

HONEYMOON URANIUM PROJECT

South Australia



DIGGERS & DEALERS PRESENTATION

August 2016

DISCLAIMER

The information contained in this presentation or subsequently provided to any recipient of this presentation whether orally or in writing by or on behalf of Boss Resources Limited ("Boss") or its respective employees, agents or consultants (Information) is provided to the recipients on the terms and conditions set out in this notice. The purpose of this presentation is to provide recipients with information relating to Boss Projects.

This presentation does not constitute investment advice and has been prepared by Boss without taking into account the recipient's investment objectives, financial circumstances or particular needs. Each recipient must make his/her own independent assessment and investigation of Boss and its business and assets when deciding if an investment is appropriate and should not rely on any statement or the adequacy and accuracy of any information. This presentation is in summary form and does not purpose to be exhaustive. This presentation should be read in conjunction with Boss' periodic and continuous disclosure announcements lodged with the Australian Securities Exchange, which are available to download at www.asx.com.au.

Boss makes no representation or warranty (either expressed or implied) as to the accuracy, reliability or completeness of the Information. Boss and its directors, employees, agents and consultants shall have no liability (including liability to any person by reason of negligence or negligent misstatement) for any statements, opinions, information or matters (express or implied) arising out of, contained in or derived from, or for any omissions from the presentation, except liability under statute that can not be excluded.

This presentation may contain forward-looking statements. Forward-looking statements are only predictions and are subject to risks, uncertainties and assumptions which are outside the control of Boss. Actual values, results or events may be materially different to those expressed or implied in this presentation. Given these uncertainties, recipients are cautioned not to place reliance on forward-looking statements.

This presentation does not constitute in any way an offer or invitation to subscribe for securities in Boss pursuant to the Corporations Act 2001 (Cth) and has not been lodged with the Australian Securities and Investment Commission.

The information in this presentation that relates to Exploration Results and Mineral Resources is based on information compiled by Dr M. Abzalov, who is a Competent Person according to the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (2012) ("JORC Code 2012"). Dr M. Abzalov is a Fellow of the AusIMM. 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 Jorc Code 2012. Dr M. Abzalov is employed as a director of Boss Resources Ltd. Dr M. Abzalov consents to the inclusion in the report of the matters based on their information in the form and context in which it appears. This information was initially reported to the ASX on 1 September 2015, 20 January 2016, 6 April 2016 and 14 June 2016 and has not materially changed.

The information in this presentation that relates to the Honeymoon 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 JORC Code 2012. 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 Ltd. This information was initially reported to the ASX on 8 December 2015 and has not materially changed.


The Exploration Target is conceptual in nature as there has been insufficient exploration to define a Mineral Resource. It is uncertain if further exploration will result in the determination of a Mineral Resource under the JORC Code 2012. The Exploration Target is not being reported as part of any Mineral Resource or Ore Reserve.

WHY URANIUM?

Nuclear Power: The Best Solution

- Nuclear power provides the best solution for a non- polluting 24:7 base load power source
- Zero Carbon Emissions
- Over 440 existing nuclear plants, focused in Europe, North America, Russia, South Korea and Japan
- 1.7 billion of the world's population is still without electricity
- Emerging economies will need to implement a combination of nuclear, coal, gas and renewables to meet their growing power requirements
- Nuclear power needs to be made readily accessible and affordable to the emerging economies to ensure that non-polluting sources are chosen in the hunt for more power





CLIMATE CHANGE REQUIRES NUCLEAR ENERGY INVOLVEMENT

“There’s really only one technology that we know of that supplies carbon-free power at the scale modern civilization requires, and that is **nuclear power**”

- Ken Caldeira of Stanford University's Department of Global Ecology

MARKET DEMAND

Global Reactor Growth

- Global nuclear generation capacity will increase 70% over the next decade from 374,067MWe to 636,693MWe
- Annual uranium demand will increase from 177mlbs to 280mlbs by 2020, representing a 58% increase
- Additional 390mlbs will be needed for new initial cores

64 UNDER CONSTRUCTION

- **Generation Capacity:** 74,886 MWe
- **Annual Uranium Demand:** 13,000 tonnes U

441 OPERABLE REACTORS
DECEMBER 2013

- **Generation Capacity:** 374,067 MWe
- **Annual Uranium Demand:** 64,978 tonnes U

173 PLANNED REACTORS

- **Generation Capacity:** 187,740 MWe
- **Annual Uranium Demand:** 32,600 tonnes U



CHINA



223 million pounds U3O8 since 2009

Breaking ground on 6-8 new units per year (increasing to 10 per year post-2020)

Air Quality Imperative – Moratorium on new coal plants

CURRENT NUCLEAR GROWTH PLAN





INDIA



Official Plan – 15 Gwe installed by 2025

Uranium buying spree (long term contracts) – Canada, Kazakhstan, Uzbekistan

Establishment of “Strategic Uranium Reserve” of between 13 and 39 million lbs. U3O8

21 **REACTORS OPERATING**
With installed capacity of
6 GWe

6 **UNDER CONSTRUCTION**
Capacity of 6 GWe

4 **PLANNED**
Totalling 24 GWe



JAPAN



20-22%
NUCLEAR POWER
PLANNED

Government approved plans are for 20%-22% from nuclear power

26

APPLICATIONS

NRA has received 26 reactor restart applications

5

APPROVED

Five reactors approved for restart

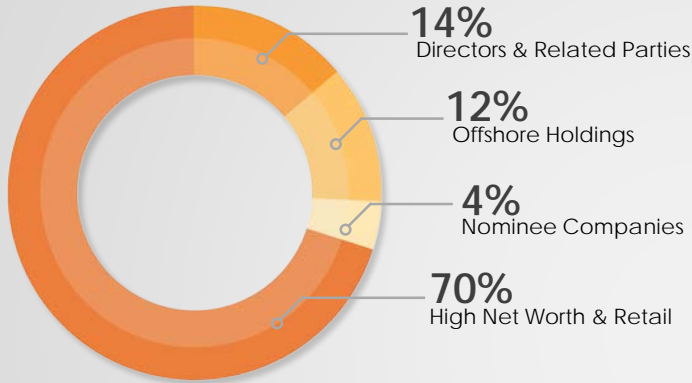
4

RESTARTED

Four reactors have started

CORPORATE STRUCTURE

Shareholder Breakdown



Existing Shares (ASX:BOE)	886 million
Performance Rights*	40 million
Options (\$0.02 Aug 18)	10 million
Cash (30 June 2016)	~ \$3 million
Market Capitalisation (at \$0.05)	~\$44 million
Top 100 Shareholders	~ 80%

Share Price Movement



HONEYMOON HIGHLIGHTS



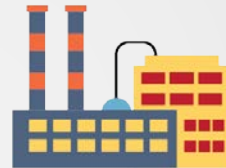
PERMITTED

Fully permitted Uranium operation
(only 1 of 4 in Australia)



TARGET

Significant exploration target
Huge 80+ km potentially mineralised strike
2,600km² under explored uranium province
57.8Mlb U₃O₈ JORC Resource



INFRASTRUCTURE

\$170m plant and infrastructure in place



LOW CAPEX

Unique option on Uranium price – operations can commence with low CAPEX targeting cash costs of <\$18/lb production



PEER COMPARISON

ASX LISTED STOCKS

Company	Initial Capex (AUD\$)	Mining Permit	Resource Mlb	Grade PPM	Mining Type	Market Cap (AUD\$)	\$ Resource Valuation	C1 Costs US\$/lb
Toro Energy (ASX:TOE)	315m	X	84	482	Bulk surface	100m	1.94	31
Vimy (Energy & Minerals) (ASX:VMY)	378m	X	76.2	520	Surface	73.6m	1.06	31
Peninsula Resources (ASX:PEN)	46m (stage 1)	✓	54	476	ISL	123m	1.61	29
Berkeley Resources (ASX:BKY)	169m	✓	89.3	514	Hard rock Open pit	176m	1.40	13.3
Boss Resources (ASX:BOE)	Constructed	✓	57.8	654	ISL	44m	0.72	Target <18



PEER COMPARISON

NORTH AMERICAN LISTED STOCKS

Company	Initial Capex (US\$)	Mining Permit	Resource MIb	Grade PPM	Mining Type	Market Cap (US\$)	US\$ Resource Valuation	C1 Costs US\$/lb
Uranium Energy Corp. (NY:UEC)	Production	✓	75		ISL	114m	5.40	16.27
Energy Fuels (TSX:EFR)	Production	✓	131.6	972	ISL & Hard rock	129m	1.31	25*
NexGen (TSXV:NXV)	Exploration	✗	201.9	2630	Hard rock	538m	3.96	
Fission Uranium Corp. (TSX:FCU)	1,100m	✗	108	1600	Hard rock – OP/UG	268m	3.43	17.50
Boss Resources (ASX:BOE)	Constructed	✓	57.8	654	ISL	33m	0.72	Target <18

*Estimated

CAD\$1 – US\$0.766
AUD\$1 – US\$0.759



DIRECTORS

- **Mark Hohnen** **Chairman**

Mr Hohnen has extensive international business experience in a wide range of industries. He is currently a Board member of Swakop Uranium and was the founding Executive Chairman of Kalahari Minerals Plc.

- **Marat Abzalov** **Executive Director - Geology**

Dr Abzalov has a PhD in Geology. Marat has recently completed an invited study of ISL styles of mineralization, including those in Australia. He is also an ex-Exploration manager for Rio Tinto Eurasia, with extensive experience in Kazakhstan uranium projects.

- **Evan Cranston** **Corporate Director**

Mr Cranston is a corporate lawyer with experience in publicly listed entities including capital raisings, offerings, and liaison with market analysts and investors.

- **Grant Davey** **Executive Director**

Mr Davey is a mining engineer with 20 years of senior management and operational experience in the construction and operation of Uranium, gold, platinum and coal mines in Africa, Australia, South America and Russia.

- **Peter Williams** **Non Executive Director**

Mr Williams is an explorationist/geophysicist with over 30 years experience. He has extensive experience in West Africa, Australia, Fennoscandia, and Canada.



AUSTRALIAN

URANIUM PROJECTS



LEGEND

- Operational Mine
- Major Deposit
- Former Mine

HONEYMOON

- One of the highest grade un-mined uranium resources in Australia
- 1 of 4 fully permitted uranium projects in Australia (3 in South Australia)
- Curnamona Basin – a significant underexplored uranium province
- Targeting >100mlbs resource
- Currently on care and maintenance



HONEYMOON RESOURCE

SIGNIFICANT EXISTING HIGH GRADE RESOURCES – HIGHEST GRADE AMONGST ASX LISTED PEERS

2016 Honeymoon Project Mineral Resource

Covering the Eastern and Western Tenement Regions. Reported Above a preferred 250ppm U_3O_8 lower cut-off

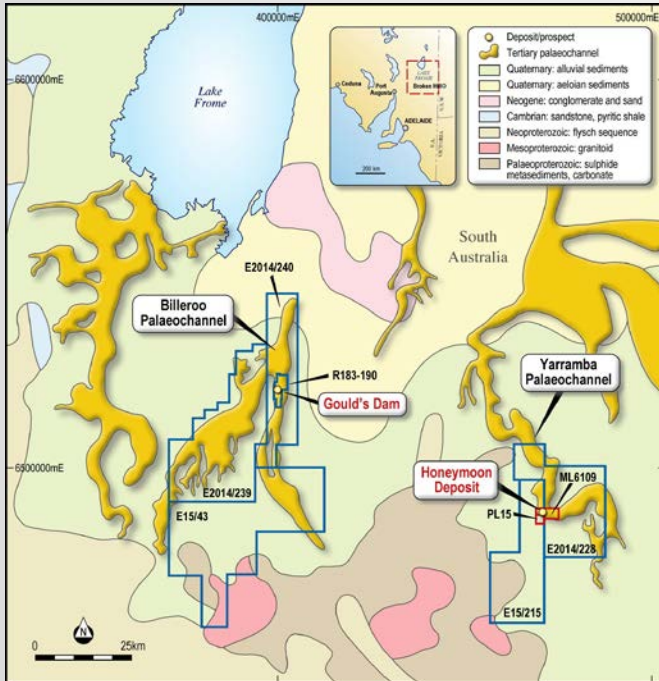
Classification	Million Tonnes	U_3O_8 ppm	Contained U_3O_8 (Mkg)	Contained U_3O_8 (Mlb)
Measured	1.7	1720	2.95	6.5
Indicated	5.9	810	4.80	10.6
Inferred	32.5	569	18.5	40.7
Total	40.1	654	26.24	57.8

Note: Figures have been rounded. Quoted resources have been adjusted to exclude previous production of approximately 335t of U_3O_8 .



HONEYMOON

URANIUM PROJECT



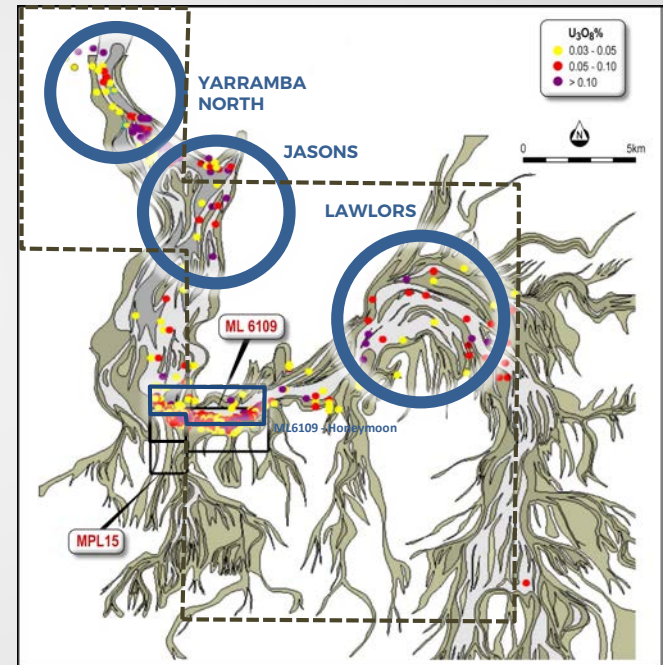
- Located 75Km NW of Broken Hill, in the Curnamona Region of South Australia
- Resources amenable to ISL recovery
- Mineralisation occurs at 90-120m depth
- Over 2,500 drill holes in data base
- Multiple styles of uranium mineralisation identified



EASTERN TENEMENTS

EXPLORATION POTENTIAL

- Eastern Tenement Resource of 32.8Mlb U_3O_8
- Additional regional exploration target of 18-47Mlb of contained U_3O_8 on Eastern Tenements.
- 30 km of potentially mineralised strike
- Drill ready targets - historical drilling shows numerous > 1,000ppm U_3O_8
- Three priority regions – Yarramba, Jasons and Lawlors
 - Early potential for resource definition
- Advanced targeting model utilising numerical prospect scoring system developed

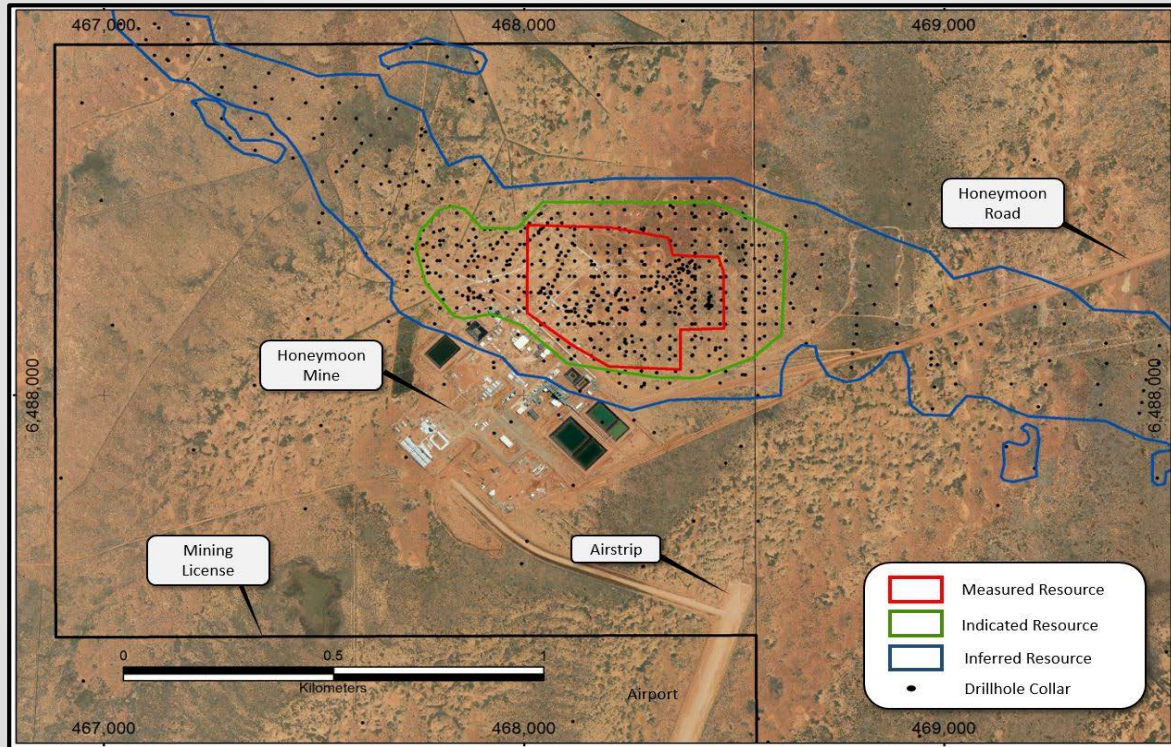


Historical & Recent Drilling Intercepts



RESOURCE LOCATION

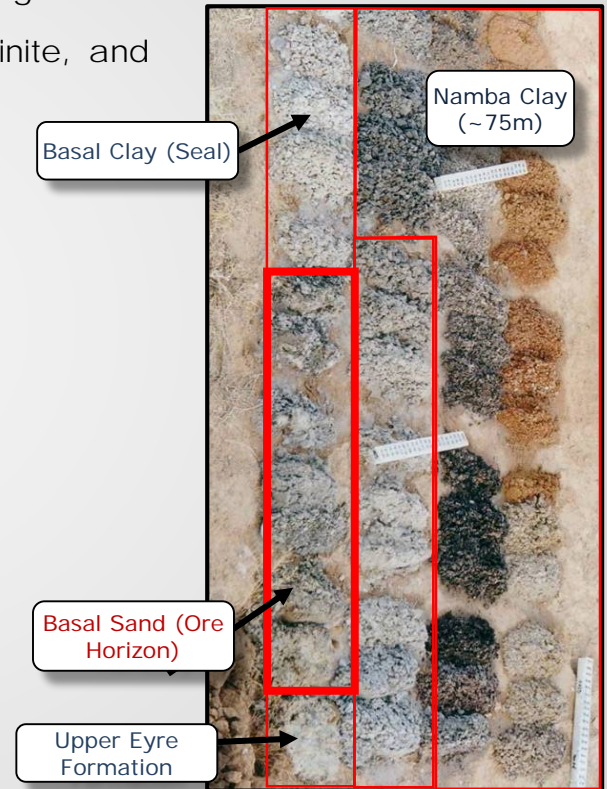
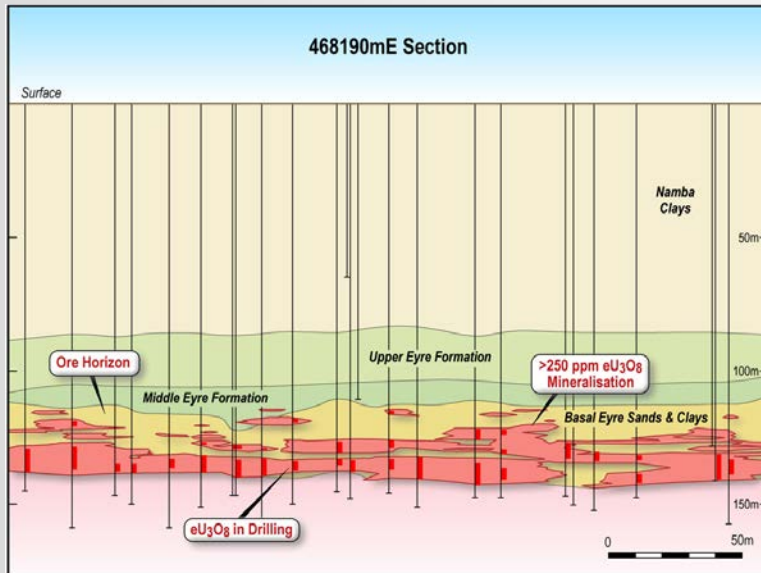
SIGNIFICANT EXPLORATION POTENTIAL



SECTIONS

TYPICAL HONEYMOON SECTION

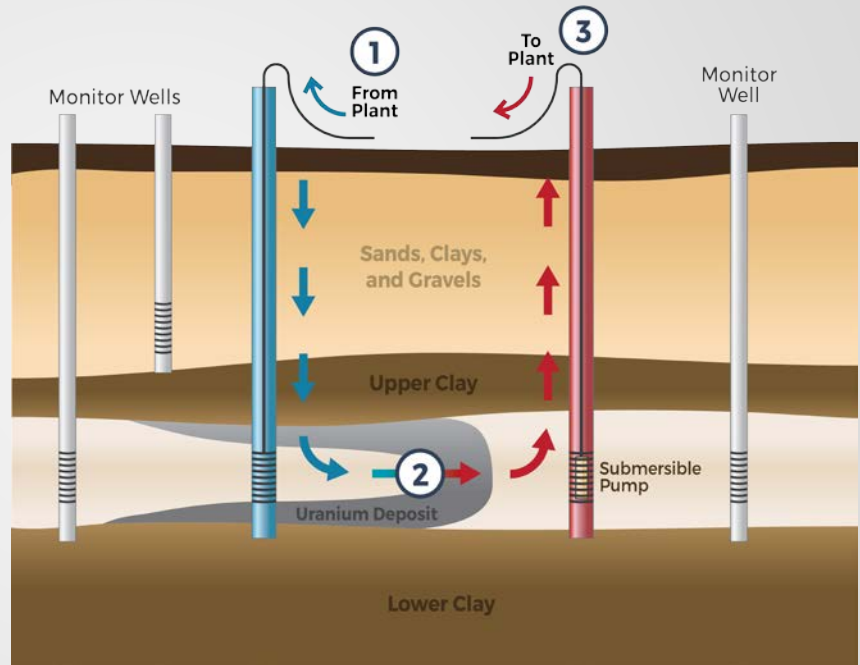
- Mineralisation within permeable Basal Eyre sands and gravels
- Uranium mineralogy of acid-soluble uraninite, coffinite, and uranium phosphates
- Mineralisation 115-125m below surface



ISL PROCESS

Process Flow

- 1** An acidic leach solution containing an oxidant is pumped through injection wells into uranium-bearing solution.
- 2** The solution migrates through the strata sands oxidising and mobilising uranium as a soluble complex.
- 3** The solution, now referred to as pregnant leach solution (PLS) is intercepted by production wells, located between the injection wells, and pumped to the surface.



INFRASTRUCTURE

Production Bore



Processing Facility



Water treatment plant



Control Room



Settling Ponds



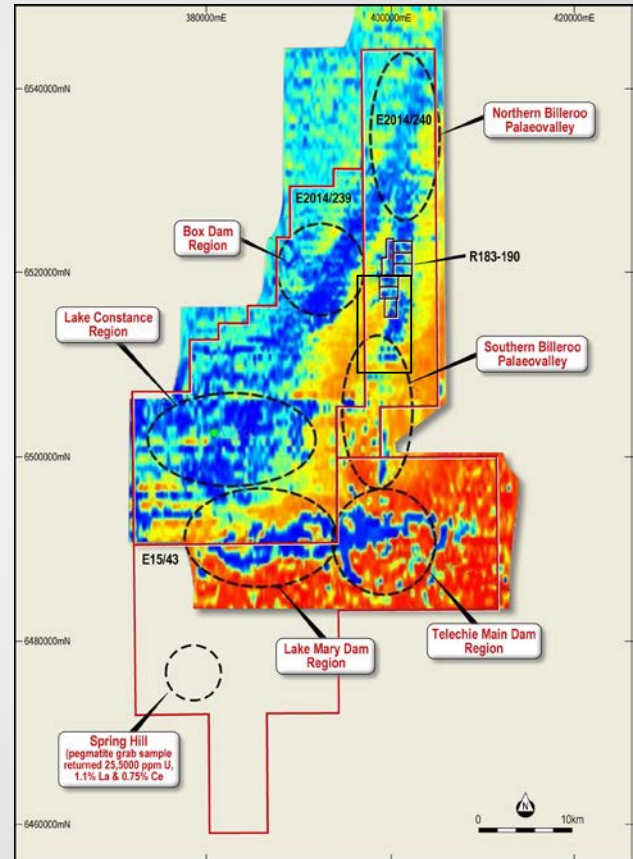
Camp



WESTERN TENEMENTS

EXPLORATION POTENTIAL





- Western Tenement Resource of 25MLb
- 54 km potentially mineralised strike
- Exploration target of 21-53Mt at between 480 and 1500ppm U_3O_8 for between 24 and 53MLB of U_3O_8 . The Exploration Target is conceptual in nature as there has been insufficient exploration to define a Mineral Resource. It is uncertain if further exploration will result in the determination of a Mineral Resource.
- Goulds Dam / Billeroo system underrated:
 - 12 km strike length
 - Under drilled
 - Highly prospective ground
 - Resource upgrade expected from further drilling
- EL5043 has pegmatite hosted mineralisation up to 3.5% U_3O_8 (grab sample)
- Broader Exploration licence under application
 - Potential for new paleochannels
 - Along trend of mineralised fluids
 - Massively under explored
 - Grades of up to 1% eU_3O_8 reported from historical drilling (1960 – EAR19)



MILESTONES

- Project Acquisition**
Lowest cost per lb acquisition in recent history
- Resource Upgraded**
Total resource of 57.8Mlb U3O8 @ 654ppm –
3.5 times the resource at acquisition in
December 2015
- Option Study**
Commence a process option study SX, IX,
Eluex – March 2016
Expansion options depending on resource size
- Commence exploration Q3 2016**
Target known mineralised areas for low cost
additional resource
- Expansion DFS completed 2017**
- Commencement of Expanded
Production estimated mid 2019**

FEASIBILITY PLANNING SCHEDULE

Project Activities	Q ₃ 2016	Q ₄ 2016	End 2017
Option Study			
Initial Exploration			
Resource Upgrade - Jasons			
Expansion Feasibility			



COMPETITIVE ADVANTAGE

BOSS RESOURCES



TEAM

Executives with project management, development, financing, and operation experience



ASSETS

Honeymoon Uranium asset in South Australia
Underestimated uranium province
Significant exploration target



APPROVAL

All approvals are in place



LICENCED

Only developed project in Australia which is fully licensed and able to be brought into production





BOSS

RESOURCES LIMITED

Grant Davey
+61 (0) 447 753 163
www.bossresources.com.au

Suite 23, 513 Hay Street
Subiaco, WA 6008
+61 8 6143 6730