



BOSS' HONEYMOON PROJECT LIES 80 KILOMETRES NORTH-WEST OF BROKEN HILL IN SOUTH AUSTRALIA.

# AWAITING THE URANIUM MARKET RESURGENCE

FACED WITH FALLING URANIUM SUPPLY AND INCREASING DEMAND, NATIONS ARE STARTING TO RECONSIDER MODERN NUCLEAR AS A CLEAN, LOW-COST SOURCE OF ELECTRICITY. **VANESSA ZHOU** DISCUSSES THE PROSPECT OF A RESURGENCE IN URANIUM MINING AND EXPLORATION.

If there is a commodity that has experiences like no other, it is uranium.

As a reliable, cost-effective and clean energy, uranium is the key ingredient for 11 per cent of all electricity produced in the world.

But with supply decreasing and demand increasing this year, many pundits have flagged the imminence of an industry recovery.

The Minerals Council of Australia (MCA) is running a campaign that aims to educate people to reconsider modern nuclear.

The move isn't a surprise considering the world's largest resources of uranium are found in Australia.

Uranium as a mining sector faces many shortcomings that are of no fault of its own, but more a consequence of it being a victim of history, according

to John Borshoff, managing director and chief executive of Namibia-focused uranium exploration company Deep Yellow.

Uranium has experienced three major cycles across its history, Borshoff says. The first was dominated by military-inspired growth, followed by a second cycle of intense activity spurred by the oil shock of the 1970s.

Finally, the Chernobyl nuclear accident in the Soviet Union in 1986 seriously impeded progress towards nuclear electricity generation.

This has hurt the uranium sector by limiting exploration activity, leading to a loss of expertise.

But Borshoff believes that uranium, being a young industry of just 75 years, has achieved a great deal, with 8.1 billion pounds of uranium produced during that time.

What's definitely next, in Borshoff's opinion, is a uranium boom sometime



BOSS RESOURCES MANAGING DIRECTOR DUNCAN CRAIB.

in the future, possibly post-2023.

“Some argue it’s around the corner. Whatever the timing, we all nearly agree our industry is showing early signs of recovery,” Borshoff says during the AusIMM International Uranium Digital Conference.

“When it arrives, it will be like all (its) other (early cycles). There will be a stampede back into the sector, and depending on the size of the boom, 60 companies today will be 200 companies tomorrow as many start to flow in.”

Not all 200 companies will become uranium producers, but they will be an important part of restoring investor confidence, Borshoff adds.

Ninety per cent of growing supply needs will be fulfilled by uranium majors such as Canada-headquartered Cameco, Kazakhstan-based Kazatomprom, French nuclear fuel cycle company Orano, Russia, and to a lesser degree, China, creating a supply shortfall that will potentially be fulfilled by junior companies.

“It will be a large gap to fill. The problem, in my opinion, is that under present conditions there are a few companies, as history demonstrates, that will be able to achieve and manage large-scale production operation,” Borshoff says.

Boss Resources’ Honeymoon uranium operation, a restart project with low capital intensity in South

Australia, is one of a few globally-advanced prospects ready to take advantage of an improved market environment.

The project can be fast-tracked to restart production over 12 months to seize an anticipated rally in the uranium market.

**“ RECOGNISED AS AUSTRALIA’S NEXT URANIUM PRODUCER, TIMING OF HONEYMOON’S RESTART IS NOW PRIMARILY CONTINGENT UPON ACHIEVING THE DESIRED SALES PRICE OF PRODUCED URANIUM.”**

Boss managing director Duncan Craib says the company has progressively de-risked the project, both technically and commercially, since acquiring the site in 2015.

The company has executed programs of work required to restart production, culminating with the

completion of Honeymoon’s feasibility study in January this year.

“Recognised as Australia’s next uranium producer, timing of Honeymoon’s restart is now primarily contingent upon achieving the desired sales price of produced uranium,” Craib tells *Australian Mining*.

“The marketing strategy for Honeymoon is to build a robust sales portfolio, which would cover costs and protect the mine from any future market downturn, while retaining sufficient uncommitted supply to take advantage of rising market conditions.

“Boss is monitoring the term price and staying very close to the market and in regular discussion with fuel buyers.”

For Craib, who’s been involved in the uranium industry for more than a decade, there is optimism for “perfect market conditions” for both uranium suppliers and investors.

The spot uranium price rose from \$US23.95 (\$33.05) per pound in March to a peak of \$US34.25 per pound, before settling at around \$US33 per pound at the time of writing.

“The price trend is upwards and is currently event and perception driven,” Craib says.

“Inventory is decreasing, capital is not easily available for exploration and development of new mines and utilities have significant unfilled requirements in the mid/long term.

“There is a clear mismatch between the spot price and the price to bring back idled production or encourage new production.”

While supply is decreasing, this can be further impacted by the predicted global economic recession, making it difficult to invest in uranium exploration, Craib adds.

“In September 2019, the World Nuclear Association forecast a need for the restart of idled mines and new production from 2024,” he says.

“Industry consensus is that new supply is needed within a three-year time horizon and it will not be available unless we see almost immediate price signals ... the macro outlook is very bullish.”

For these reasons, Boss has continued its care and maintenance program at the Honeymoon project.

The company will focus on ensuring Honeymoon’s operational readiness and quick recommissioning of the plant.

Boss also plans to continue its low-cost, non-invasive geophysical exploration techniques that will open up the pathway to drilling programs.

The company will use results from this exploration to decide its preferred source(s) of material for the stage three project, in view of ramping up production capacity from two million pounds a year to beyond three million pounds of

triuranium octoxide (U3O8) equivalent.

“The short lead time between the decision to mine and first production at Honeymoon gives Boss the ability to offer into uranium offtake agreements and respond quickly to changing market conditions,” Craib says.

“As the lead time to bring a new mine to production is significant (seven to 10 years from discovery to commissioning on average), prices would have to rise significantly in 2020 if new mines are to be brought on as needed.

“The longer the price remains low, the more probable a perceived shortfall becomes in the early 2020s and a potential overshoot in prices before they settle at a sustainable level.”

Although Craib is confident this is an ideal environment for Honeymoon, which requires low upfront capital outlay to recommence production, other new operators may struggle to achieve sustainable production.

The prospects of idled and new mines to fulfil a supply gap look uncertain due to a lack of investment, high capital expenditure and policy issues.

Borshoff believes juniors have to go on a risky path as they develop. Unique to the uranium industry, he says junior

companies will have to convince utility companies of their ability to produce and deliver uranium on time, from a mine that is yet to be built, in the absence of a previous track record.

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For the past 30 years, nuclear energy has also been the largest low carbon source of electricity for developed countries. It produces electricity with zero carbon dioxide emissions 24 hours a day, seven days a week.

In 2018, nuclear power saved

about 2.2 billion tonnes of carbon dioxide from being released into the atmosphere. Australian uranium fuelled about 10 per cent of that result, Craib says.

“This global saving is almost four times Australia’s total greenhouse emissions. Without nuclear, global emissions would be 6 per cent higher,” Craib continues.

“If Australia is serious about addressing climate change while supporting jobs and industry, then nuclear energy should be considered in the energy mix.

“Australia has one-third of the world’s uranium resource, which will be increasingly critical for a power-hungry world seeking to reduce greenhouse gas emissions.”

MCA principal adviser – energy, Patrick Gibbons, another presenter at the AusIMM conferece, says there have been three parliamentary inquiries into nuclear prohibition in the past 12 months.

He believes this is a sign of growing talk around the future of Australia’s nuclear ban.

“There is an increasing critical discussion around the efficacy of a nuclear ban,” Gibbons says.

He believes nuclear energy has a key

role to play in helping Australia meet the Paris Agreement temperature goal.

The Australian Radioactive Waste Agency strengthens this case with findings that nuclear technologies can be safely managed.

MCA chief executive Tania Constable also contends that the country’s ban on nuclear energy and technologies prohibits the development of significant, new, advanced nuclear industries.

Craib continues: “With the next generation of nuclear technologies such as small modular reactors (SMRs) expected to be commercially available by late 2020s, Australia should consider SMRs as an option to replace some of our ageing baseload coal fired generators.

“Australia is arguably better placed than many countries to also safely manage nuclear waste, both as one of the world’s most geographically stable nations and the beneficiary of world-class health and safety and environmental protections.”

There is definitely hope for Australia’s uranium resurgence. The growing number of Australians who support the role of nuclear in the nation’s energy mix over the last decade is a tell-tale sign. ■



THE HONEYMOON URANIUM PROJECT WILL BE GEARED TOWARDS OPERATIONAL READINESS FOR RECOMMISSIONING.