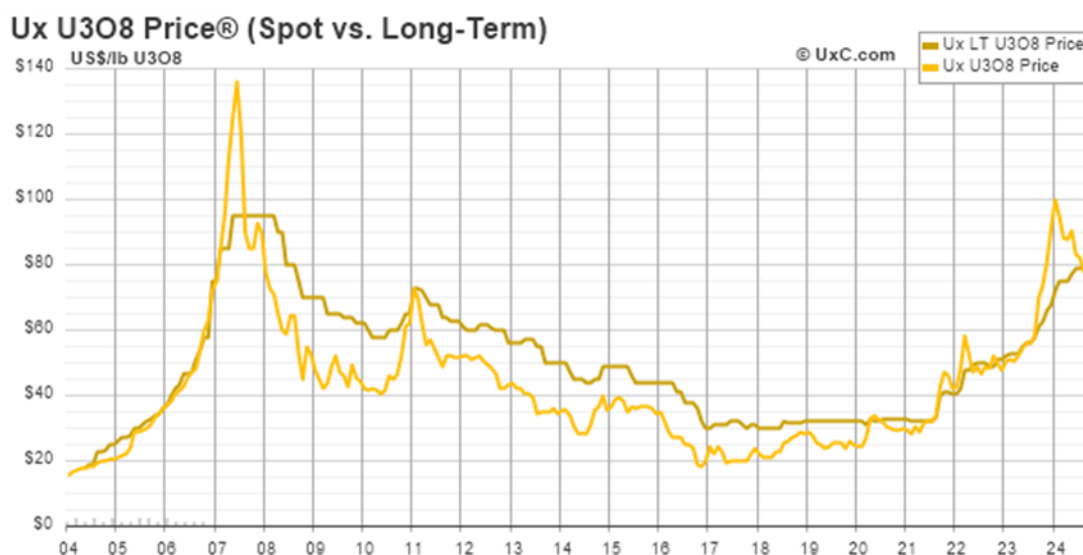
The Alta Mesa Project, which consists of over 200,000 acres plus the central processing plant and wellfields, is managed by experienced uranium producer, and partner, enCore.

Boss acquired its 30 per cent interest in the Alta Mesa Project in February 2024 from enCore and its wholly owned subsidiary, enCore Energy U.S. Corp., a highly credentialed United States uranium developer and operator, for US\$60 million cash (see ASX release dated 27 February 2024).

Uranium Market Analysis

Uranium fundamentals are strengthening as support for nuclear power grows. The long-term price continued to rise during the quarter, spot prices declined during the same period. Supply and demand fundamentals are strengthening which should be reflected in upward pressure on pricing in the coming months.

Ux U3O8 Price (Spot vs. Long-Term)



One of the key messages at the WNA uranium symposium in September was the significant increase in the demand for electricity. The presence of representatives from Microsoft, and the steel and concrete industries highlighted the unforeseen interest of these sectors in nuclear power as a viable source of supply for industrial scale clean reliable electricity capacity. Later in September this message was reinforced by the deal between Microsoft and Constellation Energy. Microsoft will purchase the entire electric generating capacity of Three Mile Island Unit 1 over the next 20 years. The trend in restarting reactors which were closed for economic reasons looks likely to continue as near-term electricity forecasts are revised upwards.

On the demand side the interest in term contracting by utilities remains high. The restart of shut down reactors is likely to impact the uranium market in the near term, life extensions and new build increase demand in the mid and longer term.

Geopolitical and supply chain concerns are shrinking the pool of existing supply available to Western Utilities. New mines are needed to fill this gap and higher prices are needed to incentivise new mines. Boss continues to ramp up its production and is well positioned to meet the need for secure and stable uranium.

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 September 2024, consist of executive director and chief financial officer salaries and wages (including superannuation) and payment of non-executive director fees.

During the quarter ended 30 September 2024, the Company spent approximately \$6.8M on project and exploration activities relating to its Honeymoon and Alta Mesa Projects. These activities included:

- Technical studies costs
- Construction equipment
- Wellfield drilling and development costs
- Engineering and construction expenses
- Mineral exploration and evaluation costs

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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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.

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.

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.

Appendix One:

Schedule of Mining Tenements

The following information is provided pursuant to Listing Rule 5.3.3 for the quarter ended 30 June 2024.

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%
Prairie Dam	South Australia	EL6962	75%
Chalker Dam	South Australia	EL6963	75%
Oakvale	South Australia	EL6964	75%
Gairloch	South Australia	EL6965	75%
Venus Bay	South Australia	EL6992	100%
Darke Peak	South Australia	ELA2024_00018	100%
Rudall	South Australia	EL6999	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 First Quantum Minerals in respect to the base and precious metal rights. Refer ASX release dated 10 February 2022 for further information.

Honeymoon Project Mineral Resource

Honeymoon's Mineral Resource (lower cut-off of 250 ppm U₃O₈)

Classification	Tonnage (Million Tonnes)	Average Grade (ppm U ₃ O ₈)	Contained Metal (Mkg, U ₃ O ₈)	Contained Metal (Mlb, U ₃ O ₈)
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
Total	52.4	620	32.5	71.6

The global Honeymoon Mineral Resource stands at 71.6 Mlb (52.4Mt) with an average grade of 620ppm U₃O₈, using a cut-off grade of 250ppm.

The current Honeymoon restart feasibility studies utilise only a portion of Honeymoon's JORC resource, excluding 36Mlb of JORC resource outside the HRA, which could expand the mine life, and Boss' defined exploration target could potentially extend the mine life beyond the initial 11 years and increase the production profile. Honeymoon's Federal EPIP Act approvals allow export of more than 3Mlbs/annum U₃O₈ equivalent.

In addition to the global Mineral Resource, the Honeymoon Uranium Project also has an Exploration Target range of 28 Mt to 133 Mt of mineralisation at a grade of 340 ppm to 1,080 ppm U₃O₈ for a contained 58Mlbs to 190Mlbs U₃O₈ (26,300 to 86,160 tonnes of contained U₃O₈), using a cut-off of 250ppm⁶. Note the potential quantity and grade of the Exploration Target range is conceptual in nature. There has been insufficient exploration to estimate a Mineral Resource and it is uncertain whether future exploration will result in the definition of a Mineral Resource.

⁶ Refer to ASX: BOE announcement dated 25 March 2019.

Alta Mesa Project Mineral Resource

Alta Mesa & Mesteña Grande Mineral Resource Summary (0.30 GT cut-off) ^{1,2,3}	Tons	Avg. Grade (% U ₃ O ₈)	Pounds
Total Measured Mineral Resource ¹	54,000	0.152	164,000
Alta Mesa Indicated Mineral Resource	1,397,000	0.106	2,959,000
Mesteña Grande Indicated Mineral Resource	119,000	0.120	287,000
Total Measured & Indicated Resources	1,570,000	0.109	3,410,000
Alta Mesa Inferred Mineral Resource	1,263,000	0.126	3,192,000
Mesteña Grande Inferred Mineral Resource	5,733,000	0.119	13,601,000
Total Inferred Resources	6,996,000	0.120	16,793,000

1. Represents that portion of the in-place mineral resource that are estimated to be recoverable within existing wellfields. Wellfield recovery factors have not been applied to indicated and inferred mineral resources.
2. Technical Report Summary for the Alta Mesa Uranium Project, Brooks and Jim Hogg Counties, Texas, National Instrument 43-101, Technical Report prepared for enCore Energy Corp, Doug Beahm, P.E. 19 January 2023.
3. For the purposes of ASX Listing Rule 5.12, Boss Energy cautions that the mineral resources for the Alta Mesa Project are not reported in accordance with the Australasian Code for Reporting of Mineral Resources and Ore Reserves 2012 (**JORC Code**). The mineral resource estimate at the Alta Mesa Project is a foreign estimate prepared in accordance with Canadian National Instrument 43-101. A competent person has not done sufficient work to classify the foreign estimate as a mineral resource in accordance with the JORC Code, and it is uncertain whether further evaluation and exploration will result in an estimate reportable under the JORC Code.

Foreign Resource Estimate

Please refer to Boss Energy's announcement to the ASX market announcements platform dated 6 December 2023 for additional technical information relating to the foreign resource estimate for the Alta Mesa Project. Boss Energy confirms it is not in possession of any new information or data relating to the foreign resource estimate that materially impacts on the reliability of the estimate or Boss Energy's ability to verify the foreign estimate as a mineral resource in accordance with the JORC Code. Boss Energy confirms that the supporting information provided in Boss Energy's announcement to the ASX market announcements platform on 6 December 2023 continues to apply and has not materially changed.