

## HONEYMOON: A SIGNIFICANT URANIUM ACQUISITION

## Investment Highlights

- Boss Resources Limited (BOE) has been transformed into an advanced uranium developer through the astute acquisition of the Honeymoon Uranium mine in South Australia (BOE 80%).** The mine, which is currently on care and maintenance, has existing infrastructure and a uranium processing facility which is in excellent condition. As a result of the purchase, BOE has all the necessary Australian permits to mine, process and export uranium, which is something that only three other mining companies currently hold. Furthermore, the project uses the In-Situ Leach (ISL) extraction technique which is renowned worldwide for its low operating cost base. Overall, we see the potential to restart uranium production in the medium term, which will likely be done at an increased scale in order to be sustainable in the current uranium price environment. We are initiating coverage of BOE with a Speculative Buy rating.
- Valuation of \$0.10-\$0.13/sh:** We have determined a Net Asset Valuation of \$0.10-\$0.13/sh for BOE. Our valuation range is calculated by using an expected "pounds in the ground" basis. We have applied the ASX-listed uranium producer peer average of \$1.25/lb to the Honeymoon projects current Mineral Resource of 27.5Mlb U<sub>3</sub>O<sub>8</sub> (80% owned) and taken half of the exploration target of 42-100Mlb U<sub>3</sub>O<sub>8</sub> (80%), to determine our valuation range of \$0.10-\$0.13/sh. BOE is planning to commence an aggressive exploration program in the June Q which should significantly expand the current resource. A significantly expanded resource base should be suitably rewarded by the market and allow for a feasibility study on the mine restart. We believe that, if BOE can double the existing resource, this would allow an increased scale for the mine from the current 880,000lbpa (nameplate) to 2-5Mlbpa which would allow for a sustainable mining operation at current uranium prices.
- Honeymoon: A Significant Uranium Acquisition:** The recent acquisition of 80% of the Honeymoon uranium mine catapults BOE into one of the most advanced uranium developers in Australia. The acquisition was effectively done at the cost of the environmental bonds (c\$9m) in staged payments and is an outstanding result for BOE. We recently visited the site and were suitably impressed with the condition of the plant, camp and airstrip. There were also a significant amount of spares (pumps, pipes etc) and vehicles that remained at site. In total, the previous owners Uranium One (UUU) and Mitsui spent some \$170m in capital on the site. The site was placed on care and maintenance in late 2013 due to the low uranium price and the fact that UUU's core focus was in Kazakhstan.
- ISL Cost Advantage:** The ability to use the ISL method of recovery at Honeymoon provides a significant cost advantage over other uranium companies that mine hardrock underground or through open pit methods. The ISL method uses wells to inject native ground water and acid reagents into the ore zone which dissolves the uranium after which it is pumped to surface for recovery.
- Honeymoon: Compares Favourably to Kazakhstan Deposits:** The Honeymoon deposit is the same basal/paleochannel type of deposit found in Kazakhstan. Whilst the Honeymoon deposit is currently significantly smaller than the Kazakhstan operating mines, if BOE is successful in realising its published exploration target of 42-100Mlb U<sub>3</sub>O<sub>8</sub>, this would place the Honeymoon project in the same scale as major Kazakhstan ISL deposits. Significantly, the Honeymoon deposits are at a much shallower depth (100-120m vs 250-600m in Kazakhstan) which means a significant advantage with lower on-going drilling costs. Honeymoon is also higher grade and has a lower acid consumption.
- Catalysts:** 1) Ongoing reduction of care and maintenance costs; 2) June Q: Commence Resource Expansion Program and; 3) End 2016: Pre-feasibility study on scope of restart.

4 February 2016

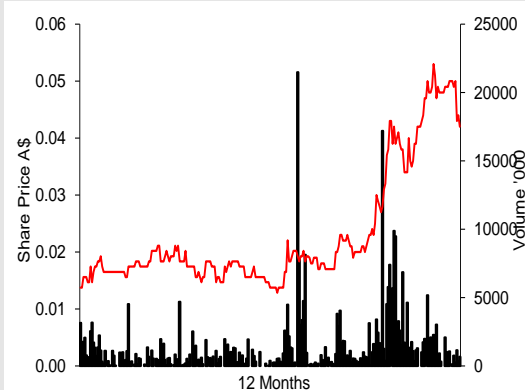
12mth Rating	SPECULATIVE BUY	
Price	A\$	0.036
Target Price	A\$	0.10-0.13
12mth Total Return	%	205-261

RIC: <b>BOE.AX</b>		BBG: <b>BOE AU</b>
Shares o/s	m	854.8
Free Float	%	78
Market Cap.	A\$m	31
Cash	A\$m	2.4
Debt	A\$m	0
3mth Av. D. T'over	A\$	79,048
52wk High/Low	A\$	0.053/0.013
2yr adj. beta		-0.1

<b>Valuation:</b>	
Methodology	In-situ Value
Value per share	A\$ \$0.10-\$0.13

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## 12 Month Share Price Performance



Performance %	1mth	3mth	12mth
Absolute	-25	80	161
Rel. S&P/ASX 300	-14	107	203

## INVESTMENT SUMMARY

We are initiating coverage of Boss Resources Limited (BOE) with a **Speculative Buy** rating. We believe BOE has a significant opportunity to become a substantial low-cost Australian ISL uranium producer with its recent acquisition of the Honeymoon uranium mine. The project is one of four uranium mines within Australia that has all the necessary permits required to mine, sell and export uranium. The project was put into care and maintenance with the low uranium pricing prior to reaching commercial production. UUU placed the Honeymoon project up for sale a few months after AtomRedMetZoloto (ARMZ), the mining division of Russian state owned Rosatom took full control of the Company. Honeymoon was considered a cost burden with high care and maintenance costs and was located in a region that was not considered a focus for ARMZ or UUU. Therefore, we believe this provided a significant opportunity for BOE.

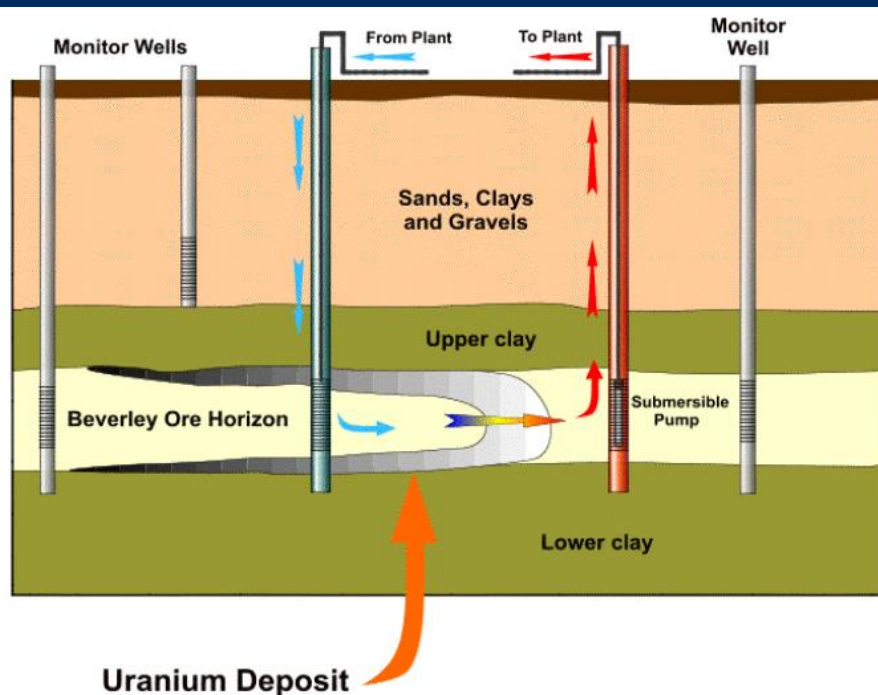
We see potential for BOE to restart uranium production in the medium term. The initial aim is to increase the size of the resource base with drilling expected to commence in the June quarter. It is BOE's intention to increase the resource to enable a 2-5Mlbpa uranium operation. We believe a project of this scale would have the capability to have a cost base below US\$30/lb and subsequently be profitable in the current uranium price environment.

## KEY INVESTMENT HIGHLIGHTS

**Honeymoon: A Significant Uranium Acquisition:** The recent acquisition of 80% of the Honeymoon uranium mine catapults BOE into one of the most advanced uranium developers in Australia. The acquisition was effectively done for the cost of the environmental bonds (c\$9m) in staged payments and is an outstanding result for BOE. We recently visited the site and were suitably impressed with the condition of the plant, camp and airstrip. There were also a significant amount of spares (pumps, pipes etc) and vehicles that remained at site.

**The ISL Advantage:** BOE's Honeymoon project uses the In-Situ Leach (ISL) mining method which has been used by previous and current mines in South Australia since the 1970's. The key advantage to this method is the low capital and operating cost of mining. ISL involves leaching the uranium in the ground without need to move ore/waste, crushing and tailings as in a conventional mining scenario. ISL involves injecting a chemical solution (Acid/Bi-carbonate) into the ore horizon and recovering the uranium through a production well at the surface. The pregnant solution is then processed in a standard uranium plant (Figure 1). In Australia, ISL mines use the oxidant hydrogen peroxide and the complexing agent sulfuric acid.

Figure 1: The In-Situ Method of Extraction



Source: World Nuclear Association

**All Permits In Place:** A key benefit of the acquisition of the Honeymoon uranium mine, is that BOE inherited the necessary permits to mine, export and sell uranium. Honeymoon is only one of four uranium operations in Australia with these permits. We understand completing the permitting process is a difficult task in itself which can take several years to finish meaning that BOE has a significant head start over other Australian uranium developers. In addition, uranium mining is a very emotive and/or political issue in Australia with a number of previous Federal and State bans on the mining of the metal. In Australia's history the most significant ban on new uranium mines was from 1983-1996 during the Federal Labor Government's "three mines policy". This effectively shut-down further exploration/development efforts, including those at Honeymoon, during this period.

**Significant Exploration Target:** We see the potential to resume uranium production at the Honeymoon project over the medium term. The key will be expanding the existing 27Mlb U<sub>3</sub>O<sub>8</sub> Mineral Resource to increase the scale of the operation which we believe should bring costs below \$30/lb. BOE has outlined an exploration target of 42-100Mlb U<sub>3</sub>O<sub>8</sub>. A resource of this size would place the project into a similar category as the highly prized Kazakhstan ISL projects. However, Honeymoon is at a much shallower depth and has higher grades and lower acid consumption than these projects. The necessary drilling permits and aboriginal clearance are expected to allow drilling to commence in June Q.

**Reasons for Honeymoon Production Underperformance:** "Why" uranium production at Honeymoon failed to meet expectations during 2010-13 was a major area of our attention during our recent site visit. This appears to be a direct result of the project being a non-core asset for Uranium One (UUU). In fact, just as the project went into construction AtomRedMetZoloto (ARMZ), the mining division of Russian state owned Rosatom, took a significant stake in UUU. This shifted the focus to UUU's Kazakhstan uranium mines. Therefore, Honeymoon uranium production suffered with the commissioning period taking longer than expected. The project was eventually sold to BOE after ARMZ purchased 100% of UUU.

The ability to achieve "optimal leaching conditions" within the formation was a major factor which directly impacted by the positioning of the screens and well pumping pressures. A further reason for the lower production was that for most of the production period only half of the drying capacity was available at any one time. This was eventually resolved. Finally, there were issues with the gypsum treatment plant overflowing on several occasions. This could be easily resolved through the addition of an overflow bund. All of the issues identified to date appear to have resolutions which should allow the project to achieve optimal leaching conditions within the well field. This will be the key to the project's success on any restart.

**Solid Management Team with Uranium Mining Experience:** The addition of Grant Davey to the BOE Board significantly strengthens the Company's technical uranium mining expertise. He is a mining engineer with over 20 years of senior management and operational experience in the construction and operation of gold, platinum and coal mines in Africa, Australia, South America and Russia. Mr Davey's uranium experience is associated with mining uranium as a by-product from the deep level gold mines in South Africa. He was responsible for the Vaal Reefs South Uranium plant between 2005 and 2008 when it produced up to 6Mlbpa and was one of the largest uranium producers in the southern hemisphere at the time.

We are also equally as impressed on the geology side with Dr Marat Abzalov who worked for Rio Tinto as Exploration Manager – New Opportunities (Eurasia) where he predominantly reviewed ISL uranium projects in Kazakhstan and the USA. He has some 30 years of industry experience and worked on uranium projects in Africa, Northern America, Central Asia and Kazakhstan. In 2013, he was invited by the Jordanian government to assist them in development of the uranium project located in Jordanian desert. The project is currently headed into the detailed pre-feasibility studies.

## VALUATION

We have determined a Net Asset Valuation of \$0.10-\$0.13/sh for BOE (Figure 2). Our valuation is calculated by using an expected "pounds in the ground" analysis. We have applied the ASX-listed producer peer average of \$1.25/lb to BOE's current resource of 27Mlb U<sub>3</sub>O<sub>8</sub> (80% owned) and half of the lower-end of the exploration target range of 42Mlb U<sub>3</sub>O<sub>8</sub> (80%) to determine our \$0.10/sh. For the higher value of \$0.13/sh, we have used 50% of the 100Mlb U<sub>3</sub>O<sub>8</sub> upper exploration target range. We have included the current cash position of \$2.4m and assumed useable tax losses of \$60m (\$170m in accumulated tax losses related to the Honeymoon acquisition and \$40m within BOE) which were part of the Honeymoon transaction. We note that the tax losses will not be usable until the project enters production; however, we see this as a valuable asset for the Company. In addition, we have conducted an unrisks scenario which assumes that BOE is able to delineate 100Mlb of U<sub>3</sub>O<sub>8</sub> outside the existing resource which results in a valuation of \$0.17/sh for BOE.

The unpaid capital of \$10.2m relates to an assumed future capital raising at a 10% discount to the current share price. We believe the \$10m will be needed over the next two years to complete the exploration drilling program, conduct feasibility studies, pay for care and maintenance costs at the Honeymoon mine, as well as provide funding for the promissory notes for the acquisition of Honeymoon.

Figure 2: Boss Resources Valuation

Boss Valuation	Base Case	\$/sh	Exp Case	\$/sh	Unrisks	\$/sh
Honeymoon	48.5	0.04	77.4	0.07	127.4	0.11
Cash	2.4	0.00	2.4	0.00	2.4	0.00
Tax Losses	60.0	0.05	60.0	0.05	60.0	0.05
Unpaid Capital	10.2	0.01	10.2	0.01	10.2	0.01
<b>Total</b>	<b>61.1</b>	<b>0.10</b>	<b>90.0</b>	<b>0.13</b>	<b>140.0</b>	<b>0.17</b>

Source: Patersons Securities Limited

## Peer Comparatives

BOE is trading at a premium on an EV/lb basis (\$1.30/lb) when compared to the developer peer average of \$0.55/lb. However, we believe this can be justified by the fact that it has a fully permitted uranium processing plant with a higher grade resource than the majority of its peers which is extractable using the low cost ISL method and a significant landholding which is prospective for uranium.

The Company is in the enviable position that it can potentially produce uranium, through a restart at Honeymoon, more rapidly than any of its peers. If BOE is successful with its expansion exploration program then there is potential for the Honeymoon mine to be scaled up to be sustainable at current uranium prices.

Figure 3: Peer Comparatives ASX listed uranium companies

Producers	Code	EV (\$m)	Main Deposit	Cash (\$m)	Debt (\$m)	Attrib. Resource (contained)		EV/lb
						U <sub>3</sub> O <sub>8</sub> Mlb	Grade (ppm)	
Paladin Energy	PDN	622.5	Langer Heinrich	195.4	443	539.3	520	1.15
ERA	ERA	-188.4	Ranger	365.0	0	279.2	3218	-0.67
Peninsula Energy	PEN	148.6	Lance Projects	6.3	0	110.6	485	1.34
<b>Average</b>						<b>310</b>	<b>1408</b>	<b>1.25</b>

Developers/Explorers	Code	EV (\$m)	Main Deposit	Cash (\$m)	Debt (\$m)	Attrib. Resource (contained)		EV/lb
						U <sub>3</sub> O <sub>8</sub> Mlb	Grade	
Toro Energy	TOE	110.1	Wiluna Uranium	13.4	0	84.0	482	1.31
Berkley	BKY	77.0	Salamanca	8.4	0	89.5	483	0.86
Vimy Resources	VMY	62.1	Mulga Rock	7.1	0	75.0	520	0.83
<b>Boss Resources</b>	<b>BOE</b>	<b>28.7</b>	<b>Honeymoon</b>	<b>2.4</b>	<b>0</b>	<b>22.1</b>	<b>820</b>	<b>1.30</b>
Uranium Resources Inc	URI	25.8	Temrezli	0.8	0	13.3	1170	1.94
Bannerman	BMN	20.8	Etango	4.2	12	270.7	186	0.08
Greenland Minerals	GGG	20.4	Kvanefjeld	2.7	0	575.0	273	0.04
Deep Yellow	DYL	12.8	Omahola	2.8	0	93.8	306	0.14
Acap	ACB	7.9	Letlhakane	0.8	0	190.4	321	0.04
Aura Energy	AEE	6.3	Tiris	0.4	0	851.6	160	0.01
UraniumSA	USA	3.7	Samphire	0.1	0	41.0	290	0.09
Marenica	MEY	3.5	Marenica	0.2	1.7	46.0	93	0.08
Alligator Energy	AGE	2.9	Tin Camp Creek	1.0	0	6.5	3100	0.45
<b>Average</b>						<b>181</b>	<b>631</b>	<b>0.55</b>

Source: Patersons Securities Limited

## Production Scenario Valuation

We believe it is too early to determine the parameters for a restart of uranium production at the Honeymoon mine, as the BOE management team are focused on increasing the resources and doing an option study on the processing plant expansions. A restart would be price dependant as the production capacity is relatively small and due to the large percentage of fixed cost associated with ISL mining, it would not be economic to restart the operation at the current uranium spot price. If uranium prices were to improve to between \$50 - \$70/lb, the operation would be economic and it would be possible to restart production for minimal capital cost. However, at current uranium prices, we see the need to scale up production to ensure the projects sustainability. In the June Q, BOE plans to embark on an exploration program which aims to expand its existing near mine resources which currently stand at 27.5Mlb  $U_3O_8$ . The Company has determined an exploration target of 42 to 100Mlb  $U_3O_8$ . Currently, the Honeymoon uranium mine has a nameplate capacity of 880,000lb  $U_3O_8$  which is fully permitted. An operation with a production rate of 2-5Mlbpa  $U_3O_8$  should be profitable in the current uranium pricing environment and bring cash costs below US\$20/lb.



## ASSETS

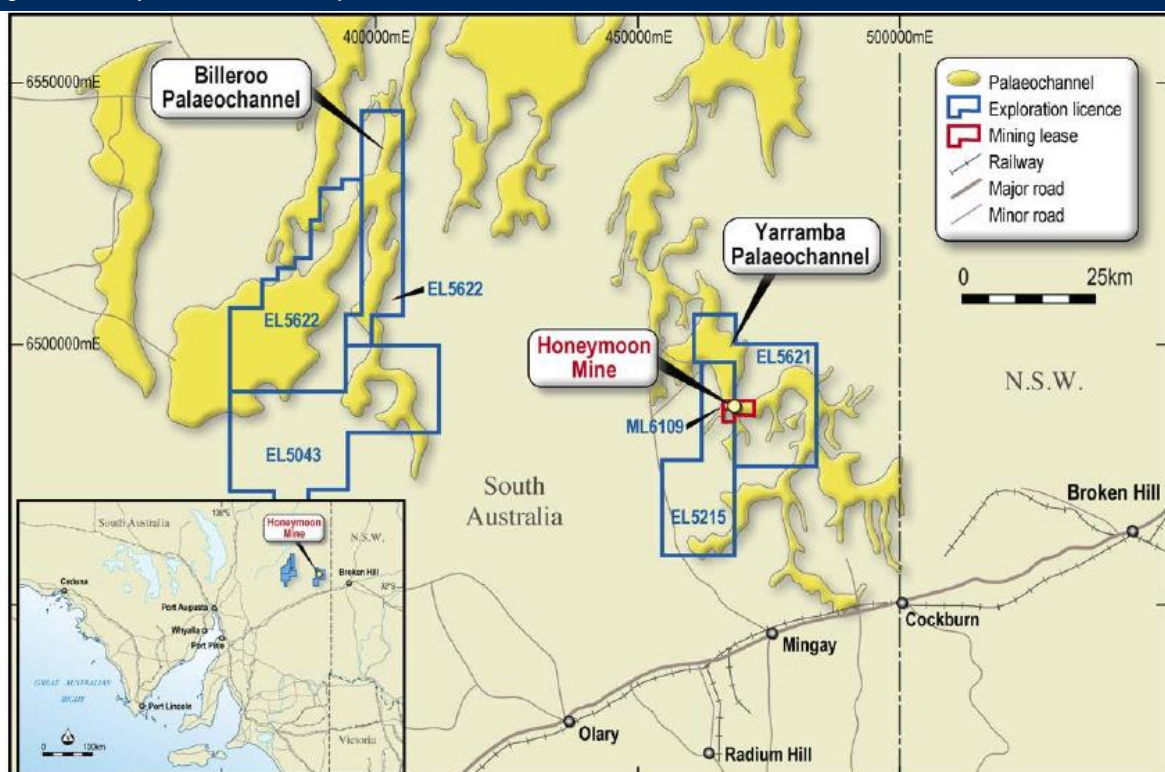
### Honeymoon Uranium Project (BOE 80%; Wattle 20%)

#### Overview

The Honeymoon Uranium Project is located in the Curnamona Uranium Province, South Australia, approximately 80km north-west from the town of Broken Hill near the SA / NSW border (Figure 4). 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 Honeymoon Region (ELs 5215 and 5621) which hosts the Honeymoon, Brooks Dam and East Kalkaroo Resources; and the Billeroo Region (ELs 5043, 5623 and 5622) which hosts the Gould's Dam and Billeroo deposits which have historical non-JORC grade estimates.

Figure 4: Honeymoon Uranium Project Location



Source: Boss Resources Limited

Native title agreements with respect to the exploration and mining activities have been signed with the local indigenous communities. Mining and uranium export permits (both State and Federal) are in place.

## Background

The Honeymoon uranium deposit was first discovered by MIM Holdings in 1972 and was moved towards development utilising the In-Situ Leach (ISL) extraction technique. In 1981, environmental approvals were given for the development of a 450tpa  $U_3O_8$  (~1Mlbpa) uranium project. ISL field tests were carried out and a 110tpa  $U_3O_8$  (~240klbpa) pilot plant was constructed. However, in 1983 the newly elected Federal Labor Government implemented its "three mines policy" which prevented the grant of a production licence and project development was quickly abandoned.

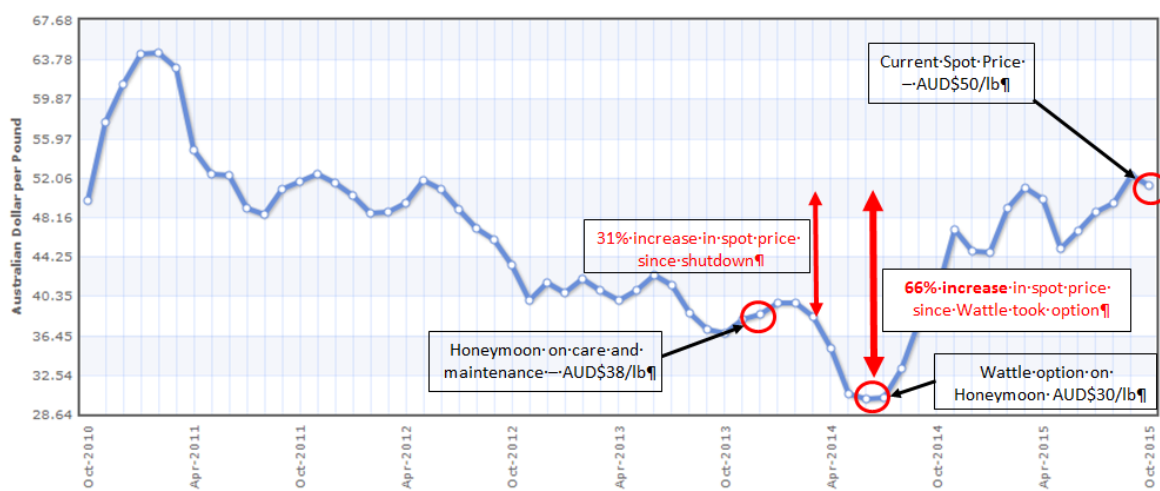
It wasn't until 1996 when John Howard's Liberal Government was elected that Labor's three uranium mines impediment was removed. A year later, junior Canadian uranium company Southern Cross Resources (SCR) reached agreement to purchase the Honeymoon project from MIM. In conjunction, SCR also purchased Australian-listed Sedimentary Holdings (SED) nearby deposits/tenure. As consideration for SED's tenure, the Company received a 35% holding in SCR. Field trials at Honeymoon resumed in 1998 with plans to build a 1,000tpa  $U_3O_8$  (2.2Mlbpa) project. With limited success in expanding the resources SCR scaled back its plans to a 400tpa  $U_3O_8$  (~900klbpa) operation. In December 2005, SCR was acquired by South African junior miner Aflease to form SXR Uranium One (renamed Uranium One).

In 2006, Uranium One (UUU) announced that the development of the Honeymoon project would proceed. A year later, UUU attracted Japanese conglomerate Mitsui as a 49% Joint Venture partner to fund the majority of the project and by 2009 construction of the 400tpa  $U_3O_8$  (~880klbpa) processing plant had commenced. First production was in September 2011, with 45.4t (100klb)  $U_3O_8$  produced in 2011. Production in 2012 was expected to be 275t (606klb)  $U_3O_8$ , at \$47/lb which was much more than UUU's average cost of production in Kazakhstan, however with commissioning drawn out this resulted in 155t (340klb)  $U_3O_8$  production. In 2013, production was 112t (250klb)  $U_3O_8$ . In total, \$170m in capital was spent on the Honeymoon project to build the plant and infrastructure. The mine was placed on care and maintenance in late 2013 amid lower uranium pricing.

Whilst the project has never lived up to expectations, this appears to be a direct result of the project being a non-core asset for Uranium One (UUU). Just as the project went into construction AtomRedMetZoloto (ARMZ), the mining division of Russian state owned Rosatom, took a significant stake in the Company. This shifted the focus to UUU's Kazakhstan uranium mines. We explain the specific areas for the underperformance on page 2, however, we believe these all appear to be addressable.

In early 2014, UUU decided to sell the Honeymoon uranium mine with an exclusivity/option agreement signed with Wattle Mining Pty Limited (a company controlled by Mr Grant Davey). Interestingly, in Australian dollar terms the uranium price was A\$30/lb at the time and it has since improved to A\$50/lb which is above the price that UUU placed the Honeymoon uranium mine on care and maintenance in late 2013 (A\$38/lb) [Figure 5]. BOE announced that it had reached agreement in September 2014 to form a Special Purpose Joint Venture whereby BOE will own 80% and Wattle will own 20% of Uranium One Australia. BOE has an option to acquire Wattle's 20% post completion of a Bankable Feasibility Study (BFS). Wattle is free carried by BOE until the completion of a BFS. The terms of the acquisition are outlined below:

Figure 5: Honeymoon Acquisition Timing



Source: Boss Resources Limited

## Acquisition Terms

In December 2015, BOE completed the acquisition of Uranium One Australia which owns the Honeymoon Uranium project. The consideration for acquisition is approximately \$9.6m in cash with an initial payment of \$2.6m. Therefore, the project was effectively acquired for the value of the statutory Environmental Bonds which total \$8.7m. There are further payments in cash and/or shares of \$5m related to the project being successfully recommissioned.

### Project Acquisition Payments (~\$9.6m):

- BOE has paid an initial \$2.6m in cash payments to complete the transaction.
- There are a further \$7m in cash payments due within 4 years from the completion of the transaction (\$3m within 2 years and \$4m within 4 years). These are held under promissory notes.

The promissory notes are secured under the terms of a general security deed. Repayment of the amounts due under the promissory notes may be accelerated in certain circumstances, including where BOE raises financing of \$15m, the sale of the shares in Uranium One Australia or the Honeymoon Project (or part thereof) and a change in control of BOE.

### Production Related Payments (\$5m):

- \$2m payable in cash and/or shares upon the later of restart of the operations with commercial production or 5 years from the completion of the acquisition.
- 10% of the net operating cash flow of the Honeymoon Project payable annually up to a maximum of \$3m.

BOE has a call option to acquire Wattle's 20% interest in the Joint Venture after it completes a positive Bankable Feasibility Study (BFS) to restart the operations. The terms of the acquisition will be mutually agreed or otherwise determined by an independent valuer taking into account the valuation of the project and market capitalisation of BOE at the relevant point in time. The consideration of the acquisition of Wattle's 20% interest may, at the election of BOE, be payable in cash and/or shares in BOE.



## Mine and Infrastructure

We recently visited the Honeymoon mine and we came away impressed with the significant infrastructure and its excellent condition (Figure 6). In total, the UUU and Mitsui JV spent some \$170m on building the processing plant and associated infrastructure which includes:

- Solvent extraction processing plant with a capacity to produce 880,000lbpa  $U_3O_8$  currently on care and maintenance
- Well fields currently on care and maintenance
- 100 person operating mining camp
- Administration buildings
- 75km power line connecting to mains power
- A fleet of vehicles spares and other equipment associated with the commissioning of the Project
- Runway capable of landing light planes
- Extensive geological database of 3,000 drill holes and associated logging information
- Cash backed environmental bonds in the amount of \$8.7m

We note that under the control of UUU care and maintenance costs were as high as \$4-5mpa. BOE is currently reducing this level down to ~\$1mpa through installing a number of automated systems. For a junior company, such as BOE with limited funding this is being treated as a priority. BOE recently sold the kerosene in the Solvent Extraction (SX) columns for \$660k which will assist in funding a portion of the first 12-months of care and maintenance costs.

We believe BOE will look to make several modifications to the plant in a production scenario to improve uranium recoveries and increase safety. Firstly, a bund around the gypsum treatment plant will prevent any overflow issues. In addition, BOE would look to replace the SX columns with the newer resin technology. The reason why UUU and its engineering consultants chose the SX route, which uses highly flammable kerosene, was this was the proven processing route in Western nations at the time (2006-7). However, the resin technology has overtaken SX in the last decade as it can be adapted to the particular deposit, has the potential for improved recoveries and is safer than SX. In addition, the drying and packaging plant would likely need to be expanded.

Figure 6: Honeymoon Uranium Processing Plant



Source: Boss Resources Limited

## Permitting

A key aspect of the acquisition of the Honeymoon uranium mine is that it is only 1 of 4 uranium mines in Australia which has all the necessary permits to produce, export and sell uranium. We understand completing the permitting process is a difficult task in itself which can take several years to complete. It is worth noting that in Western Australia Toro Energy (TOE) and Vimy Resources (VMY) are rapidly completing the permitting process for their proposed mines prior to the state election in late 2016. Should there be a change of Government to Labor there is a large risk that they would not issue any further uranium mining permits as they have previously indicated they are against uranium mining.

BOE holds the following licences which would effectively enable the Company to re-commence uranium production quickly from any decision to re-start operations:

1. **Licence to Carry Out Mining or Mineral Processing:** Annual licence issued by the EPA under the Radiation Protection and Control Act 1982, in relation to ML 6109.
2. **Registration of an Ionising Radiation Apparatus:** one registration for each of Borehole Logging, XRF Analyser, Thermo Fisher, Down Hole Neutron Generator, Bore Hole Probe, Density Gauge x 2, and PFN MKII. All annual licences.
3. **Apparatus Licence (for mobile, fixed telephony and aeronautical):** Annual licence.
4. **Approval of Potable Water Monitoring Program,** Approved by the Government of South Australia Health Department on 15 July 2014. This is an ongoing monitoring program, subject to two-yearly audits, with the first audit due by 1 July 2016.
5. **Permit to Possess Nuclear Material:** Issued by the Australian Safeguards and Non-Proliferation Office (ASNO). Authorises mining, processing, production, storage and transport (for which the Company has an approved transport management plan).
6. **Licence to Possess a Radiation Source:** Authorizes the possession of up to 10 sealed radioactive sources and up to 5 premises for the use or storage of unsealed radioactive substances. Annual licence.
7. **Powerline Licence Agreement:** Entered into with The Mutooroo Pastoral Co Pty Ltd (a private landowner) commencing 1 September 2007, providing authorization for the Company to erect powerlines and access two private roads. These powerlines are still in place and are required for the Company's operations.
8. **Licence to operate under the Radiation Protection and Control Act** (the Radiation Protection branch of the EPA). This is not a physical licence, rather approval of the Company's Radiation Management Plan and Radioactive Waste Management Plan. Regulated as part of the Licence to Carry Out Mining.
9. **Mining and Rehabilitation Program:** Initially approved at the start of operations. Every time there is a material change to the Company's risk processes or profile, an update needs to be made to the Mining and Rehabilitation Program.
10. **Permission to Export:** Issued by the Commonwealth Government, and valid for 10 years to 2019.
11. **Wastewater Collection, Treatment and Irrigation System Approval:** Issued by the Department of Health on 26 August 2009. No expiry date, rather requirement to comply with conditions.
12. **Works Approval:** Issued by the EPA, required to be kept to authorize the repository. Annual licence, fee paid annually.
13. **Dangerous Substances Licence:** Processed with SafeWork, providing for systems regarding dangerous substances kept on site.

## Sandstone Uranium Deposits

Sandstone uranium deposits (including Honeymoon) represent uranium concentrations formed by low-temperature hydrothermal processes. They are typically distributed in younger sedimentary formations, mainly of the Cainozoic and Mesozoic age. These deposits make up c37.5% of the world's uranium deposits containing some 28% of the world's uranium resources. Approximately 45% of sandstone uranium deposits are located in the central/western USA. Another region which hosts significant sandstone uranium deposits in central Asia which includes Uzbekistan and Kazakhstan. Appendix 1 shows the global distribution of sandstone deposits.

Pre-1960's, sandstone uranium deposits were mined by conventional open pit and underground mining methods. However, in the 1960's a new exploitation technology was developed, known as in-situ leach/recovery (ISL/ISR), which allows the direct recovery of uranium by injecting chemical solutions into mineralised strata using specially designed drill holes. The main uranium minerals recovered are pitchblende and coffinite which occur as coatings on the sand grains and in the pores of the host sandstones (Abzalov, 2012).

According to Abzalov, there are four types of sandstone hosted deposits (shown in Figure 7).

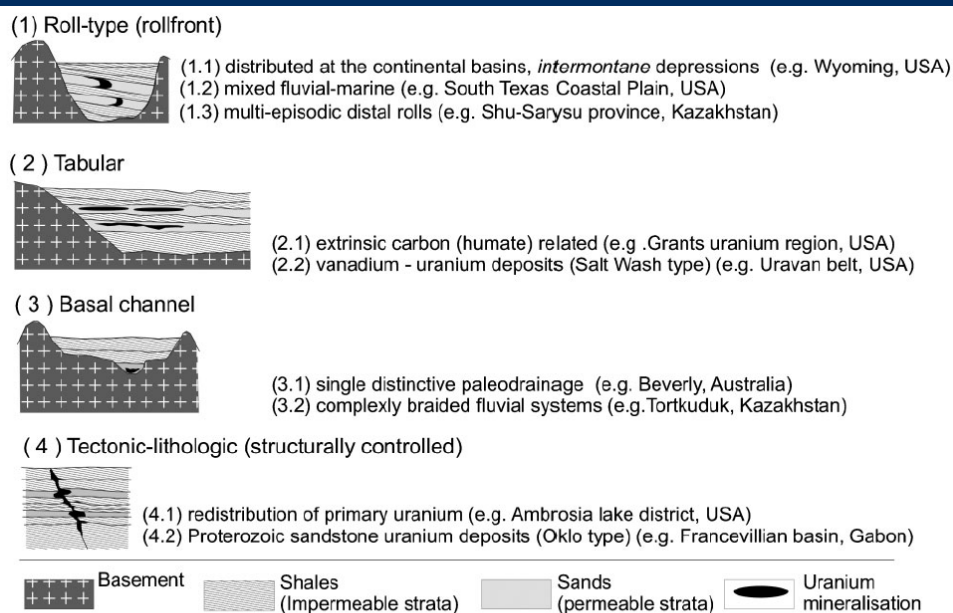
Basal channel type uranium deposits are common in the US, Australia, Canada, Kazakhstan and Russia. The Honeymoon uranium deposit is this type. They are associated within paleochannels with the channels usually filled with clastic sediments of alluvial-fluvial affinity. Uranium mineralisation occurs in elongated lenses usually several hundred meters long and several tens of meters wide. In general, uranium lenses are distributed with the host sedimentary beds which are associated with organic paleo-plant debris.

Roll front deposits are the most common in Wyoming, Texas, Kazakhstan and Uzbekistan. Mineralisation is called rollfront because of its specific arch like shape which cross-cuts the sedimentary bedding. Uranium mineralisation is distributed at the contact between oxidised (altered) and reduced (non-altered) sediment and usually bounded from the top and bottom by less permeable seams represented by shale or consolidated sandstone.

Globally, Tabular type uranium deposits are the most common type of sandstone deposit. A characteristic feature of these deposit are the tabular shape created by the distribution in parallel with bedding of the enclosed sediments. Ore bodies are horizontally extensive and thin in their vertical dimensions.

The tectonic-lithologic type of uranium deposits are less common and characterised by strong structural control of mineralisation distributed along high tectonic faults cutting the host sedimentary sequences.

Figure 7: Main Type's of



2 Schematic diagram showing main types of the sandstone uranium deposits, based on classifications proposed by Dahlkamp (1993) and IAEA (2009) with modifications by the author

Source: Marat Abzalov: "Sandstone uranium deposits amenable for exploitation by in-situ leaching technologies" (2012)

## Honeymoon Geology

The Honeymoon Uranium deposit is a basal-channel type deposit and 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. This is the same palaeovalleys porous sands in Eocene to Miocene as the operating Beverley-Four mile operating mine in South Australia. The uranium is usually present as a uraninite or coffinite coating on sand grains, and the ore is often pyritic and carbonaceous (Brunt, 1997). The average depth of the mineralisation is 100-120m below surface and has an average thickness of 13-15m.

The uranium mineralisation represents a classic basal channel type sandstone-hosted uranium model. This model implies the movement of oxidised, uranium-bearing fluids 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.

Distribution of the uranium accumulations within the palaeochannels is controlled by fluid pathways that have transported the dissolved uranium and the distribution of organic matter which served as reductants causing precipitation of uranium. Interplay of these two main factors has created a stacked geometry of the "uranium rolls" commonly distributed as elongate pods along the strike of the palaeovalley. This style of mineralisation is similar to that seen in the Shinarump, Monitor Butte and Moss Back members of the Upper Triassic Chinle formation in the White Canyon areas of the uranium mining districts of South Eastern Utah, USA.

## Kazakhstan vs South Australia

From 2001 to 2013 uranium production from Kazakhstan increased significantly from around 2000t to 22,550t of uranium. This ten-fold increase catapulted Kazakhstan to the world's largest producer of uranium supplying c.38% of global production. The reason for the significant increase was predominately its ISL deposits which were relatively cheap to fund and produced uranium at a low cost (Figure 12).

When we compare the Honeymoon uranium deposit with those in Kazakhstan it is smaller but higher grade, significantly shallower and has lower acid consumption. This is a significant advantage with lower drilling costs and significantly less pressure. In 2010, the Kharassan deposit had significant issues during its start-up with the depth causing problems with the piping/pressures and screen positioning. It is worth noting that whilst the Honeymoon deposit is relatively small it seems plausible that BOE could expand the Honeymoon project to a size that could be comparable to the Kazakhstan deposits. BOE has established an exploration target of 32-78 Mt at a grade between 450 to 1400ppm  $U_3O_8$  for 42 to 100Mlb of contained  $U_3O_8$ .

Figure 8: Kazakhstan/Uzbekistan vs Honeymoon ISL deposits (2012)

Deposit	Country	Resources		Leach reagent	Acid consumption		Operating cost	References
		Tonnage (Mt)/grade ( $U_3O_8$ %)	Depth below surface/m		(acid tonnes per 1 t uranium)	Uranium recovery/%	US\$/lb U	
Akdala	Kazakhstan	30-3 Mt at 0-06%	200-250	Sulphuric acid (92%)	35	90	7-34	Pool and Wallis (2006a), Petrov <i>et al.</i> (2008)
Kharassan	Kazakhstan	38-6 Mt at 0-11%	560-680	Sulphuric acid (92%)	90-140	93	8-70	Pool and Wallis (2006b), Petrov <i>et al.</i> (2008)
South Inkai	Kazakhstan	32-7 Mt @ 0-043%	350-510	Sulphuric acid (92%)	50	90	8-49	Pool and Wallis (2006c), Petrov <i>et al.</i> (2008)
Honeymoon	Australia	1-2 Mt at 0-24%	100-120	Sulphuric acid	7-7	70	N/A	Bush (2000), McKay <i>et al.</i> (2007)
Uchkuduk	Uzbekistan	25 Mt at 0-2%	10-280	Sulphuric acid	20-40	N/A	N/A	Karimov <i>et al.</i> (1996), IAEA (2001, 2009)

\*N/A: not available.

Source: Marat Abzalov: "Sandstone uranium deposits amenable for exploitation by in-situ leaching technologies" (2012)

## Mineral Resources

In January 2016, BOE published a JORC Mineral Resource estimate of 15.2Mt at 820ppm for 27.6Mlb  $U_3O_8$  at a 250ppm cut-off which covers the Honeymoon, East Kalkaroo and Brooks Dam deposits (Figure 9). This was a 66% increase when compared to the previous estimate of 5.3Mt at 1400ppm  $U_3O_8$  for 16.6Mlb  $U_3O_8$  at a 500ppm cut-off. On a comparable cut-off basis (500ppm), the resource increased by 31% to 6.9Mt at 1420ppm  $U_3O_8$  for 21.7Mlb  $U_3O_8$ . The increase in endowment and Resource Classification is related to a better understanding of the geology, mineralisation continuity and volume due to the advanced 3D geostatistical modelling used. The previous resource model used a 2D-polygonal fixed method of resource estimation. Benchmarking to similar operating uranium projects worldwide indicates that a 250ppm  $eU_3O_8$  lower cut-off should be the preferred reporting option. For example, PEN's Lance project in Wyoming uses a cut-off of 200ppm.

Whilst we agree with the lower-cut off used in the resource estimate there remains a significant amount of drilling required to improve the size and confidence in the resource to target a higher production rate of uranium. Currently 39% is in the measured and indicated categories with the remainder inferred. We estimate a resource of double the current estimate would be enough to consider an expanded operation (2-4Mlbpa). BOE plans to embark on a drilling in the June Q with the purpose of expanding the resource base.

Figure 9: Honeymoon JORC Resource Estimate (2016)

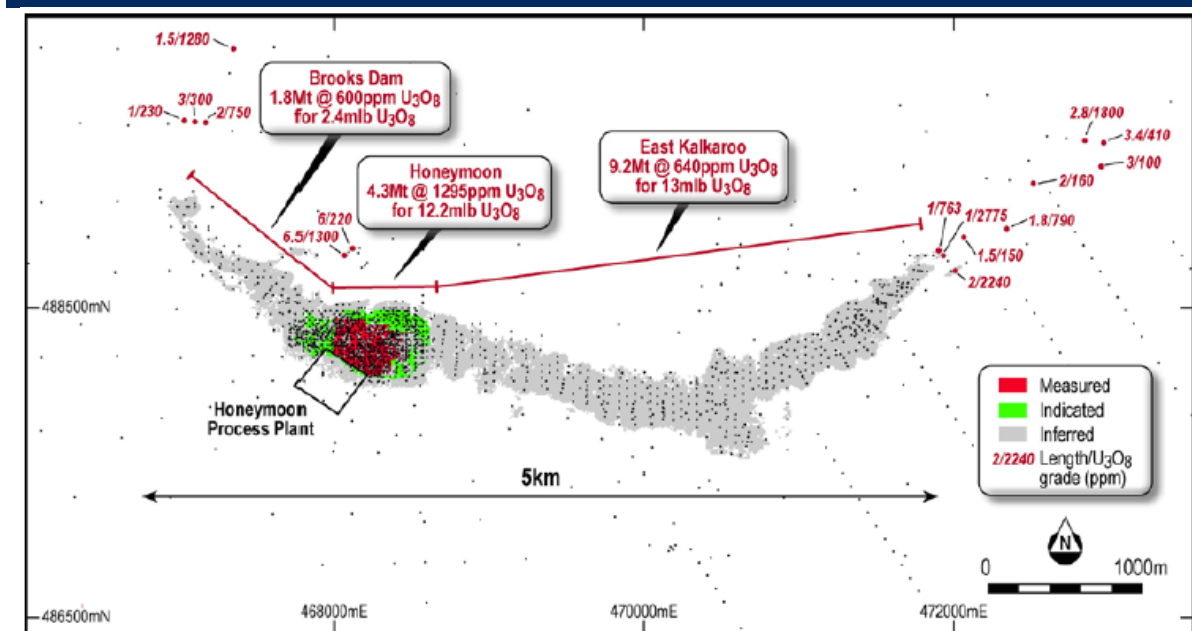
2016 Honeymoon Project Mineral Resource Covering the Honeymoon, East Kalkaroo and Brooks Dam Deposits Reported Above a preferred 250ppm $eU_3O_8$ lower cut-off.				
Classification	Million Tonnes	$eU_3O_8$ ppm	Contained $U_3O_8$ (M Kg)	Contained $U_3O_8$ (M Lb)
Measured	1.7	1720	2.95	6.51
Indicated	1.5	1270	1.92	4.24
Inferred	12.0	640	7.62	16.8
<b>Total</b>	<b>15.2</b>	<b>820</b>	<b>12.50</b>	<b>27.56</b>
Note: Figures have been rounded. Quoted resources have been adjusted to exclude previous production of approximately 335t of $U_3O_8$ .				

Source: Boss Resources Limited



BOE has updated resource estimates for the Brooks Dam, Honeymoon and East Kalkaroo mineralisation that covers 5km of the 50km mineralised trend hosted by the Yarramba Palaeochannel, directly around the main Honeymoon processing facility (Figure 10). This is the first time that the combined resources have been modelled in three dimensions which will assist with a more accurate design of the production wellfields and screen placement which has been identified as a major reason for the projects underperformance.

Figure 10: Honeymoon Resource Estimate

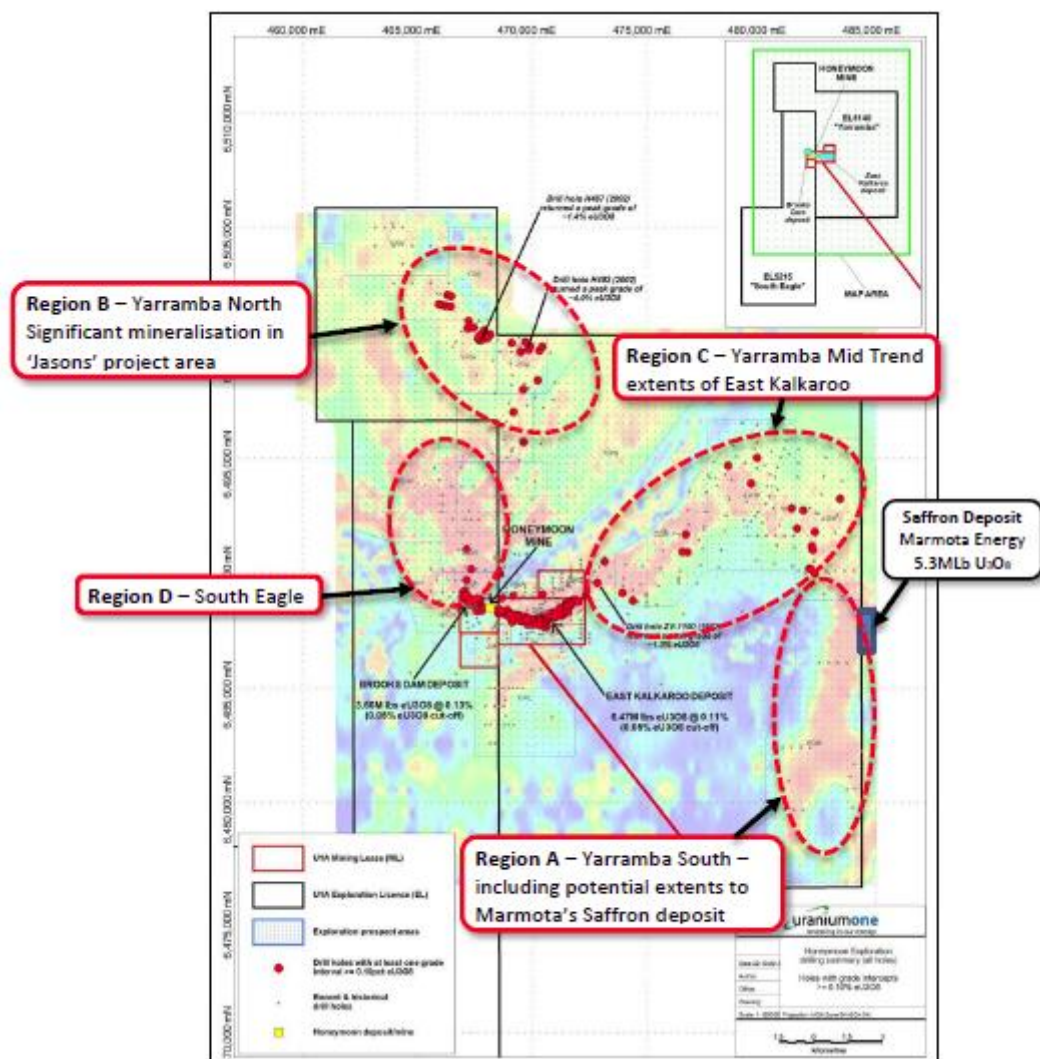


Source: Boss Resources Limited

## Exploration Target (42 to 100Mlb)

BOE has identified an additional Exploration Target in the Honeymoon region of between 7 and 14 Mt at a grade range of between 300 to 1500ppm  $U_3O_8$  for a potential endowment of between 8 to 23Mlb  $U_3O_8$  along strike and exclusive of the current resource (Figure 11). This would likely be the immediate target of the June Q drill program. The global Exploration Target for BOE's entire 2,600km<sup>2</sup> tenement package is currently estimated to between 42 to 100Mlb of contained  $U_3O_8$  (32 Mt to 78 Mt at a grade between 450 to 1400ppm  $U_3O_8$ ). This Exploration Target is conceptual in nature and there has been insufficient exploration to estimate a Mineral Resource.

Figure 11: Eastern Exploration Target Regions. Shown on a conductivity map with historical drilling and intercepts.



Note: Red, orange and yellow indicate potential paleochannel areas. (Base image source: U1A).

Source: Boss Resources Limited

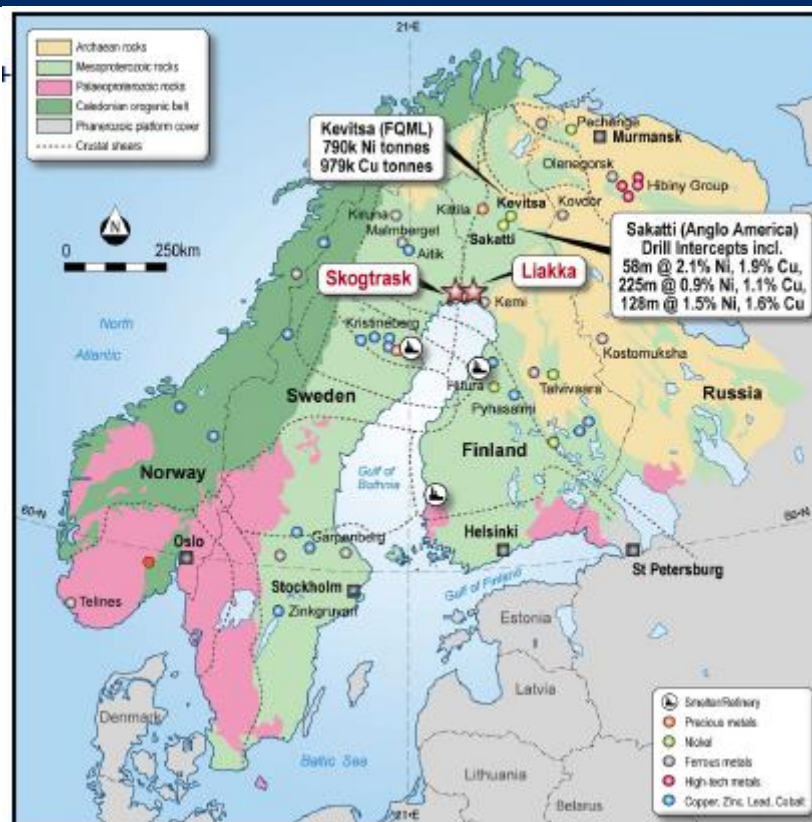
## OTHER ASSETS

BOE has a number of other exploration assets including nickel and copper projects in Sweden, Finland and gold projects in Burkina Faso. With the acquisition of the Honeymoon uranium mine we believe BOE will look to divest it Scandinavian assets. The Company already has a joint venture agreement for the Burkina Faso assets.

### Scandinavian Ni-Cu Projects

BOE has three Scandinavian based projects which are prospective for nickel and copper deposits (Figure 12). The region is low-risk with excellent infrastructure should a discovery be made. However, the vast majority of deposits are hidden undercover and need modern geophysics and systematic exploration to find major new discoveries. Limited exploration work has been done on any of the projects in recent times. BOE drilled a couple of holes at the Skogtrask project.

Figure 12: Scandinavian Ni-Cu projects



Source: Boss Resources Limited

### Skogtrask Project, Sweden

The Skogtrask Project is located 9km south of the regional centre of Kalix in northeast Sweden. The Project is located close to road and rail access, power and port infrastructure, within a region that is reliant on forestry and mining for its economy. Originally the project was identified as part of a 3-year regional exploration program undertaken by Newgenco during 2008-2011, the Project covers a mafic to ultramafic intrusion that was located from airborne magnetic surveys and government mapping. This intrusion lies adjacent to a major deep structure of a type that worldwide has been demonstrated to control the location of major nickel-copper camps. The Skogtrask deposit is hosted by a 1.8-1.9 Ga Svecofennian-aged mafic to ultramafic intrusion, which in turn is hosted in sulphidic sediments. This age is known to be highly prospective for nickel-copper-PGE mineralization worldwide.

In 2015, two holes for a total of 500m (Boss 1 and Boss 2) were drilled to test different geophysical/geological anomalies as part of a first pass focussed assessment of the Skogtrask Project to determine the commercial significance of the historic Ni-Cu occurrences. The drill program was designed to target down-dip and down plunge extensions of the known mineralisation. Both maiden drill holes hit disseminated and stringer sulphide

mineralisation, with significantly thicker mineralisation encountered in Boss 1 averaging 20.3m at 0.3% Ni, 0.2% Cu and 0.02% Co at the down hole depth from 111m to 131.3m. This is comparable with the reserve grades of the Kevitsa deposit in Finland which is currently being mined by First Quantum Minerals (0.31% Ni, 0.41% Cu, 0.18ppm Pd, 0.25ppm Pt, 0.25ppm Au).

### **Nottrask Project, Sweden**

In 2015, BOE was granted its application for a new 37km<sup>2</sup> exploration license known as Nottrask in northern Sweden in October 2014. Nottrask is a 10km long by 5km wide “eye” shaped intrusion that has outcropping of massive and breccia nickel (up to 1.25% Ni) and copper (up to 1.82% Cu) sulphides contained in an 80m long gossan exposed on the southern side of the license.

BOE has targeted key areas for future exploration that include the entry points (feeder dikes) to the intrusion as illustrated on the airborne magnetics. Future programs of work include a review of existing geophysical data and development of a quantitative model, undertaking a high resolution airborne magnetic survey, and completing high powered modern TEM to search for conductors along the interpreted contact.

### **Liakka Project, Finland**

The Liakka Project is a 29km<sup>2</sup> exploration permit located 12km north of the regional centre of Tornio and close to the Swedish border on the Tornio River. The Project was defined as part of a 3-year regional exploration program undertaken by Newgenco during 2008-2011. The Liakka deposit is hosted by a 1.8-1.9 Ga Svecofennian-aged mafic-ultramafic intrusion. This age is known to be highly prospective for nickel-copper-PGE mineralisation worldwide. Outcrop is poor due to the presence of thin glacial cover, similar to most of northern Finland.

Geophysical exploration and 22 diamond drill holes (for a total of 3,455m) by Outokumpu between 1982 and 1986 confirmed the presence of nickel-copper sulphide hosted within ultramafic rocks in those intrusions. The presence of PGE has been confirmed by recent reanalysis of the historic core.

Approvals are currently being sought for a drill program to assess the northern extension of both conductive zones identified by the ground geophysics program. All holes will be logged with down hole transient electromagnetics, a technique which is widely used for assessing the geometry and extent of conductive mineralisation.

### **Lilltrask**

A new occurrence of Ni-Cu sulphides has been identified by BOE and an application for three exploration licenses over the prospective area has been submitted. The three adjoining licenses cover an area of approximately 14.9 km<sup>2</sup> and are located in the Lilltrask area in northern Sweden approximately 35 km from Lulea, the regional administrative and industrial centre on the coast of the Gulf of Bothnia. Two other Boss projects, Nottrask and Skogtrask, are also located in the same province.

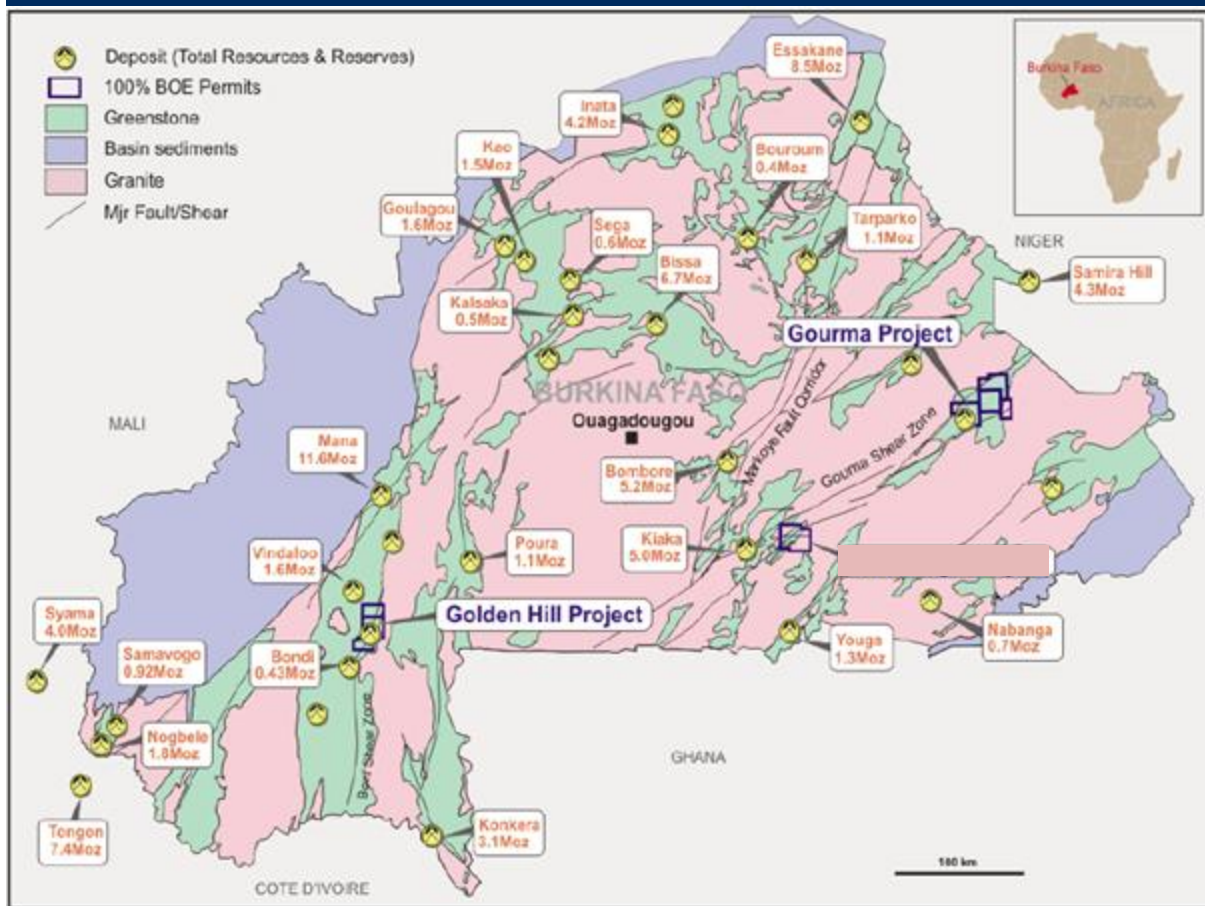
The Project area is characterised by the presence of norites and gabbro-norites containing disseminated Ni-Cu sulphides. The mafic rocks bearing Ni-Cu mineralisation were found in the boulders and also in one small outcrop located approximately 500m from the bitumen road passing through the licenses. Assay results have confirmed the outcropping Ni grades are up to 0.6% and Cu grades up to 0.8%. Sulphides are characterised by high metal tenors, with Ni tenor up to 4% and Cu tenor exceeding 7%.



## Burkina Faso Gold Assets

In 2014, BOE and Gryphon Minerals Ltd ("Gryphon") executed definitive earn in agreements and an equipment sale agreement whereby Gryphon could earn up to 80% of the Company's highly prospective gold projects in Burkina Faso (Figure 13). As part of the agreement, BOE is free carried to a decision to mine. The gold projects include the Golden Hill and Gourma.

Figure 13: Burkina Faso Gold Assets



Source: Boss Resources Limited

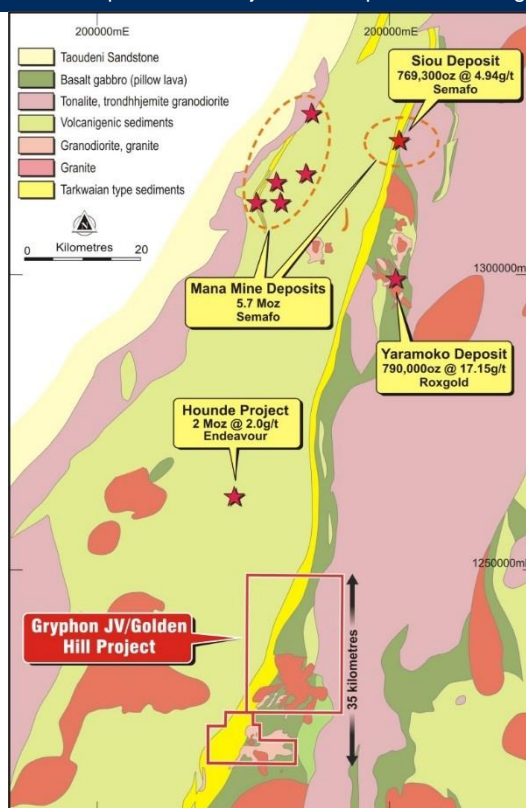
## Golden Hill Project

The Golden Hill Project is the most advanced of all the projects in the JV agreement area and is considered particularly prospective as it is located within the highly mineralised Houndé Greenstone Belt. This belt hosts the majority of the high grade discovered gold ounces in Burkina Faso, including Semafo's (TSX, OMF: SMF) recently discovered Siou Deposit (Ore Reserves of 769 koz at 4.94 g/t gold) plus the high grade Yaramoko deposit owned by Roxgold (TSX.V: ROG) (790koz at 17.15 g/t gold). The belt also hosts Semafo's Mana Mine (6 Moz) and Endeavour Mining's (TSX: EDV, ASX: EVR) 2Moz at 2.0 g/t Houndé deposit (Figure 13). The Golden Hill Project straddles the same structure and stratigraphy that host these high grade deposits.

Exploration work by Gryphon during 2015 comprised of soil sampling, geological mapping and auger drilling. Auger drilling focused primarily at the Ma, Peksou, Nahirindon North, C-Zone, Nahirindon South and Intiedougou prospects. At the Ma prospect, where the strongest evidence of significant mineralisation has been detected by Gryphon to date, results have included a peak of 8.48 g/t gold from saprolite from the extension of a northwest trending orpillage which has returned multiple high grade rock chips up to 10 g/t gold. The auger results have identified a continuation of the mineralised trend at Ma East in saprolite towards Ma, extending the trend more than 400m to the northeast.



Figure 14: Golden Hill Project Located Compared with Major Gold Deposits in the region



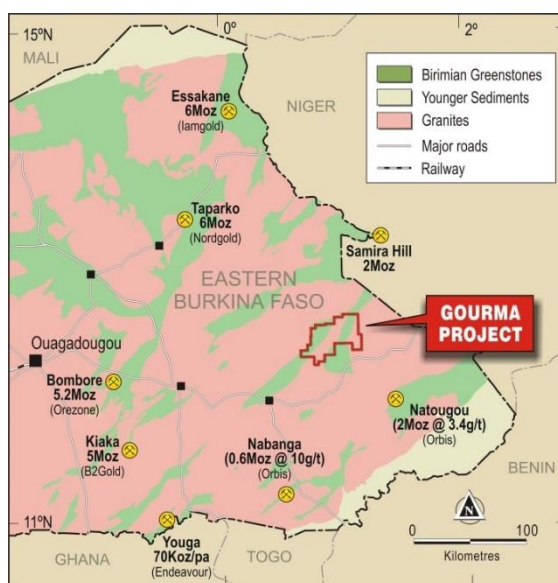
Source: Boss Resources Limited

## Gourma Gold Project

The Gourma Project is located within the Fada N'Gourma Greenstone Belt, 250km east of Ouagadougou and only 80 km south-southwest of Niger's largest gold deposit, the 50,000ozpa Samira Hill gold mine (1.9 million ounce project). The Project consists of six contiguous permits (Diabatou, Tyara, Foutouri Boutouanou, Tyabo and Kankandi) that cover a total area of approximately 1,300 km<sup>2</sup>.

BOE was the first modern explorer on the property and completed a detailed aeromagnetic survey and extensive, mostly broad spaced reconnaissance style geochemical work involving several methods including soil, auger and rock chip sampling between 2010 and 2013. Work by Gryphon to date includes a regolith terrain and aeromagnetic interpretation, detailed BLEG stream sampling and selective lateritic lag sampling in areas where drainage geochemistry is an unreliable geochemical prospecting method, as well as 8525 soil samples plus preliminary shallow auger drilling which has returned a peak result of 27.5 g/t Au in saprolite.

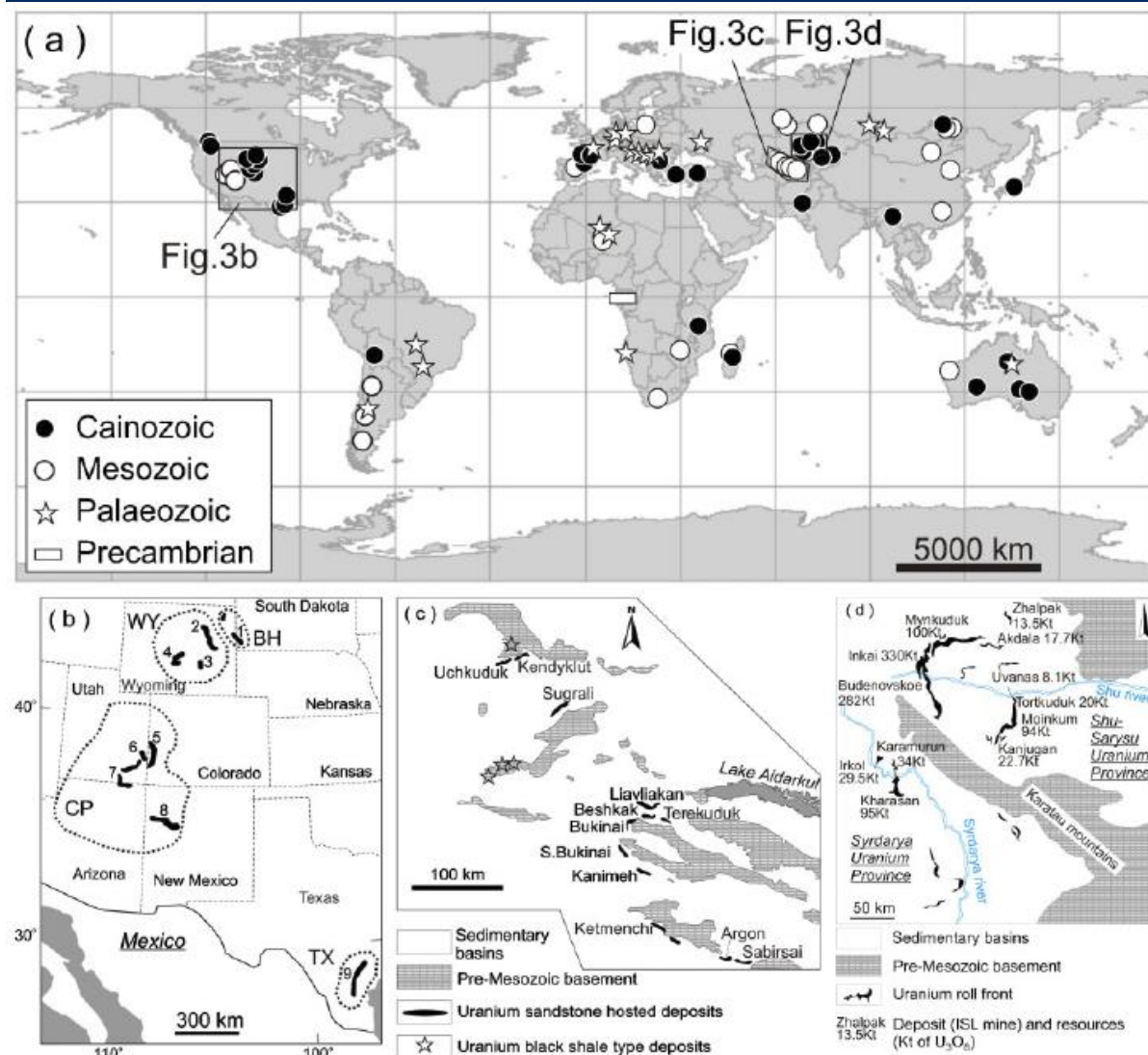
Figure 15: Gourma Project Location



Source: Boss Resources Limited

## APPENDIX 1 –SANDSTONE HOSTED DEPOSITS

Figure 16 World Distribution of Sandstone Hosted Deposits



- 3 Distribution of sandstone hosted uranium deposits: *a* a world map showing the main sandstone type uranium deposits and age of their host rocks (IAEA, 1996, 2009); *b* sandstone hosted uranium deposits in the USA. Regions: BH – Black Hills, WY – Wyoming basins, CP – Colorado Plateau, TX – Texas Coastal region. Numbers denote uranium districts and basins: 1 – Edgement district, 2 – Powder River basin, 3 – Shirley basin, 4 – Great Divide basin, 5 – Uravan belt, 6 – Big Indian district, 7 – Monuments Valley-White Canyon district, 8 – Grants Uranium region (Church Rock, Smith Lake and Ambrosia Lake districts), 9 – Texas Coastal region (Ray Point district, Clay-West Burns district, Rhodes Ranch area and South Duval trend; Fischer, 1970, 1974; Eargle *et al.*, 1975; Fishman *et al.*, 1985; Abzalov and Paulson, 2012); *c* uranium deposits of the Kyzylkum province, Uzbekistan (Karimov *et al.*, 1996); *d* uranium deposits of the Shu-Sarys and Syrdarya provinces of Kazakhstan (Petrov *et al.*, 2008). Resources as reported by Pool and Wallis (2006b)

Source: Marat Abzalov: "Sandstone uranium deposits amenable for exploitation by in-situ leaching technologies" (2012)

## RISKS

Below we have identified a number of risks which may impact BOE. These are by no means a complete list of risks and there may be others beyond those identified:

**Funding:** There are number of funding risks for BOE. The Company last reported its cash position of \$2.4m at the end of December Q. BOE will need to pay the care and maintenance costs for the Honeymoon mine for the foreseeable future. The Company envisages reducing these costs from \$4-5mpa down to \$1mpa in the immediate term. BOE will also need to fund the two remaining promissory notes which are a further \$3m within 2 years and \$4m within 4 years. In addition, it will need to fund drilling and restart feasibility studies on the Honeymoon project. Finally, funding will be needed to restart operations. There is no guarantee that these funds will be available at a reasonable cost or create an excessive level of dilution to existing shareholders.

**Resource/Reserve Conversion:** Whilst BOE has determined an updated resource of 27.5 Mlb U<sub>3</sub>O<sub>8</sub>, the conversion to Ore Reserves could be lower than expected. In an operating scenario, the production wells may behave differently than expected due to a number of factors which include and are not limited to sand permeability and porosity which may impact grade and/or recoveries. If the projected porosity, permeability, and transmissivity differ from expectations, the consequence could be detrimental to the project.

**Commodity Price:** With the acquisition of the Honeymoon uranium project BOE's share price will be influenced by the prevailing price of uranium. Once BOE moves towards a production scenario its revenues will be influenced by the price of uranium. Whilst we forecast uranium prices to continue to strengthen over the medium to longer term they could be significantly influenced by such things as nuclear accidents, such as Fukushima or other unforeseen events.

**Exchange Rate:** BOE has an Australian based uranium project and its projects valuation is subject to fluctuations in currency against the US dollar.

**Political:** Uranium mining in Australia has been highly political. Most recently the Palaszczuk Government in Queensland announced that it would reinstate a previous uranium mining ban. Probably the most destructive ban to developers of uranium deposits was from 1983-1996 when the Federal Labor Government implemented its "three mines policy". Whilst, the South Australian Government, where the Honeymoon uranium project is located, remains supportive of uranium mining there can be no assurances this will continue. We will be watching with interest when the West Australian election is held in late 2016 as it is widely assumed that if the state Labor party is elected that a previous uranium mining ban would be reinstated.

**Permitting/Environmental:** Whilst BOE has all the necessary approvals needed to mine, process and export uranium it will need to renew these as required.

## DIRECTORS/KEY MANAGEMENT

### Mr Evan Cranston (Non-Executive Chairman)

Mr Cranston is a corporate lawyer with experience in publicly listed entities including capital raisings, initial public offerings and liaison with market analysts and potential investors. He has a detailed knowledge of Corporate Governance, the Australian Securities Exchange's Listing Rules and the Corporations Act. Mr Cranston is also currently Non-Executive Director of Attila Resources Ltd (ASX: AYA), Non-Executive Director of Cradle Resources Limited (ASX:CXX), Non-Executive Director of Clancy Resources limited (ASX:CLY) and Non-Executive Director of Carbine Resources Limited (ASX:CRB).

### Mr Grant Davey (Executive Director)

Mr Davey is a mining engineer with over 20 years of senior management and operational experience in the construction and operation of gold, platinum and coal mines in Africa, Australia, South America and Russia. More recently, he has been involved in venture capital investments in several exploration and mining projects and he has been instrumental in developing the Panda Hill niobium opportunity.

Mr Davey's uranium experience is associated with mining uranium as a by-product from the deep level gold mines in South Africa. He was responsible for the Vaal Reefs South Uranium plant between 2005 and 2008 when it produced up to 6Mlbpa and was one of the largest uranium producers in the southern hemisphere at the time.

### Mr Peter Williams (Technical Director)

Mr Williams was formerly Chief Geophysicist and Manager of Geoscience Technology for WMC Resources. He was one of the founding members of Independence Group Limited and developed high powered 3 component 3D TEM applications that lead to the discovery of over 75,000t of nickel at the Victor Long Nickel Mine in Kambalda. Peter has extensive experience in West Africa where he was the vendor of Gryphon Minerals' Banfora Gold Project, was involved in the project generation of Papillion's Mali projects and was a founding director of Ampella Mining Ltd. Peter was a co-founder of the International Resource Sector Intelligence company, Intierra, and was a co-founder of the first dedicated hard rock mineral seismic company in the world, HiSeis.

### Dr Marat Abzalov (Executive Director - Geology)

Dr Abzalov has managed and consulted to a wide range of mining projects including government run projects, technical reviews and detailed studies from scoping to bankable feasibility. He has a solid expertise in all aspects of ore body knowledge with an emphasis on geostatistical resource estimation, samples quality assurance / control and geological / mathematical 3D modelling. His exploration experience includes management and technical support to exploration activities in both brownfields and greenfields projects. In brownfields exploration, using advance 3D visualisation of geological data and applying new 3D modelling and visualisation methodologies, Dr Abzalov built a predictive exploration model of the Olympic Dam deposit which led to the discovery of significant new resources in 2003. He also built a predictive exploration model of Cliff's Ni-S brownfields project in Western Australia which led to the discovery of a high grade zone turning the deposit to an economically viable mining project. In greenfields exploration, he has managed the search programs for deep or covered deposits using innovative targeting tools, including specialised geochemical datasets and applying quality 3D geological interpretation and visualisation. His geological analysis and exploration targeting has led to the generation of highly prospective exploration projects in Far East Russia, the Stans and Eastern Europe.



### Mr Neil Inwood (Consultant)

Mr Inwood is a professional geologist with 20 years' multi-commodity project and consulting experience in Australia, Africa, USA, Europe, South America and Central Asia. He has a BSc in Geology from Curtin University, an MSc in Geology from the University of Western Australia and has studied geostatistics at Edith Cowen University.

Mr Inwood is also the Geology Manager for Cradle Resources and was a Principal Consultant with the international mining consultancy group, Coffey Mining, and was the Competent Person (ASX) / Qualified Person (TSX) for a variety of international uranium, gold, nickel, base metal and iron ore projects. He has consulted on uranium projects in Australia, Czech Republic, Columbia, Hungary, Namibia and the USA and was the lead resource consultant on the world-class Husab uranium deposit in Namibia. Other uranium projects include:

- Bannerman Resources – Etango Uranium Project in Namibia
- Deep Yellow – Namibia and Australian Projects
- Energia – Nyang ISL Project in Western Australia
- Wildhorse Energy Ltd – Pecs Uranium project in Hungary
- U3O8 Corp – Argentine and Brazilian Uranium Projects (Berlin Project)
- Atom Energy – Utah Projects

**Stock recommendations:** Investment ratings are a function of Patersons expectation of total return (forecast price appreciation plus dividend yield) within the next 12 months. The investment ratings are Buy (expected total return of 10% or more), Hold (-10% to +10% total return) and Sell (> 10% negative total return). In addition we have a Speculative Buy rating covering higher risk stocks that may not be of investment grade due to low market capitalisation, high debt levels, or significant risks in the business model. Investment ratings are determined at the time of initiation of coverage, or a change in target price. At other times the expected total return may fall outside of these ranges because of price movements and/or volatility. Such interim deviations from specified ranges will be permitted but will become subject to review by Research Management. This Document is not to be passed on to any third party without our prior written consent.



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