



Under-cover explorer hits hot spots in SA Outback

DEEP IN THE STATE'S OUTBACK BILLIONS OF DOLLARS OF URANIUM LIES BURIED. THE THING IS, HOW DO YOU FIND IT? CHRISTOPHER RUSSELL REPORTS.

ABOUT 20 million years ago, tonnes of uranium washed down from mountains into the channels etched into the wide plains west of Broken Hill.

Some of this snagged in biological traps, precipitating into coarse sands below and then being sandwiched by later layers of clay.

Worth billions of dollars, some of this lies in rich pockets perhaps 100m below the flat plains rolling across South Australia toward the Flinders Ranges.

Modern-day explorers want to get their hands on this long-hidden bounty. They are out there now, armed with a potent force – science.

At the forefront is Adelaide-based Marmota Energy which is combining as many techniques as possible to give it the best chance of success.

The team combines initial gravity data with electromagnetic mapping.

This is overlaid with two techniques Marmota has developed.

It has imported and adapted real-time radon sampling, where decay profiles in the upper layers of the soil are studied. It also conducts biogeochemical research by analysing radioactivity of leaves of plants with deep roots, particularly mulga, saltbush and black oaks.

“This discovery was completely based on our methods,” Marmota managing director Dom Calandro said at Junction Dam, the company's flagship tenement.

The sophisticated targeting enables drillers to focus on specific hot spots

instead of pattern drilling at regularly spaced intervals in the hope of striking it lucky.

“Since we started drilling here at Junction Dam, we've consistently intercepted significant uranium,” Mr Calandro said.

Once the holes are drilled, a down-hole probe checks for gamma rays at varying depths. This is further refined by separating the profiles of uranium, potassium and thorium.

After early rotary mud drilling, Marmota used a sonic drill from Boart Longyear which extracted intact cores for full laboratory assay. Pleasingly, these assays have discovered uranium content is up to twice as prevalent as indicated by the gamma ray analysis.

Within Junction Dam, Marmota has earmarked three key prospects – Bridget, Saffron and Yolanda.

“We're very pleased with what we've seen and we suspect the Saffron and Bridget prospects are continuous,” Mr Calandro said.

Confident in the prospect – including announcing an inferred resource of 1500 tonnes of U₃O₈ at Saffron – Marmota wants to take the next step.

It held \$3.2 million at the end of March but is now seeking \$3 million through a one-for-two rights issue due to close on July 13.

The asking price is 4c a share, considerably higher than Friday's closing price of 3.3c, but Mr Calandro remains optimistic.

“Feedback so far has been very positive, with the usual caveats that there's support, provided the market doesn't tank,” he said.

He reckons \$3 million will see the company through to June 2014.

First priority will be to advance Saffron and then drill at many other of the company's exploration tenements.

“Potentially, we'll bring Saffron into production while continuing to work on other prospects,” he said.

The aim will be to run a field trial of in-situ leaching at Saffron but first Marmota must conduct thorough

flora and fauna studies and define water usage.

There is a hyper-saline aquifer which would be suitable as process water. Marmota has been working with the Kuyani Aboriginal people on heritage.

Mr Calandro believes the next 18 months will be defining for Marmota. As well as the Junction Dam project being led

by Dan Gray, it has tenements across SA, in WA and a gold joint venture with Ramelius in Nevada.

Clearly highly prospective is its Western Spur iron site northwest of Lake Frome where outcropping hematite has been discovered.

Then it has copper hopes for Melton on the Yorke Peninsula near Rex



Minerals' Hillside discovery. It will target copper-gold at Indooroopilly – near the WA border – in conjunction with a state government PACE grant and at Aurora Tank, near the Challenger goldmine.

Further down the track are uranium at Pundinya in the Woomera Prohibited Area and Rudall East in central-north WA.

Mr Calandro hopes that if and when Junction Dam comes into pro-

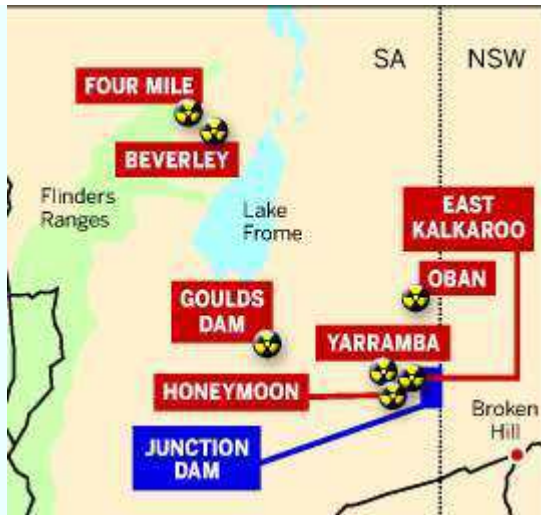
duction it will form part of a suite of uranium mines that together will be regarded as a world-class domain.

Uranium One's Honeymoon is just 10km from Junction Dam and other hopes include East Kalkaroo and Oban, although the latter has been dogged by technical issues.

The author visited Junction Dam as a guest of Marmota Energy

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MODERN MINER:
Marmota Energy's Dan Gray checks out Facebook via satellite link from the base camp in the Saffron prospect in the Junction Dam tenement.

