

## FIELD WORK AND CORE SAMPLING UNDERWAY AT HONEYMOON URANIUM PROJECT

### HIGHLIGHTS

- Boss initiates first field work program at Honeymoon Uranium Project following acquisition
  - Follows complete analysis of historical data and amalgamation of databases
  - 5 previously unsampled sonic core holes identified
- Core sampling and logging has commenced on these 5 previously unsampled historical sonic holes from the Honeymoon and East Kalkaroo Prospects
- On-ground heritage clearances to begin week commencing 1 August 2016 at the Jasons Prospect
- Drill program of 70 mud rotary holes to commence at the high grade Jasons Prospect following clearances
- Drill program designed to confirm historical data and increase resource definition for the Jasons Prospect
  - Current JORC Inferred Resource of 5.2Mlb U<sub>3</sub>O<sub>8</sub> (2.8Mt at 840ppm eU<sub>3</sub>O<sub>8</sub> above a 250ppm eU<sub>3</sub>O<sub>8</sub> lower cut-off)
  - Opportunity to evaluate current exploration target

Boss Resources Limited (ASX: BOE) is pleased to announce that its maiden field work program has commenced at the Honeymoon Uranium Prospect, South Australia.

### Core Sampling

Following extensive analysis of the data acquired from Uranium One Australia Pty Ltd, including amalgamation of a number of separate databases, five previously unsampled sonic core holes drilled by the previous owners have been identified by Boss (Figure 1). Geological logging and core sampling of this core is now underway.

Two of the holes were drilled within the main Honeymoon Resource and three were drilled within the East Kalkaroo Resource region. These holes were drilled by Boart Longyear in 2011 and had a typical core diameter of 155mm. The new logging and sampling of these holes will provide additional information on potential disequilibrium at the Honeymoon and East Kalkaroo Deposits (Figure 2). It is noted that sampling of sonic core from the Gould's Dam deposit indicated a strong positive disequilibrium when comparing PFN and gamma eU<sub>3</sub>O<sub>8</sub> grade data to chemical grade data (Figure 3; ASX: 8 April 2016).

### Maiden Drill Program

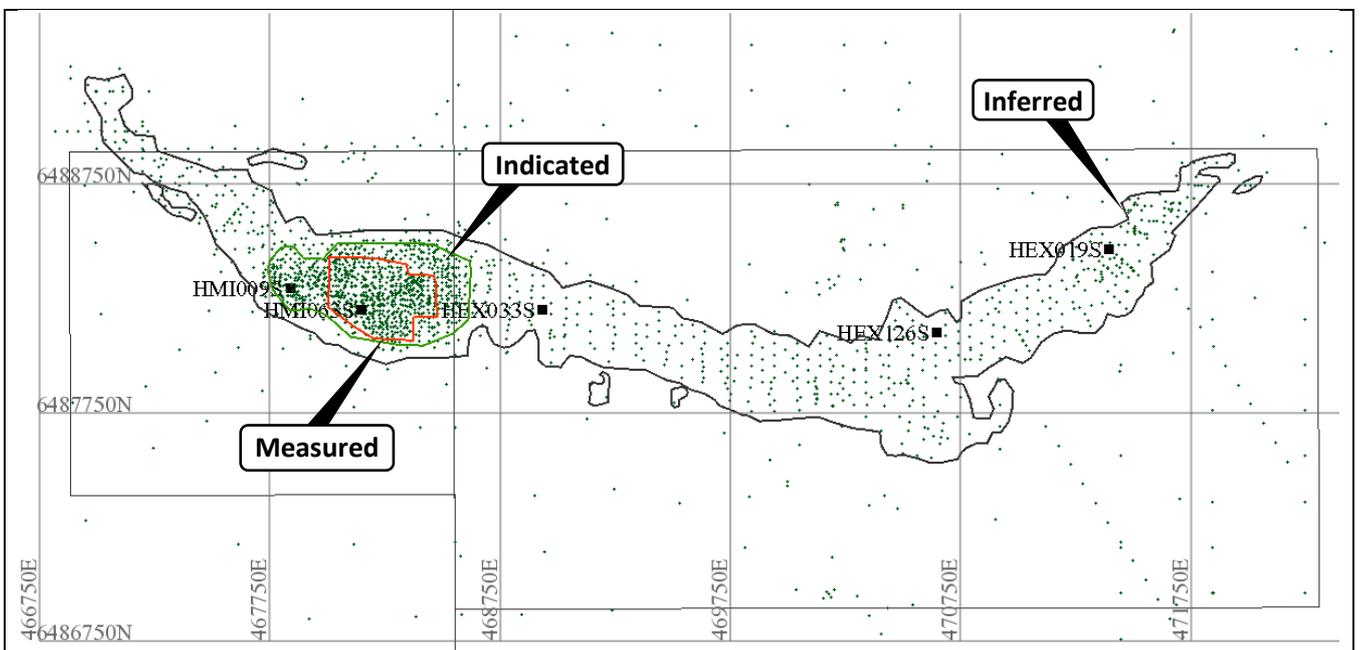
Boss has designed a maiden drill program of approximately 70 mud rotary holes to enable increased resource definition at the Jasons Prospect. The Jasons Prospect currently has an Inferred Mineral Resource of 5.2Mlb U<sub>3</sub>O<sub>8</sub> (2.8Mt at 840ppm eU<sub>3</sub>O<sub>8</sub>) (ASX: 14 June 2016) and an additional exploration

target of 1.5 to 6Mt at 600 to 1,500ppm  $eU_3O_8$  for between 7 to 18MLb of contained  $U_3O_8$  (ASX: 8 December 2015). This Exploration Target is conceptual in nature and there has been insufficient exploration to estimate a Mineral Resource. It is uncertain if further exploration will result in the estimation of a Mineral Resource.

Heritage clearances are scheduled to begin onsite in the week commencing 1 August 2016, with drilling to commence on completion.



**Figure 1:** Logging and Sampling of Sonic Core - Holes HMI063S and HEX019S shown



**Figure 2:** Location of Sonic Core holes at the Honeymoon and East Kalkaroo Deposits. 2016 Resource areas shown.

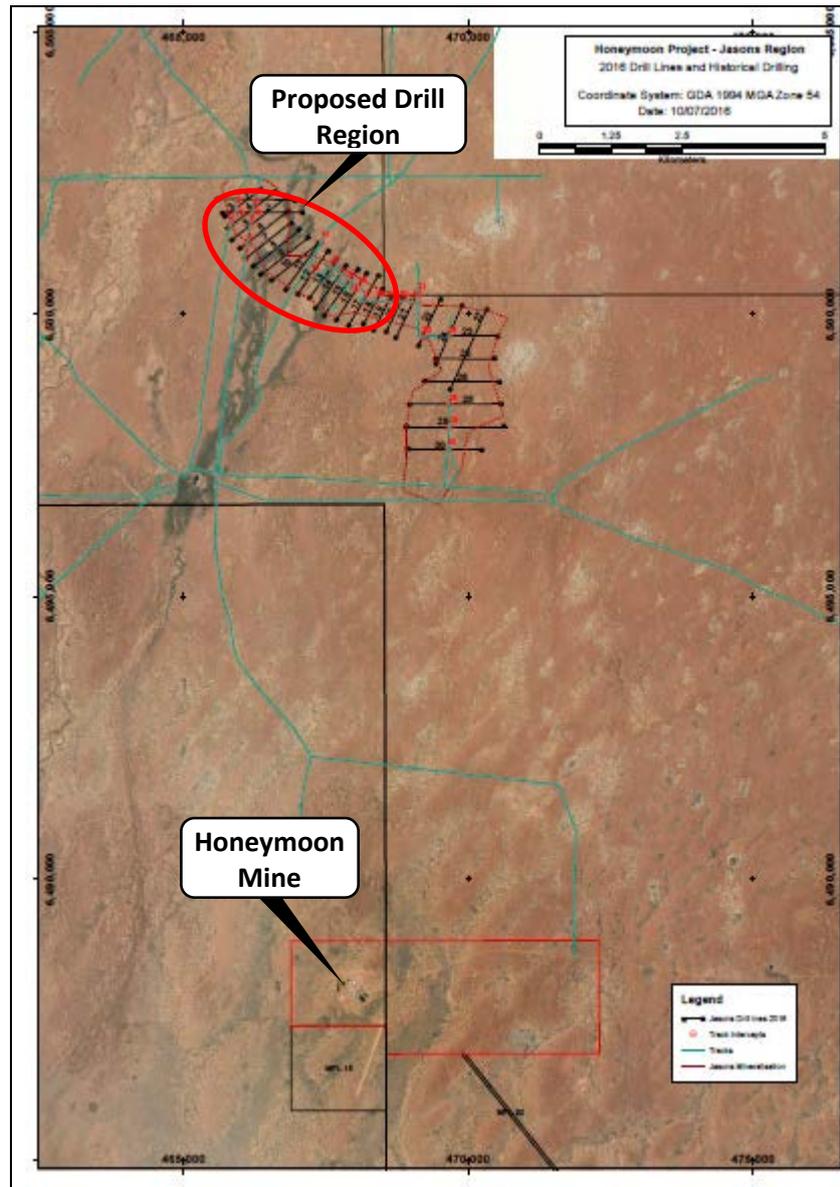
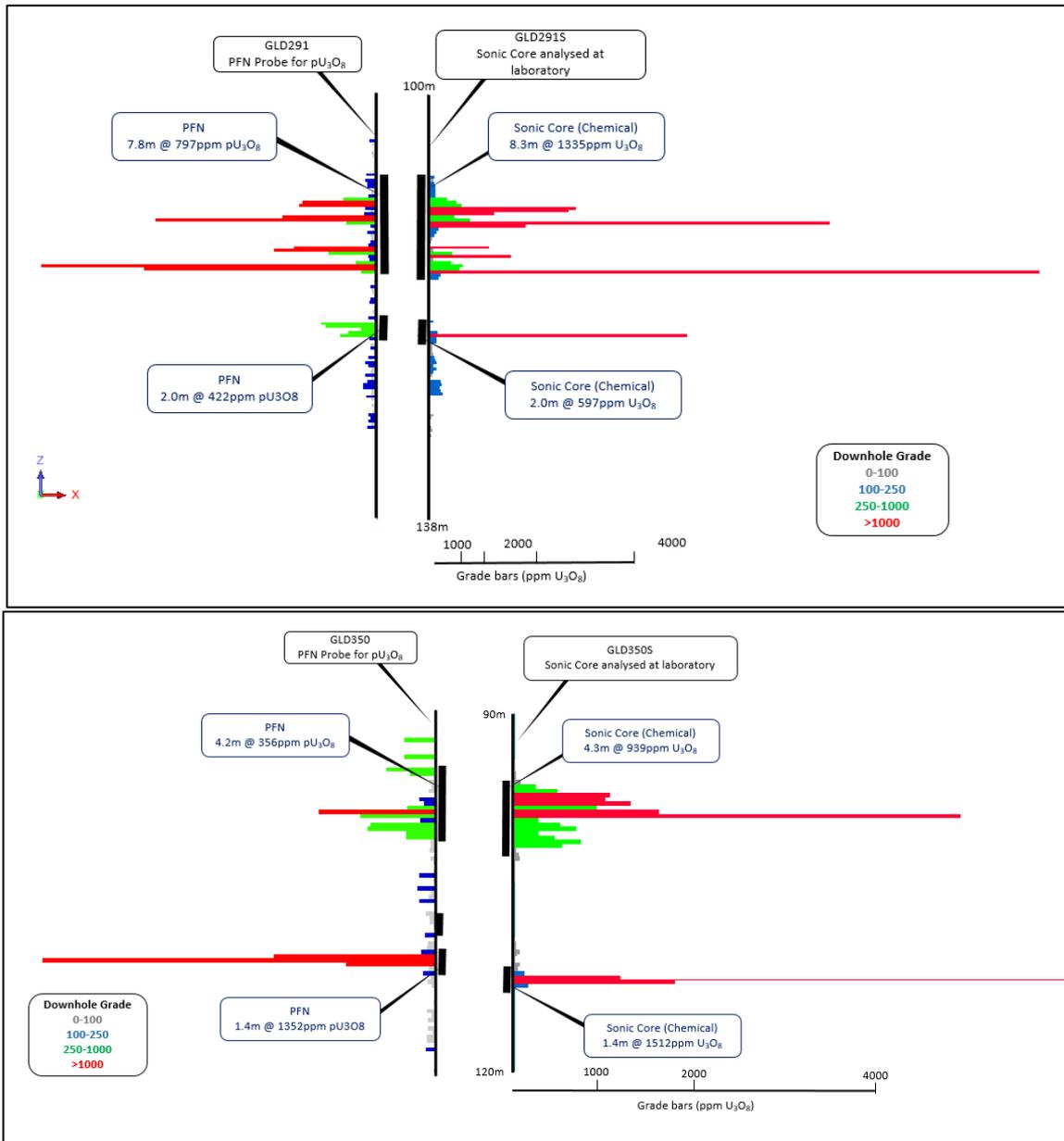


Figure 3: Location of planned drilling at the Jasons Prospect, approximately 15km north of the Honeymoon Mine site.



**Figure 4:** Strong positive disequilibrium experienced at the two sonic holes drilled within the Gould’s Dam deposit. The results from these two holes also indicate that the PFN calibration is resulting in realistic interval thicknesses (ASX: 8 April 2016)

## About the Honeymoon Uranium Project

The Honeymoon Uranium Project is located in South Australia, approximately 80km north-west from the town of Broken Hill near the SA / NSW border. The Project consists of 1 granted Mining Lease, 5 granted Exploration Licenses, 8 Retention Leases and 2 Miscellaneous Purposes Licenses.

There are 2 main exploration regions: the Eastern Region (ELs 5215 and 5621) which hosts the Honeymoon, Brooks Dam and East Kalkaroo Resources; and the Western Region (ELs 5043, 5623 and 5622) which hosts the Gould's Dam and Billeroo deposits.

The Honeymoon Uranium Project is located in the southern part of the Callabonna sub-basin in South Australia. Uranium mineralisation within the project area is hosted by the Yarramba and Billeroo palaeochannels (Figure 5). These consist of Palaeogene age palaeovalleys filled by a sequence of inter-bedded sand, silt and clay). Thickness of the palaeochannels at Honeymoon deposit area reaches a maximum of 55m thick, and is around a depth from surface of approximately 110 metres.

The uranium mineralisation represents a classic basal channel type sandstone-hosted uranium roll-front model. This model implies the movement of oxidised, uranium-bearing fluid through a largely reduced aquifer, with mineralisation occurring at the redox front of the fluid. A geochemical zonation is associated with the roll front, including oxidation of the sands upstream (orange and yellow limonite) and abundance of pyrite/marcasites and organic matter downstream. Mineralisation is associated with discreet accumulations of organic matter and pyrite within the palaeovalley sequence.

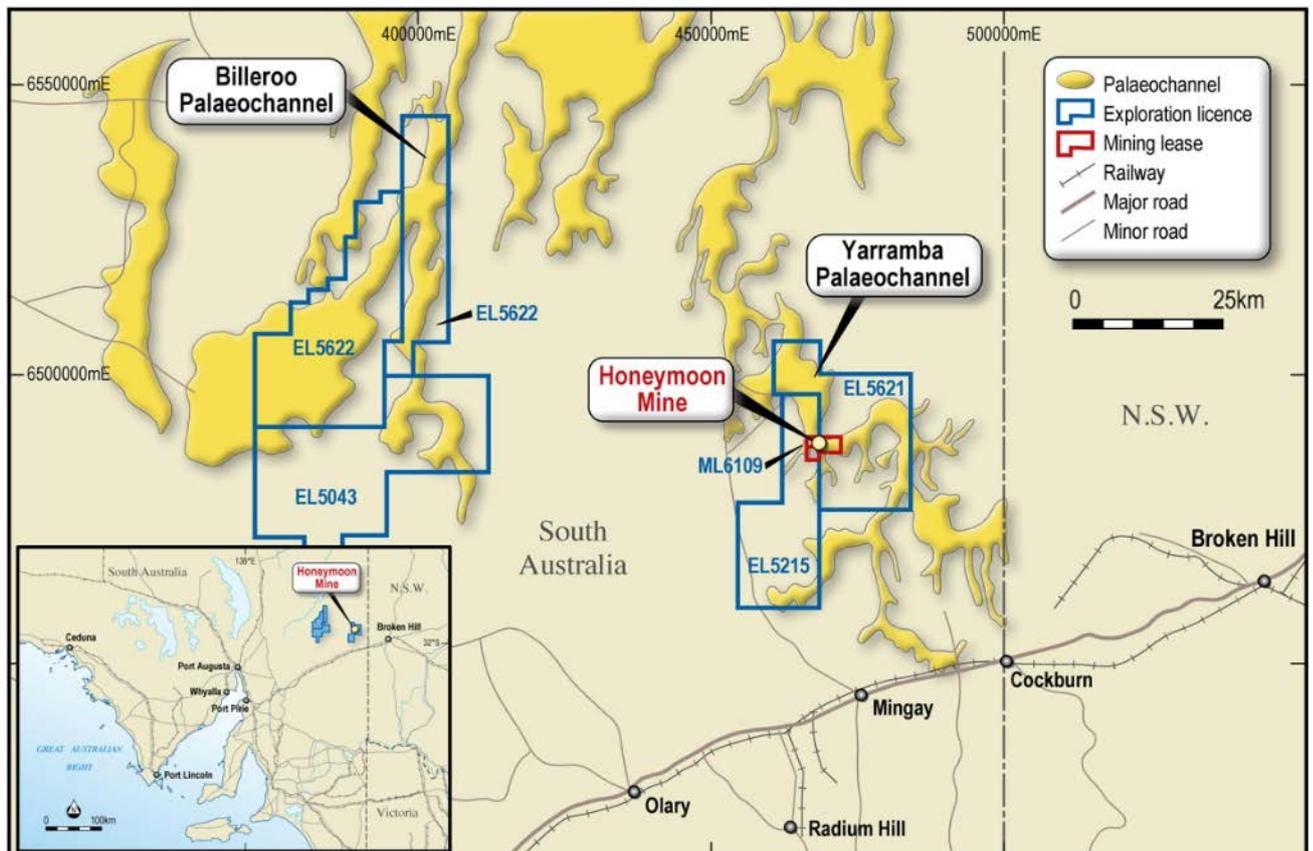


Figure 5: Honeymoon Uranium Project. The pink shaded regions represent palaeodrainage channels which have potential to host uranium mineralisation and are the focus of exploration efforts.

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**Competent Persons' Statements**

*The Mineral Resource estimate for the Jasons Prospect were previously announced on 14 June 2016 and the Exploration target for the Honeymoon Project was discussed in the announcement on 8th December, 2015. The relevant reports are available to view on [www.bossresources.com.au](http://www.bossresources.com.au). The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements and, in the case of estimates of Mineral Resources, Exploration Target or Ore Reserves that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. 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.*

*The information in this report that relates to the Mineral Resources is based on information compiled by Dr. M. Abzalov, who is a Competent Person according to the JORC 2012 Code. Dr. M. Abzalov is a Fellow of Australasian Institute of Mining and Metallurgy. He has sufficient experience in estimation Resources of uranium mineralisation, and have a strong expertise in the all aspects of the data collection, interpretation and geostatistical analysis to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting Exploration Results, Mineral Resources and Ore Reserves'. Dr. M. Abzalov is employed as a director of BOSS Resources and also working as independent consultant and Director of 'MASSA Geoservices (Australia). M. Abzalov consent to the inclusion in the report of the matters based on their information in the form and context in which it appears.*

*The information in this document that relates to the Honeymoon Mine Project Exploration Target and associated Exploration Data is based on information provided by Mr. Neil Inwood, who is a Fellow of the AUSIMM. Consent is granted only for the purposes of outlining an Exploration Target, no warranty is made on the use of the exploration information and data for other purposes. Mr Inwood is a consulting geologist and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity undertaken to qualify as Competent Persons as defined in the 2012 edition of the "Australasian Code for Reporting of Mineral Resources and Ore Reserves". Mr. Inwood has consented to the inclusion of this information in this document in the form and context in which it appears. An entity associated with Mr Inwood has shares in Boss Resources.*

