

31 DECEMBER 2018 QUARTERLY REPORT

Boss Resources Limited (ASX: BOE) (“Boss” or the “Company”) is pleased to provide shareholders with the quarterly activities report for the three-month period ending 31st December 2018.

HIGHLIGHTS

- **Divestment of African gold assets for A\$10m, contributing to A\$12.7m quarter-end cash at bank**
- **Successful advancement of Honeymoon Re-Start Strategy**
 - Phase 1 nearing completion with improvements being demonstrated over original base case
- **Exploration drilling completed in East Kalkaroo ahead of schedule and within budget**
 - Two new highly prospective exploration targets identified
- **Native Title finalised, existing agreements novated to the new native title body corporate**

SUCCESSFUL ADVANCEMENT OF RE-START STRATEGY

As previously detailed, (ASX Announcements - 2 July 2018, 9 October 2018), the Re-Start Strategy for the Company’s Honeymoon Uranium Project in South Australia comprises of three key phases. The first phase is focused around the generation of the final input data, including the recently completed infill drilling program to deliver the measured and indicated resource, required for the completion of the Definitive Feasibility Study (“DFS”).

Phase 1 also includes the optimisation program and trade-off studies which are being carried out to identify potential cost savings and/or process improvements, in addition to a preliminary execution plan, updated cost estimate and schedule for the restart of the existing solvent extraction (“SX”) plant.

The testwork programs are all well advanced with improvements being demonstrated over the original base case process defined in the Pre-feasibility Study. Results to date confirm that Boss is well on track to successfully returning the Honeymoon Uranium Project to production.

Phase 1 Schedule

Progress dates for the completion of the main deliverables for Phase 1 are as follows:

- Infill drill campaign completed, upgraded mineral resource estimate being finalised
- Optimisation testwork (except leaching) nearing completion, reporting in progress
- Trade-off Studies nearing completion, reporting in progress
- Preliminary SX Re-Start Assessment completed, report being finalised
- Preliminary Operational Readiness plan ongoing

Future Work Programs

On completion of the Phase 1 activities, Phase 2 of the Re-Start Strategy will commence. This will begin with the updated mineral resource estimate, followed by the wellfield design activities which will be based on the geological and resource models.

The recent infill drill results along with the historical drill results will be used for the mineral resource update which is targeting a measured and indicated resource for the Honeymoon, East Kalkaroo and Brooks Dam deposits.

The DFS engineering works; process, engineering design and cost estimation, will use the results from the Phase 1 studies along with the outputs of the wellfield design (wellfield solution tenors and flowrates) to deliver an independent feasibility study report. As part of this work program the solvent extraction re-start assessment and operational readiness programs will be updated to reflect any changes and a detailed execution plan developed. In addition, the necessary permitting updates and applications will be prepared so as to minimise any delays with progressing into the next phase.

Phase 3 of the strategy covers the detailed execution planning, operational readiness inclusive of the SX plant recommissioning plan, in conjunction with the ion exchange plant detailed design.

EAST KALKAROO DRILLING IDENTIFIES MINERALISED EXTENSIONS

Throughout the quarter, Boss completed an exploration drilling program concentrating on the East Kalkaroo area which is located approximately 3 - 10 kilometres from the Honeymoon Uranium Mine (**Figure 1**).

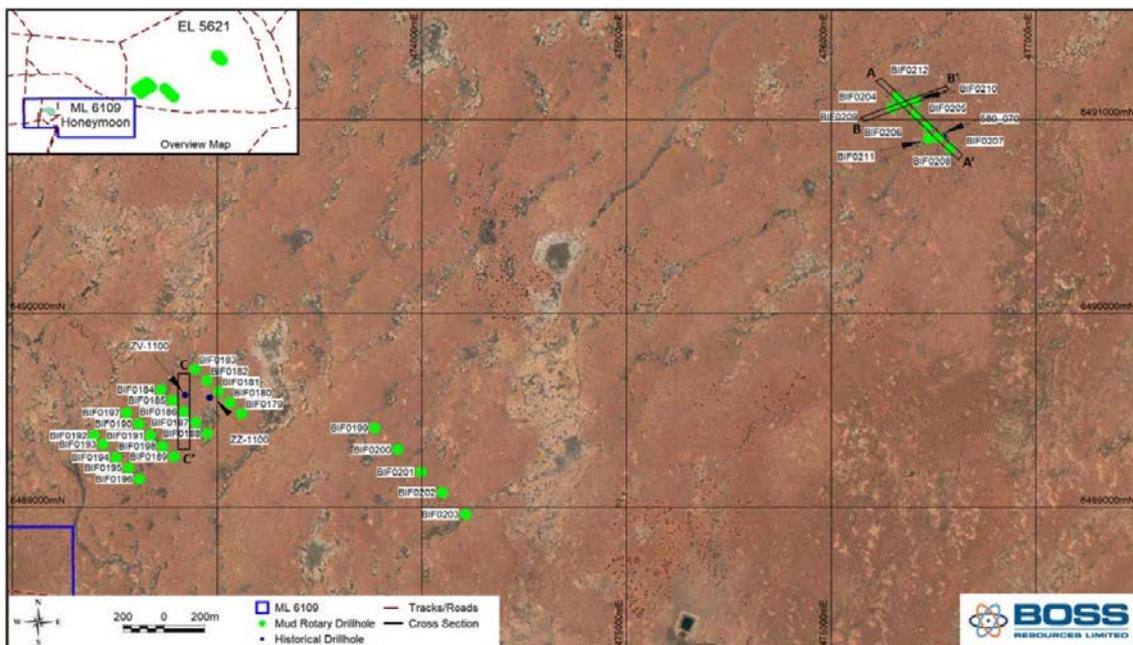


Figure 1: Location Map for the 2018 exploration drilling program at East Kalkaroo

The focus of this program was divided into two key areas:

- **Step-out drilling:** targeting the easternmost edge of the Honeymoon Mining Lease, with the objective of identifying extensions to the current Mineral Resource; and
- **Regional exploration drilling:** focusing on the poorly-explored central part of Exploration Licence 5621, with the objective of identifying new areas of mineralisation for future exploration.

To date, two new zones of mineralisation have been identified by drilling, which regional-scale, airborne electromagnetic (EM) data (**Figure 2**) suggest are extensions of the same Tertiary-aged Yarramba Palaeochannel that hosts the Honeymoon Uranium Deposit. As such, Boss has identified these new targets to be highly prospective and worthy of further exploration.

The results from the 2018 program highlight one mineralised trend (Target Area 1, **Figure 2**) that appears to be 190m across at its widest point and is situated at the easternmost edge of the Honeymoon Mining Licence (ML). The location of this mineralisation suggests an extension of the known Mineral Resource in an orientation different to the currently recognised east-west trend at Honeymoon.

A second mineralised trend of approximately 80m width (Target Area 2, **Figure 2**) was identified from the drilling completed 4 kilometres from the eastern edge of the ML. Further extensive exploration is required to define the morphology of these channel limbs and determine their potential to meet the ultimate objective of increasing the Honeymoon Mineral Resource.

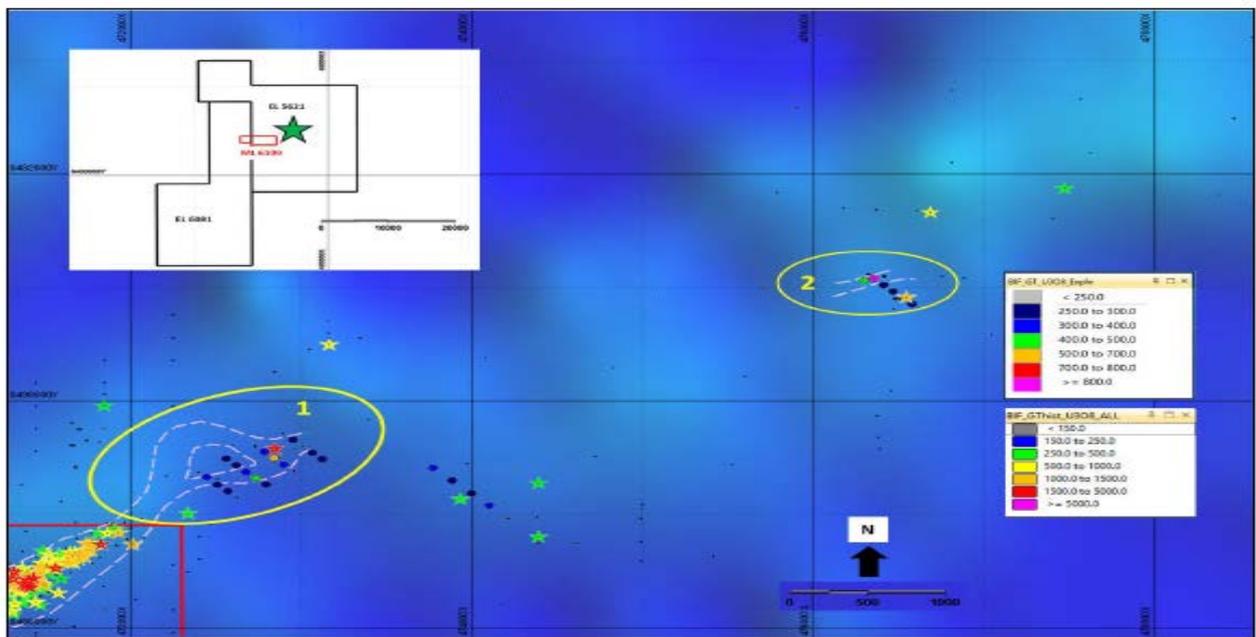


Figure 2: Summary grade x thickness (GT) distribution map overlaying regional-scale EM depth slice. Green star on inset tenement map denotes area of exploration drilling in 2018.

Significant intersections returned from the downhole Prompt Fission Neutron (PFN) logging (ppm pU₃O₈), fell within grade expectations and confirmed historical interpretation. Highlights include:

- 3.50m @ 829ppm pU₃O₈GT 2,902 (BIF0204 from 119.00m)
- 4.00m @ 340ppm pU₃O₈GT 1,360 (BIF0199 from 117.25m)
- 2.75m @ 428ppm pU₃O₈GT 1,177 (BIF0198 from 109.25m)
- 2.00m @ 568ppm pU₃O₈GT 1,136 (BIF0186 from 124.75m)
- 2.25m @ 278ppm pU₃O₈GT 626 (BIF0207 from 113.50m)
- 2.25m @ 274ppm pU₃O₈GT 617 (BIF0206 from 122.25m)

All reported drill intercepts were above the nominal cut-off value of 250ppm pU₃O₈, greater than 0.5m in thickness and less than 1m of internal dilution.

Geological logging of the drill chip samples shows that the mineralisation is hosted within the sandy units of the Lower Eyre Formation, with continual review of the geophysical logs to ensure that correct interpretation of lithological units was applied.

The results from the 2018 exploration drill campaign provide strong justification for further exploration over the two new target areas. The Company will look to commence with comparably low-cost surface geophysics to provide better channel definition ahead of any drilling.

As such, the next stage of exploration activities will involve the use of the ground-based passive seismic system to map out the underlying basement topography, identifying areas of basement depression and structure as well as improving the current resolution of the known morphology of the Yarramba Palaeochannel.

A small orientation survey will initially be undertaken within the Honeymoon Mining Licence to provide definitive confirmation that the passive seismic system will derive expected results. The resulting data will be used to produce a depth-to-basement model, with the recent drilling utilised as calibration data. Once the model has been produced, the geophysical method will be applied to regional areas around the tenement package. It is anticipated that this phase of exploration will commence in the first half of 2019.

NATIVE TITLE FINALISED

Prior to the year end, Boss was pleased to announce that the longstanding competing native title claims over its tenements and mining licence held in South Australia, including Honeymoon and Gould's Dam, were concluded on Friday 14 December 2018. As part of the Consent Determination, existing agreements with the Company were novated to the new native title body corporate, preserving their operation into the future and affirming one new claim group with whom the Company will correspond for all future programs.

Consent Determinations are currently the most widely used method of settling native title claims in Australia. Under the leadership of the State of South Australia, the three competing native title

claimants were advised that by combining to form a new claim group, the State would consider acquiescing in a Determination of native title by consent.

On Friday 14 December 2018, a specially convened hearing of the Federal Court of Australia held at Orroroo, South Australia, pronounced a Consent Determination of native title held jointly by Adnyamathanha, Wilyakali No. 2 and Ngadjuri Nation native title holders over the region and its many mining projects from approximately Orroroo to Olary north of the Barrier Highway in South Australia. The court hearing settled native title claims that had been in dispute since as far back as 1996.

The Honeymoon Uranium Project forms a relatively small part of the affected region, but the Company actively committed to supporting this significant achievement and its satisfactory outcome.

Existing native title agreements over Company-held tenements and mining licence were already in place and these have been preserved, however the various stakeholders are now resolved that all native title party interests will transfer to a new native title body corporate which will hold the native title for its constituents.

CORPORATE

On 3 October 2018, the Company banked A\$10m cash from the divestment of its Burkina Faso gold assets, contributing to a A\$12.7m cash balance for the December 2018 quarter end.

On 1 November 2018, Tribeca Investment Partners Pty Ltd increased its holding in Boss to 150,839,449 shares for 9.52%.

The Company held its Annual General Meeting on 23rd November where all resolutions were passed.

For further information, contact:

Duncan Craib	Managing Director/ CEO	+61 (08) 6143 6730
Nathan Ryan	NWR Communications	+61 (0) 420 582 887
Victoria Humphries	NWR Communications	+61 (0) 431 151 676

Competent Person's Statement

The information in this report that relates to exploration results for the Honeymoon Project were initially reported to the ASX on 5 November 2018. The Company is not aware of any new information or data that materially affects the information included in the relevant announcements. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

APPENDIX 1

The following information is provided pursuant to Listing Rule 5.3.3 for the quarter ended 31 December 2018.

SCHEDULE OF MINING TENEMENTS

Tenement Name	Location	Licence Number	Interest
Yarramba	South Australia	EL5621	100%
South Eagle	South Australia	EL6081	100%
Gould's Dam	South Australia	EL5623	100%
Katchiwilleroo	South Australia	EL5622	100%
Ethiudna	South Australia	EL6020	100%
Gould's Dam	South Australia	RL83-90	100%
Honeymoon Mine	South Australia	ML6109	100%

There were no acquisitions during the quarter.

During the quarter, the following assets were divested via a share sale agreement with Teranga Gold (Australia) Pty Ltd:

Tenement Name	Location	Licence Number	Prior Interest
Boutouanou	Burkina Faso	2011/11/410	49%
Diabatou	Burkina Faso	2011/11/409	49%
Tyara	Burkina Faso	2011/11-159	49%
Foutouri	Burkina Faso	2011/11-160	49%
Baniri	Burkina Faso	2009/09-060	49%
Intiedougou	Burkina Faso	2009/09-061	49%
Mougue	Burkina Faso	2009/09-062	49%
Kankandi	Burkina Faso	10/142/MCE	49%
Tyabo	Burkina Faso	10/144/MCE	49%