Boss Energy secures Owner's Team

ASX Release 8 December 2020

Highlights

- **Core in-house capabilities secured for advancement of the Honeymoon Uranium Mine**
- **Leading uranium industry consultants engaged on Honeymoon's restart**
- **Enhanced Feasibility Study progressing on OpEx optimisations and operational simplicity**
- **Excellent progress to date on key deliverables**

Boss Energy Limited (ASX: BOE) (**Boss** or the **Company**) is pleased to announce it has secured an Owners Team to strengthen the Company's in-house capabilities in progressing the Enhanced Feasibility Study (EFS) and re-starting the Honeymoon Uranium Mine.

Following the highly successful Feasibility Study (FS) released in January 2020[1], the Company embarked on technical optimisation studies which included potential cost savings relating to power and reagent consumption[2] and NIMCIX ion exchange process detail design[3] along with additional reagent and consumable cost reduction initiatives. The identified savings and technical advancements incentivised Boss to initiate the EFS to incorporate these significant developments.

Through the EFS, Boss aspires to increase the ramp up production schedule and nameplate capacity of Honeymoon via the adoption of a wholly IX (NIMCIX) system with the first stage of production ramp up delivered within the original 12-month delivery timeline from an investment decision. Upon completion, the EFS will also serve to provide the basis for a final investment decision to finance the restart of Honeymoon.

Building an effective Owner's Team at this point in time prepares our industry experts and provides them with an opportunity to contribute to the EFS, so that the Company proactively manages the challenges involved with meeting construction milestones when Honeymoon's operations restart.

Boss Energy Managing Director and CEO Duncan Craib said, "*As we prepare Honeymoon for restart our focus has been on securing an optimal owners team structure and core in-house capabilities. Having achieved the right combination of engineering excellence and technical expertise we have successfully kicked off the Enhanced Feasibility Study. The EFS is aimed at evaluating further OpEx and CapEx savings and efficiencies that will further strengthen our global first mover advantage, by assisting our international sales and marketing channels and attracting financiers.*"

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[1] Refer ASX Announcement dated 21 January 2020. All material assumptions underpinning the forecast financial information (and the production targets on which such forecast financial information is based) in the announcement on 21 January 2020 continue to apply and have not materially changed.
[2] Refer ASX Announcement dated 20 August 2020.
[3] Refer ASX Announcement dated 25 September 2020.

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Owners Team

Under the leadership of the Board and Technical Director, Bryn Jones, the Company has established a comprehensive Owners Team to provide the necessary engineering excellence and technical expertise for ensuring a successful EFS evolves into Honeymoon's Restart.

Trevor Robinson (Project Manager) Trevor has over 35 years of professional experience. His expertise is in the evaluation, design, construction, commissioning and management of metallurgical projects; including uranium, nickel, gold, and copper. Trevor has deep experience in study management, design and commissioning of complex hydrometallurgical plants for several delivery companies as a design engineer, discipline lead, project manager, and functional manager. Trevor's significant uranium experience includes NIMCIX ion exchange commissioning and operation in Namibia which is very relevant to Honeymoon. Additional uranium experience has been gained at Olympic Dam, Ranger and Rossing.

Merrill Ford (Process Consultant) Dr Merrill Ford is an independent metallurgical consultant. He was educated as a chemical engineer in South Africa, in mineral process design at Imperial College, London and gained his Ph.D. from the University of Witwatersrand. He spent several years in the field of uranium extraction metallurgy, the design of NIMCIX columns for IX systems, the development of resin-in-pulp technology for gold and uranium and the modelling of uranium leaching. He joined ANSTO in March 2003 as Manager Special Projects, and from July 2008 until April 2016 he was Manager Metallurgy for Paladin Energy, becoming an independent consultant in 2016. As an independent consultant to the uranium industry Merrill has provided input to feasibility and operational studies for a number of uranium clients, including Cameco, Paladin, Energy Metals, and Swakop Uranium.

Jeremy Green (Civil Engineer) Jeremy has 40 years of experience in all aspects of civil and structural design with an emphasis on resource developments, with extensive engineering experience at a senior level on many projects. His experience has provided a good understanding of design, design logistics and practical construction factors. He holds academic qualifications at post-graduate levels in both structural engineering and business studies. These reflect his broad interest in structural engineering as a profession that should aim at the delivery of design solutions with a commercial as well as technical focus.

Continued Engagement of Key Advisers

The Company has also re-appointed their Key Advisers, who are leading industry specialists and possess an inherent understanding of Honeymoon having worked alongside the Boss management over the past 5 years. Their high-quality technical abilities, coupled with input from the Owners Team, will ensure a robust technical approach to completing the EFS and successfully restarting Honeymoon.

GR Engineering Services (GRES) continues as engineering and lead study consultant. All process, mechanical, civil, structural, piping, electrical, instrumentation engineering and process control design.

The Australian Nuclear Science and Technology Organisation (ANSTO) has provided supporting testwork for the optimised NIMCIX and elution design.

Groundwater Science has designed the wellfield and production schedule including wellfield layout drawing to show all well locations and the production order to enable estimation of the wellfield piping and electrical costs.

Inception Group continues to provide expert ISR process support.

Enhanced Feasibility Study

The EFS embraces the following staged approach:

Stage 1

Based on the flowsheet developed during the FS, however the SX circuit for uranium recovery will be removed from the process and replaced with an IX circuit. The IX circuit will consist of two parallel trains of NIMCIX adsorption and elution columns designed to accept 1,040 m^3/h of PLS (in total) and produce approximately 0.84 Mlb/annum U_3O_8.

Stage 2

Production expansion will consist of two additional parallel trains of NIMCIX adsorption and elution columns designed to accept an additional 2,000 m^3/h of PLS for a total production of up to 2.45 Mlb/annum U_3O_8.

The NIMCIX circuit design in both stages will incorporate updated resin performance data and optimised elution parameters established during the recent test work programme.

Timeframe

The EFS is scheduled to be completed in 1H 2021.

To date the Company has completed the preliminary NIMCIX and Wellfield designs to allow GRES to proceed with the balance of the design.

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 Feasibility Study announced 21 January 2020, 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. Nothing in this announcement pre-empts the findings of the Enhanced Feasibility Study proposed to be undertaken.

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.