



September 2022 Quarterly Report

Solid construction progress ensures Boss is on track for first production in December quarter, 2023

Boss Energy Ltd (ASX: BOE; OTC: BQSSF) is pleased to report on the strong progress it made during the September quarter at its Honeymoon uranium project in South Australia.

All key milestones were achieved in line with the project timetable and budget and preparations for the next round of construction and development works are well on track.

Construction

Rapid progress was made re-commissioning camp services and site accommodation, with 80 rooms completely refurbished and in use. The camp management contract for camp services, including messing, laundry and maintenance, was awarded, with the successful tenderer due to start shortly.

A local earth works contractor mobilised for the upgrade of the 22km-long access road to site in late August 2022. This is designed to improve weather and wear-resilience.

Strong progress was also made in the procurement area. More than 60 procurement packages have been issued valued at approximately \$15.4M. The packages awarded to date are in line with the feasibility cost estimates and represent 14 per cent of the project's total forecast capital cost of \$113M.

The long-lead items ordered include two new electric kilns, which will produce a calcinated U_3O_8 product. Enabling equipment continues to be delivered to site, including an ambulance, tele-handlers, and elevated work platforms.

Construction activities continue to progress:

- Delivery in November of the first long lead item, a 300m² Water Treatment Plant;
- Award of the earthwork contracts for the line gypsum pond;
- Structural, Mechanical and Piping works on the wellfield branch lines are underway;
- Large bore piping arriving on site; and
- Verification / recommissioning of existing equipment, valves and instruments remains ongoing.

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Resource extension drilling

On 12 July 2022, Boss announced strong results from the infill and resource drilling campaign.

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

The strategy involved:

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 an increase in forecast production from 2.45Mlb/annum of U³⁰⁸ equivalent to more than 3Mlb/annum. Capital costs associated with the potential production increase do not form part of the current Honeymoon feasibility studies but the Company believes that with improving market conditions, it is prudent to progress with the exploitation of the known satellite deposits.

34 Wells successfully drilled and cased at Honeymoon

On 6 September 2022, Boss reported that the first 12 of the planned 86 pre-start wells were successfully drilled and cased. Preliminary testing and inspections have begun by the wellfield construction contractors. Since then, a further 22 holes have been drilled and cased, being 34 in total.

Key approval for restart at Honeymoon secured

The South Australian Department for Energy and Mining approved the Company's updated Program for Environment Protection and Rehabilitation (PEPR) at Honeymoon.

Approval of the updated Honeymoon PEPR is the key regulatory document required under the Mining Act 1971 for the restart of production.

The Company has been working closely with State Regulators over the past 12 months to update the Honeymoon PEPR following the release of the Enhanced Feasibility Study in June 2021.

Key project improvements, that are now incorporated into regulatory approvals under the Mining Act 1971, include:

- Maximum allowable production capacity – 3.3Mlb U₃O₈ per annum;
- Expanded mining footprint for extension to the 11-year mine life;
- Processing plant upgrades - replacing solvent extraction with ion exchange processing; and
- New uranium calciner - producing a more refined and higher value final product of U₃O₈.

Uranium Market Analysis

During the third quarter of 2022, the ongoing war between Russia and the Ukraine escalated with the annexation by Russia of several parts of the Ukraine. To date there have been no sanctions imposed on the purchase of nuclear fuel from Russia, but the ongoing hostilities have reinforced the importance of energy and fuel independence and strengthened Western Utilities' commitment to reducing dependence on Russia by finding alternative sources of nuclear fuel supply.

The long-term fundamentals for the uranium market continue to strengthen.

Demand in the near to mid-term is increasing as reactor life extensions are sought and agreed, nuclear reactor phaseouts are delayed in Germany and Belgium and several countries recommit to maintaining and growing their nuclear programs. In the longer term, several countries including China, Korea and several European countries have announced or are evaluating higher targets for nuclear capacity growth which include SMRs and advanced reactors programs. The 2022, IAEA forecasts for nuclear power growth for the period to 2050 have increased for the second year in a row. In the high case scenario, world nuclear generating capacity is forecast to more than double by 2050, rising to 873GWe from current levels of around 390GWe. The key drivers for these higher forecasts are identified as climate change and energy security concerns.

On the supply side, the pandemic and the war in the Ukraine have taken their toll on the supply chain. Potential disruptions to transport out of Russian ports; longer lead times for essential equipment, competition for manpower, rising inflation and interest rates and concerns about geopolitical stability are important factors which threaten the timely development of supply in the near and longer term.

In the near and mid term demand is forecast to be higher than primary supply and the deficit is met from mobile inventory and secondary supply. Primary supply will be predominantly from existing mines and restart projects. Secondary supply is decreasing and mobile inventory has been depleted by supplier discipline and purchasing on the spot market to meet contract commitments, in parallel with SPUT buying on the spot market to build sequestered inventory. At current prices, spot supply is thin and prices will have to increase to bring the next price tier of inventory into the spot market to meet additional demand in this period.

There are sufficient identified projects and resources to meet long term demand but costs to bring on new mines are increasing due to the impact of inflation and high interest rates and term prices will have to increase to incentivise the development of new mines.

Some of the most significant recent developments are:

- Sweden's new government announces support for the expansion of Nuclear Power. Sweden currently has six commercial reactors at three nuclear power plant sites with a total capacity of approximately 8,000 MWe. If the government plans are realised Sweden could see several small modular reactors as early as 2030
- Finnish utility Fortum will begin a two-year feasibility study to explore the potential for building new nuclear power stations in Finland and Sweden.
- Germany will continue operating its three remaining nuclear reactors until April 15, 2023. All three reactors had been previously scheduled for decommissioning at the end of 2022.
- Fuel loading is underway for Vogtle Unit 3 Georgia Power in the USA. This will be the start-up and commercial operation of the first new nuclear units to be built in the USA in more than 30 years

- Japan's Kyushu Electric Power has applied for 20-Year operating extensions for Sendai Units 1 & 2. This would extend the operating life of the plants from 40 to 60 years
- South Korea increases nuclear power share of energy generation mix from 28% today to 33% by 2030;
- China's State Council approves four new reactors. Two of these reactors are CNNC's Zhangzhou phase II in Fujian Province (Hualong One reactors) and two at State Power Investment Corp's Lianjiang Phase I in Guangdong Province (CAP1000 reactors);
- Cameco and Brookfield Renewable to Acquire Westinghouse Electric Co. which operates global nuclear services businesses. Until very recently most companies within the uranium industry have been operating in survival mode, this acquisition is of a long term strategic nature which will vertically integrate Cameco within the nuclear industry and could be interpreted as a move from survival to long term growth.

The spot market during Q3 remained volatile, starting out at US\$50.0/lb at the beginning of July and falling to US\$48.25/lb by the end of September, with price swings of up to +/- \$4/lb within a week occurring during the quarter. The long term price indicator remained relatively stable within a range of US\$50 to US\$53/lb.

The spot market participants during the quarter were mostly financial entities, traders, intermediaries with the occasional utility. Most utility purchases occurred in the mid to long term market. Activity in the term market has stepped up as utilities look to diversify their supply sources. The Honeymoon mine, located in South Australia, will be in production by the December quarter of 2023 and offers secure and reliable supply to the civil nuclear industry. Boss continues to engage in discussions with buyers and monitor market developments.

Strong Balance Sheet

The 2022 Annual Report was completed during September with an unqualified audit opinion.

As at 30 September 2022, the Company held unrestricted cash and cash equivalents of A\$127.28M, which excludes a fully cash-backed environmental bond of A\$8.84M. Cash balances are being managed with a term deposit program to take advantage of the higher interest rate environment.

The Company also holds inventory of 1.25Mlb of U₃O₈, which has a current spot market value of A\$103.77¹ million. Combined with unrestricted cash, Boss has liquid assets of A\$231.05M, no long-term debt obligations, and a remaining estimated CAPEX spend of A\$105.9M, leaving it well-positioned to transform Honeymoon into production.

¹ Strategic uranium stockpile valued at A\$103.77 based on a spot price of US\$52.63/lb as at 24 October 2022 at an exchange rate of US\$0.63 to A\$1.00.

Completion of executive and KMP remuneration review

During the quarter, Boss Energy undertook a detailed review of its remuneration strategy for its executive and key management personnel, with the support of an independent remuneration consultant.

The Board determined it is appropriate to transform to a contemporary remuneration structure for its executive and key management personnel which reflects the size and operational complexity of an ASX 300 commodity producer. A benchmarking exercise was undertaken, where all components of remuneration were independently assessed against a market comparator group to ensure fixed and variable remuneration appropriately incentivises whilst remaining relative to the relevant market. In determining a suitable comparator group the Board applied the following criteria:

- Companies from the ASX Energy and Mining & Metals sector;
- 50% - 200% of the Company's average 12 months market capitalisation (\$644m as at 30 June 2022); and
- Companies representative of the Company's current mining cycle (developer) and those who will be comparable in the near term (producers).

Having considered the outcomes of the external benchmarking exercise and alignment to the Company's overall strategy and reward philosophy (targeting the median of the comparator group), the Board is required to publicly disclose its approval of the following remuneration changes for the Chief Executive Officer and Managing Director, Mr Duncan Craib:

- Total fixed remuneration of \$580,000 per annum inclusive of superannuation, effective 1 July 2022 (all other key terms remain the same);
- A short-term incentive, up to 50% of Mr Craib's TFR in cash, based on defined operational, sales, financial, ESG and safety KPI's being achieved over the 12 month period to 30 June 2023;
- A long-term incentive (LTI), up to 100% of Mr Craib's TFR to be issued as performance rights, based on defined performance KPI's being achieved over the 36 months to 30 June 2025. The issue of the LTI incentives will be subject to shareholder approval at the upcoming Annual General Meeting (AGM). For further details please refer to the Company's Notice of AGM.

Executive and key management personnel remuneration arrangements are structured to encourage a long-term approach to decision making at a crucial time for the Company, ensuring a balance between achieving the remaining development phase imperatives and impending production targets for the Honeymoon Project.

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 2022, consist of executive director, company secretary and chief financial officer salaries and wages (including superannuation) and payment of non-executive director fees.

During the quarter ended 30 September 2022, the Company spent approximately \$5.33 million on project and exploration activities relating to its Honeymoon Project. These activities included:

- Completion of further technical studies;
- Commencement of development activities at Honeymoon;
- Down payments on long-lead items, NIMCIX columns, 2 kilns, construction equipment;
- Wellfield drilling and construction; and
- Engineering and construction consultant expenses.

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 September 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 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

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, 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.