

NEWS

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Inside The Wire At Australia's Leading Nuclear Facility, The "Guardroos" Watch Over Alkane's Unique Rare Earths Project

By Our Man in Oz

There is nowhere more secure in Australia than Lucas Heights, down in the southern suburbs of Sydney. Not only is it home to Australia's only nuclear reactor, but it's also the site of a myriad of research projects that are rarely seen by the prying eyes of roving reporters. Last week, Minesite's Man in Oz wriggled his way through the security gates - a snug fit for a largish chap - to have a look at an aspect of one project in particular that's starting to attract worldwide interest, and which now looms as surprise upside inside the diversified miner Alkane Exploration. In a tin shed by the back fence, in the grounds of the Australian Nuclear Science and Technology Organisation (ANSTO), and guarded by the Australian Federal Police and a mob of Eastern Grey kangaroos, is proof that the Dubbo Zirconia Project (DZP) is not just alive well - it's kicking.

More than a decade in gestation, the DZP is arguably the most exotic mineral processing venture in Australia. While zirconia - a metal used in a wide variety of chemical and electronic applications - gets a namecheck alongside Dubbo, a town in western New South Wales, the real value in the DZP lies in the suite of other minerals found in its unique orebody. Alongside the zirconia is niobium, used in high strength steels, tantalum, used in electronics, yttrium and other rare earths, all used in electronics and long-life batteries, and last, but not least, uranium.

It's the presence of uranium in the ore which has forced this latest phase of the assessment of the DZP inside ANSTO. The state government of New South Wales, bless its cotton socks, is not only opposed to uranium exploration and mining, it has written an element that's found on every periodic table in every school in the world off the statute books. In New South Wales uranium officially does not exist. Strange, but true. ANSTO, however, is Australian Government land, where uranium does exist, and that's why a team of scientists employed by the mineral research team at Lucas Heights is working to crack the code of the mineral assemblage at Dubbo and to produce a flow sheet which shows profitable products. That'll likely be a combination of a zirconium-hafnium product and a niobium-tantalum product.

For investors wary of the science, take heart. The message garnered by Minesite's Man inside ANSTO is that the DZP not only works, but it's becoming rather exciting. **Alkane** staff shuffle their feet when pressed for commercial details but it's understood that in recent days a large Japanese carmaker has dispatched a team of commodity buyers to see **Alkane** and to inquire whether they can buy all the output of the rare earths to satisfy their company's demand for materials to make specialty batteries for hybrid cars, flavour of the month in a fuel-starved world. The Japanese are keen because their cousins in China have closed the rare earths export gate. The Chinese say they need all of their own neodymium, dysprosium and other "star wars" elements for their own car batteries. That's sparked a stampede for these exotic metals. Toyota, for example, is struggling to meet demand for its high-tech hybrids because of a global battery shortage.

Marketing decisions, however, are further down the track. What's happening inside ANSTO today is pure science, as the boffins in acid-holed jeans and floppy jumpers crawl all over the process they're developing with the aim of producing mineral-rich samples to send to potential customers. Fascinating as the science might be, Minesite's Man on Site was only interested in two things - does the process work, and can **Alkane** show us a bag of it? Yes and yes, are the answers. The demonstration plant works, and handfuls of white powder and soap-like cake can be handled, as long as you wash your hands after (as mother always advised).

To see the DZP demonstration plant in action is an eye-opening experience. It's a shame shareholders in **Alkane** can't do the same, because what they would walk away with is an understanding that their company might be on the cusp of something seriously significant. When the potential of DZP is combined with recent developments in **Alkane's** gold operations it becomes clear why the company's share price has been on an uptrend since March last year, when it bottomed at around A20 cents. Recent trades have been closer to A44 cents, and on Tuesday got as high as A46.5 cents.

A confluence of events is driving **Alkane**. The traditional gold business is making a strong return with the Caloma/Tomingley project, now shaping up as a million ounce deposit, and getting better by the day courtesy of "bonanza" drill hits such as the four metres assaying 293 grams a tonne from the latest hole. In the background lurks something bigger in the shape of the McPhillamys project, where exploration in joint venture with the world's biggest goldminer, Newmont, is ongoing. Drill results from McPhillamys have been remarkable, including one truly spectacular 263 metres grading 1.32 grams a tonne, from a depth of 134 metres.

To put **Alkane** in perspective, here is a small gold company working to get back into production after the closure of its Peak Hill mine, just down the track from Dubbo. Caloma/Tomingley will achieve that objective and get cash coming in the front door. McPhillamys is in the hands of Newmont, but it's hard to imagine the world's biggest goldminer taking its eye off a discovery that's revealing ore-grade intersections nearly a quarter of a kilometre thick. The challenge for **Alkane** is to endure the tortuous decision-making process of a mining major.

And while the gold phase of **Alkane** moves along, the 100 per cent owned DZP is rapidly rising in value. Past attempts to interest outsiders in the project have proved frustrating, which is why **Alkane** tossed A\$3.5 million of its own money at the ANSTO demonstration plant, and the Australian Government a matching A\$3.5 million. The aim is to produce several hundred kilograms of product to show potential customers. Given the world's interest in exotic minerals, especially those which store large amounts of electricity for long periods, this project may well attract the direct participation of a major end user, but one who'll have to pay a price which recognises **Alkane's** decade-long determination to make Dubbo fly.

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