

HONEYMOON FIELD LEACH TRIAL

HIGHLIGHTS

- Construction and start-up of Field Leach Trial successfully completed
- Wellfield conditioning underway with process stability demonstrated
- Initial performance demonstrates low acid consumptions and no gypsum precipitation issues
- Installation of Ion Exchange plant completed and commissioning in progress
- Site visit conducted and positive feedback received by the South Australian Department of Premier & Cabinet, and Safe Work South Australia

Boss Resources Limited (ASX: BOE) (“Boss” or the “Company”) is pleased to announce that it has successfully commenced operation of the Field Leach Trial (“FLT”) at its Honeymoon Uranium Project (“Project”) in South Australia. The construction phase was completed in mid-August and the wellfield conditioning phase of the operation started on the 11 August 2017. The installation of the Ion Exchange pilot plant (“IX”) has now also been completed and the commissioning of the plant and training of the operators is underway. The program is on schedule for completion in November 2017.

Leaching Progress

The first leach pattern (E3) commenced on 11 August 2017 and operated with ground water for the first few days to allow the injector and extractor flowrates to be optimised and stabilised. Acid injection was then started with a pH of 1.8 targeted in the injectors. The extractor pH was monitored and the addition of ferric chloride (oxidant) started once the extractor pH had reached ~2.2. Oxidant levels (“ORP”) in the extractor are now being monitored as higher ORP levels will achieve desired uranium tenors. pH levels in the injectors have also been lowered as low acid consumption has been observed and the lower pH will assist recovery.

Importantly no issues with the gypsum formation have been identified to date and calcium levels have stabilised in the liquor.

The second leach (E1) pattern will soon commence, to be run in parallel with the current E3 pattern.

Once both patterns have passed their peak tenor the patterns will be changed to a series operation and the solution stacking concept tested.

The results from the FLT will enable Boss Resources to:

- Validate optimal leaching conditions (pH, Redox, Fe levels)
- Confirm calcium leaching and the required gypsum control measures
- Confirm initial leach kinetics

- Define the initial part of the recovery curve (uranium tenor vs. time)
- Assess reagent consumptions
- Check wellfield construction procedures
- Assess solution stacking as an option for low grade patterns

Ion Exchange Piloting

The installation of the IX equipment was completed on 4 September and commissioning is currently underway using liquors from the wellfield. During this commissioning phase, the operators are being trained by ANSTO Minerals personnel in the operation of the plant. The conditions used in the piloting are based on the results of the laboratory testwork undertaken by ANSTO as part of the Pre-Feasibility Study. A minimum of two sets of conditions will be tested as part of the IX piloting, with each campaign lasting approximately 3 weeks.

The IX piloting will enable Boss Resources to:

- verify the stability and ongoing performance of the resin over multiple load and elute cycles
- test various eluents on elution kinetics and efficiency
- test resin loadings at various PLS grades
- investigate effect of dissolved silica on performance
- determine if calcium levels are problematic for the IX performance

Figure 1: Aerial view of the IX Plant



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