12 May 2017



ASX Announcement ASX: BOE

FINAL DRILL RESULTS FROM JASONS PROSPECT DRILLING

HIGHLIGHTS

- Final results for drilling at the Jasons Prospect announced with significant intercepts encountered include:
 - 1.14m @ 1385ppm pU3O8 from 94.32m in BMR068
 - 1.77m @ 1270ppm pU3O8 from 86.82m in BMR069
 - 0.79m @ 899ppm pU3O8 from 92.46m in BMR069
 - 0.57m @ 1146ppm pU308 from 88.68m in BMR072
- Promising potential for resource extension at Jasons Prospect

Boss's Chief Executive Officer, Mr Duncan Craib, said: "These results confirm our expectation that targeted drilling can extend the uranium endowment in this area.

Meanwhile we have advanced the Pre-Feasibility Study and now look forward to announcing the results by month end, May 2017."

Jasons Prospect

Boss Resources Limited (ASX: BOE) is pleased to announce that the final round of results of the mudrotary program at the Jasons Prospect have been processed. The Jasons Prospect is located approximately 12km north of Boss's Honeymoon Uranium Mine Site. The drilling program commenced in the northern region of the deposit before shifting to the southern region. The final part of the program infilled between the northern and southern drilling.

Figure 1 shows the peak per-hole grade x thickness composites (single best composite, not amalgamated) for the recently drilled holes, along with historical holes for reference. The results to date support the general endowment seen in historical drilling; significantly good lateral continuity of mineralisation has been encountered.

Table 1 summarises significant intercepts above a nominal 250ppm eU_3O_8 lower cut-off and greater than 0.5m in thickness and less than 1m of internal dilution. Based upon logging of the drilling muds, the mineralisation encountered to date is within sandy units of the Middle and Lower Eyre Formation and along sand/clay interbeds and interfaces.

Boss has probed the holes using its two wholly owned Prompt Fission Neutron (PFN) tools, which can provide calibrated eU_3O_8 grade data which is not affected by radioactive disequilibrium. Boss's PFN tools have been calibrated using four on-site test pits which were established by the previous owners of the operation. The operating, calibration and results of the PFN tool have been reviewed by an independent PFN expert. Full sampling and drilling details are shown in Appendix 1.





Figure 1: Summary grade x thickness plot of the Jasons drilling.

| Table 1: Results from 2016 Jasons Mud Rotary Drilling | | | | | | | | | |
|--|------------------|----------------------|-------|-----|-----|--------|------------|------------------|------------------|
| Summarised above a nominal 50cm minimum thickness, 1m internal dilution, and > 250ppm U3O8 | | | | | | | | | |
| Hole ID | Easting MGA94 | Northing Zone 54S | RL | Dip | Az. | From | Length (m) | eU3O8 1 (ppm) | pU3O8 2 (ppm) |
| BMR067 | 467217 | 6501365 | 94.62 | -90 | 0 | 67.23 | 0.5 | 414 | 593 |
| | | | | | | 79.21 | 0.5 | 280 | 663 |
| | | | | | | 82.18 | 0.5 | 219 | 244 |
| | | | | | | 92.31 | 0.69 | 742 | 716 |
| | | | | | | 103.74 | 0.51 | 1231 | 2180 |
| | | | | | | 106.33 | 0.5 | 254 | 508 |
| BMR068 | 467037 | 6501168 | 95.76 | -90 | 0 | 69.81 | 0.5 | 50 | 278 |
| | | | | | | 79.59 | 0.5 | 73 | 285 |
| | | | | | | 94.32 | 1.14 | 1184 | 1385 |
| | | | | | | 100.35 | 0.5 | 103 | 258 |
| BMR069 | 466908 | 6501067 | 96.22 | -90 | 0 | 80.11 | 0.5 | 301 | 744 |
| | | | | | | 84.69 | 0.5 | 341 | 650 |
| | | | | | | 86.82 | 1.77 | 805 | 1270 |
| | | | | | | 92.46 | 0.72 | 655 | 899 |
| | | | | | | 103.32 | 0.5 | 175 | 276 |



| | | | | | | 105.6 | 0.5 | 125 | 243 |
|--------|--------|---------|-------|-----|---|--------|------|------|------|
| BMR070 | 467038 | 6501738 | 94.38 | -90 | 0 | NSA | | | |
| BMR071 | 467121 | 6501805 | 94.19 | -90 | 0 | 65.25 | 0.5 | 19 | 274 |
| | | | | | | 74.07 | 0.57 | 16 | 383 |
| | | | | | | 76.12 | 0.5 | 18 | 278 |
| | | | | | | 79.69 | 0.5 | 52 | 289 |
| BMR072 | 466746 | 6501508 | 95.81 | -90 | 0 | 75.66 | 0.5 | 262 | 408 |
| | | | | | | 82 | 0.5 | 274 | 495 |
| | | | | | | 88.68 | 0.57 | 1027 | 1146 |
| | | | | | | 90.52 | 0.5 | 45 | 302 |
| | | | | | | 95.1 | 0.51 | 1017 | 1309 |
| | | | | | | 101.16 | 0.54 | 80 | 301 |

1 - eU₃O₈ grade data derived from natural gamma downhole tool calibrated and operated by Borehole Wireline 2(South Australia) for holes BMR001 to BMR064. All other holes are by the Boss gamma tool. No top cuts applied.

₂- pU₃O₄grade derived from Boss's Prompt Fission Neutron (PFN) tools. These have been calibrated to the groundwater and sedimentary conditions at the Honeymoon Mine Site.

About the Honeymoon Uranium Project

The Honeymoon Uranium Project (Figure 2) is 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 Purpose 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 Project has combined JORC 2012 Mineral Resources across three main project areas of 43.5Mt at 660ppm eU_3O_8 for 63.3Mlb of contained U_3O_8 . Including Measured Resources of 1.7Mt @ 1720ppm eU_3O_8 , Indicated Resources of 5.9Mt @ 810ppm eU_3O_8 and Inferred resources of 35.9Mt @ 586ppm eU_3O_8 reported above a 250ppm lower cutoff.

The Project also has a combined Exploration Target of between 32Mt to 78Mt at a grade of between 450ppm and 1400ppm U_3O_8 with a potential target endowment of between 42Mlb and 100Mlb of contained U_3O_8 . 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. See announcement of 8th December, 2015, for further information.

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 3). These consist of Palaeogene age palaeovalleys filled by a sequence of interbedded sand, silt and clay). Palaeochannels at Honeymoon deposit area reaches a maximum of 55m thickness, and are approximately 110 metres below surface.



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

For further information, contact:

Duncan Craib: +61 (08) 6143 6730

Competent Persons' Statements

The information in this document that relates to the Exploration Data is based on information provided by Mr. Neil Inwood, who is a Fellow of the AUSIMM. 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.

The information in this document relating to the Mineral Resources is extracted from the announcements entitled 'Substantial Increase And Upgrade In Honeymoon Uranium Resource' dated 20 January 2016, 'Boss Increases Honeymoon Uranium Project Resource' dated 8 April 2016, 'Maiden Resource of 5.2Mlb for Jason's Deposit' dated 14 June 2016 and is available to view on www.bossresources.com.au. The information relating to the Exploration Target is extracted from the announcement entitled 'Honeymoon Project Exploration Update' and dated 8 December 2015. 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 that, in the case of Mineral Resources or Ore Reserves, all the 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 announcements.



Appendix 1 - JORC TABLES

JORC Table 1: Section 1 Sampling Techniques and Data

| Criteria of | Reference to the Current Report | | | |
|--------------|---|--|--|--|
| JORC Code | Comments / Findings | | | |
| 2012 | | | | |
| Sampling | Boss is utilising it's own PFN tools to obtain pU ₂ O ₈ grades which when properly calibrated reduce the efect of | | | |
| techniques | radioactive disequilibrium. | | | |
| | All tools were maintained by specialised electronic companies and technicians based in Adelaide. | | | |
| | Calibration for the PFN tool was regularly undertaken using in-house calibration pits available at the Honeymoon | | | |
| | Project and for the gamma tools externally, at the certified calibration facilities at Glenside, ConvIngham St, | | | |
| | Adelaide. Standard industry procedures were used for geophysical logging of the drill holes and estimation from | | | |
| Drilling | The Jasons holes were drilled by Watsons Drilling using the mud rotary method. The typical hole | | | |
| techniques | diameter is 14cm. The Honeymoon sonic core holes were drilled by Star Drilling | | | |
| Drill sample | Not applicable | | | |
| recovery | | | | |
| Logging | Chip samples are collected every 2m and piles are photographed and geologically logged. Documentation | | | |
| | has included colour, grain size, texture, sorting, alteration and oxidation state. All mineralised intervals | | | |
| | were geologically logged with logging standards compliant with the industry standards. | | | |
| Sub- | QA/QC of the geophysical data has included systematic control of the depth logged and control of the | | | |
| sampling | recorded U ₃ O ₈ grade values. Geophysical tools estimate uranium content at large volumes, | | | |
| techniques | approximately 25 to 40 cm radius. The volume is sufficiently large allowing accurate measure of the | | | |
| and sample | grade. | | | |
| preparation | ¼ sonic core sampled for chemical assaying. | | | |
| Quality of | Company Geophysical tools used to collect data include: | | | |
| assay data | Auslog Gamma (with Guard) S422 | | | |
| and | Prompt Fission Neutron tool PFN#27 | | | |
| laboratory | Prompt Fission Neutron tool PFN#32 | | | |
| tests | Gamma combined with guard S058 | | | |
| | Auslog 3 arm calliper A326 | | | |
| | Borehole wireline tools used to collect data include: Natural gamma, Induction, SP, Density, Spectral | | | |
| | Gamma, deviation and 3 arm calliper | | | |
| | Holes were logged in down and up directions, which provided a good control of logging consistency. | | | |
| | All geophysical tools were regularly calibrated, using in-house facilities and the certified laboratories in | | | |
| | Adelaide. | | | |
| | QA/QC of the geophysical data has included systematic control of the depth logged and control of the | | | |
| | recorded eU ₃ O ₈ grade values. | | | |
| | The winches in the logging truck have their depth calibration checked periodically. | | | |
| | Core samples were digested with a mixture of Acids including Hydrofluoric, Nitric, Hydrochloric and | | | |
| | Perchloric Acids. U has been determined by Inductively Coupled Plasma (ICP) Mass Spectrometry by | | | |
| | Bureau Veritas Minerals Pty Ltd, Thebarton S.A. | | | |
| Verification | The gamma-log data were additionally validated against the PFN logs. | | | |
| of sampling | | | | |
| and assaying | | | | |



| Location of | Positions are set out using a Garmin handheld GPS, after drilling. |
|--------------|---|
| data points | The projection adopted for surveying is GDA 94, MGA zone 54 with AHD elevation. All surveys were tied |
| | to the existing registered base stations. |
| | Topographic control was improved by Aerometrx Pty. Ltd flying 10cm pixel aerial photography which was |
| | rectified using registered survey points installed at site before plant construction began. |
| Data spacing | Drill spacing is approximately 100m x 180m. Uranium grade is composited to 0.25cm to aid in |
| and | interpretation. |
| distribution | |
| Orientation | All holes are drilled vertically which provides an accurate intersection of the flat laying mineralised |
| of data in | bodies. |
| relation to | |
| geological | |
| structure | |
| Sample | N/A |
| security | |
| Audits or | A independent review of the PFN calibration and sampling has been undertaken by Mr J Oram in December 2016, |
| reviews | the review conculded tha the PFN data is suitable for eporting. |



| JORC Table 1: | Section 2 | Reporting of | ^{Exploration} | Results |
|---------------|-----------|--------------|------------------------|---------|
|---------------|-----------|--------------|------------------------|---------|

| Criteria of | Reference to the Current Report |
|---|---|
| 2012 | Comments / Findings |
| Mineral tenement and land tenure status | The Project consists of 1 granted Mining Lease, 5 granted Exploration Licenses, 8 Retention Leases and 2 Miscellaneous Purpose Licenses. The Mining license expires in 2023, exploration licenses expire in 2017 (except EL 5043 which expires in 2016). |
| Exploration done by other parties | The Honeymoon deposit and surrounding areas of the Yarramba palaeochannel have been intensely explored and systematically drilled starting from 1969. The Honeymoon Project was evaluated several times, with the degree of details varying from scoping studies to bankable feasibility undertaken in 2006. Resource estimates have been made from 1998 to 2016. |
| Geology | Palaeochannel type sandstone hosted uranium roll and tabular style. |
| Drill hole Information | See previously exploration announcements and drillhole collar diagrams. The topography in this region is predominantly flat. All holes were drilled vertically with an average hole length of approximately 120m. |
| Data aggregation methods | Mineralised intervals were chosen based upon a nominal 250ppm U_3O_8 cutoff. Consideration was given to mineralisation defined by a combination of PFN eU_3O_8 and natural gamma eU_3O_8 co-existent intervals. |
| Relationship between mineralisation widths and intercept lengths | Drill traverses are oriented at right angle across the domain strike. Holes are drilled vertically down. |
| Diagrams | Appropriate and relevant diagrams have been included in the announcement. The following diagram illustrates currently drilled holes. Black collars denote historical drill holes. |







| | Honeymoon |
|--|---|
| | |
| Balanced reporting Other substantive exploration data | Balanced reporting has been adhered to. See previous exploration announcements. Mineralisation is still open along the strike of the domain. Sonic holes will be planned to enable a fuller understanding of practical disequilibrium and |
| FURTNER WORK | some noises will be planned to enable a fuller understanding of practical disequilibrium and sedimentological conditions within the deposit. |