



ASX ANNOUNCEMENT – 8 April 2008

**DEMONSTRATION PILOT PLANT
COMMISSIONING BRINGS WORLD CLASS
DUBBO ZIRCONIA PROJECT CLOSER**

- **The Dubbo Zirconia Project (DZP) is based upon the world class resource of zirconium, hafnium, niobium, tantalum, yttrium and rare earth metals located south of Dubbo in the Central West of New South Wales.**
- **Over several years of process development, Alkane has proved a flow sheet of sulphuric acid leaching, followed by solvent extraction recovery and refining to produce a suite of marketable products.**
- **The DZP's Demonstration Pilot Plant (DPP) has been commissioned at ANSTO Minerals research facilities at Lucas Heights, south of Sydney.**
- **The DPP is designed to test the larger scale continuous flow sheet and process an initial 100 tonnes of ore. It will produce several tonnes of various products for international market assessment.**
- **The plant has already produced and processed several thousand litres of pregnant leach solution. Loaded zirconium strip liquor and niobium-yttrium-rare earth feed streams are ready for further separation and product precipitation.**
- **A recent market update study has confirmed an expanding demand for the products used in ceramic, catalyst, fuel cells, electronics, batteries and permanent magnets, engineering ceramic, and specialty glasses and alloys industries, as well as the nuclear power industry.**
- **Commissioning the DPP represents a significant step forward in moving the project closer to a potential development decision by mid 2009.**

Corporate Profile

Alkane Board

J. S. F. Dunlop (Chairman)

D. I. Chalmers (Managing Dir)

A. D. Lethlean

I. J. Gandel

I. R. Cornelius

L A Colless (Secretary)

Contact

Ian Chalmers

Managing Director

96 Parry Street

PERTH WA 6000

Telephone +61 8 9328 9411

Facsimile +61 8 9227 6011

Email ichalmers@alkane.com.au

Web – www.alkane.com.au

12 month share price range

A\$0.515 - \$0.20

Market Cap 7 April 08

~A\$90 million

ASX Code: ALK

241.6 million shares (Jan 08)

March 2008 Cash

~ \$12.3 million

No debt

Media Relations

Westbrook Communications

Level 1, 17 Castlereagh Street

SYDNEY NSW 2000

Telephone +61 2 9231 0922

Facsimile +61 2 9231 0131

Web – www.westbrookfin.com.au



The Dubbo Zirconia Project (DZP) is located 30 kilometres south of the large regional centre of Dubbo in the Central West Region of New South Wales. The DZP is based upon one of the world's largest in-ground resources of the metals zirconium, hafnium, niobium, tantalum and yttrium, and represents the third biggest defined rare earth resource outside of China (Resources are defined in Annual Reports available on the web site).

Over several years the Company has developed a flow sheet consisting of sulphuric acid leach followed by solvent extraction recovery and refining to produce several products (figure 1). This flow sheet has been trialled to Mini Pilot Plant level, to recover a suite of zirconium chemicals, zirconia, a niobium-tantalum concentrate and a yttrium-rare earth concentrate which are used in the expanding ceramic, catalyst, electronics, batteries and magnets, engineering ceramic, and specialty glasses and alloys industries, as well as the nuclear power industry.

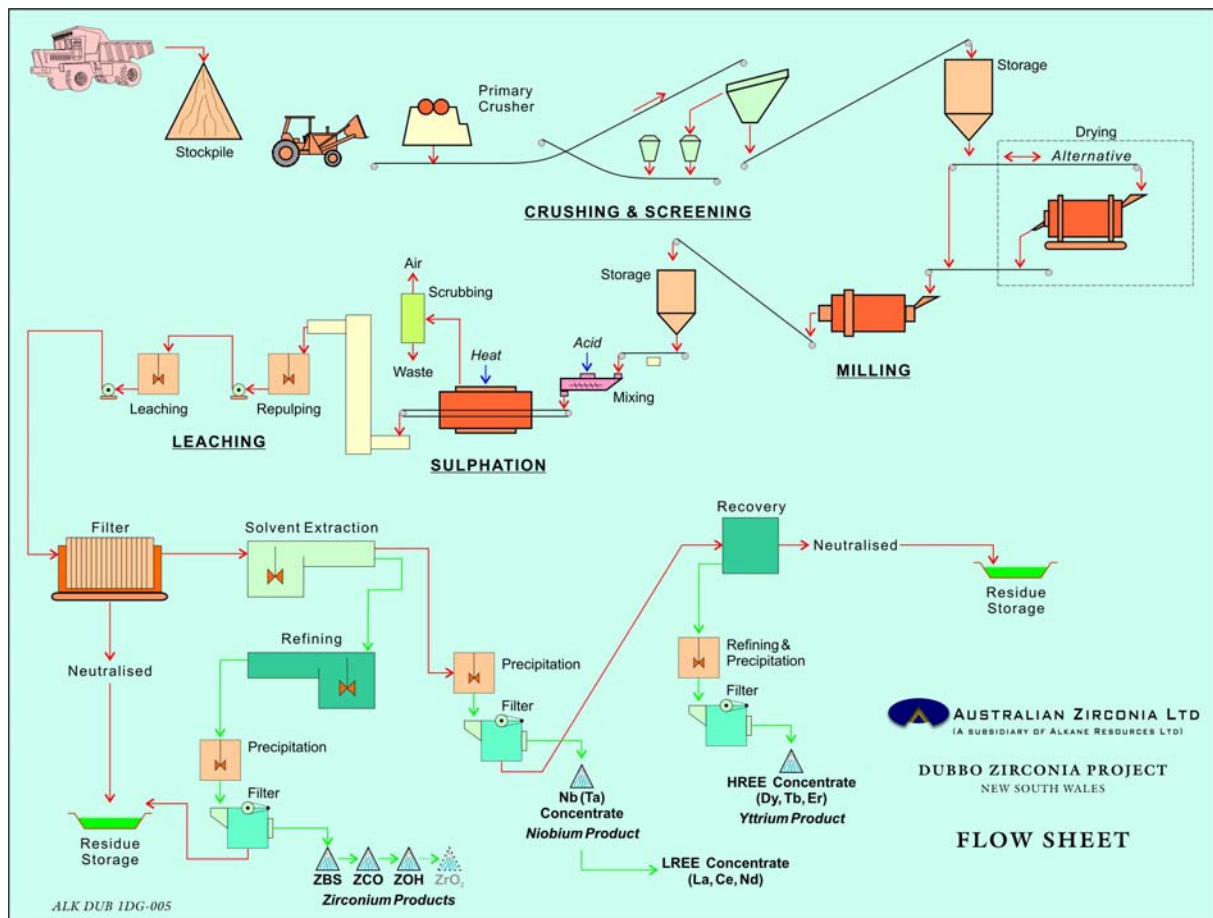


Figure 1

In July 2006 process optimisation and development work commenced at the laboratory facilities of **ANSTO Minerals** at Lucas Heights south of Sydney. ANSTO Minerals is a business unit of the Australian Nuclear Science and Technology Organisation and is one of Australia's premier research facilities.

Construction of the **Demonstration Pilot Plant** (DPP) comprising sulphation, leaching, filtration and solvent extraction stages were recently completed at ANSTO and only the product recovery section remains to be finalised. Initially only the zirconium and niobium products will be recovered while the yttrium and rare earth circuit is tested at laboratory scale prior to inclusion in the DPP.

The DPP was designed for 50 kilogram per hour throughput of ore that has been crushed and ground to specification off site. The plant is planned to test the flowsheet, providing process and engineering data, but most importantly, several tonnes of the various products for distribution to potential end users. The plant is scheduled to be operated for at least six months to process 100 tonnes of ore and



this could be extended to twelve months (additional 100 tonnes) depending upon any process issues and the amount of sample products required to be distributed to potential consumers.

Commissioning of most of the plant has been completed and several thousand litres of pregnant leach solution (PLS) have been collected from the sulphation, leaching and primary filtration phases (figure 1). The recovery of all metals into the PLS has been high and has confirmed that the sulphation process is robust and should readily scale up to a full commercial sized operation. The solvent extraction circuit has also been operated and several hundred litres of loaded zirconium strip liquor has been stored ready for the zirconium product recovery stage. The feed stream from the solvent extraction has also been stored ready for niobium product precipitation, and then future yttrium and rare earth recovery.

Plant Images:



DPP Shed



DPP Shed internal



Alkane Board at rotary kiln (Sulphation)



PLS Filter



Solvent Extraction Circuit



Product recovery - Zirconium and Niobium Ppt



Zirconium product filter

Commissioning the DPP represents a significant step forward in moving the project closer to a potential development decision by mid 2009.

Market Summary

A major review of the current market for DZP products was completed by the Project's consultants, **TZ Minerals International Pty Ltd**, late last year (31 December Quarterly Report) and the study focussed on the three separate product streams of zirconium, niobium and yttrium-rare earth elements.

Current world consumption of **zirconium** products is about 100,000tpa (ZrO_2 equivalent), roughly split 50% each to fused zirconia and zirconium chemicals. The market is very diverse with applications in electronics, ceramics, catalysts, special alloys and glasses, fuel cells, nuclear power and as environmental stable drying agents.

The overall zirconium (+hafnium) chemical and zirconia industries are showing annual growth rates of 8%, while specific areas of the industry, such as advanced ceramics and catalysts, range up to 13%pa. Prices have remained relatively stable after two years of growth and range from around US\$4/kg for basic chemical, through to US\$25/kg for electronic grade zirconia. The expansion of the nuclear power industry will also impact on the zirconium and hafnium metal demand. Nuclear grade zirconium metal and hafnium metal are US\$250 and US\$350/kg respectively.

The dominant use for **niobium** is in ferro-niobium for HSLA steels, and hence demand and pricing have been driven by rapid growth in the steel industry in the last five years, particularly in China and India. 2006/07 consumption was around 80,000 tonnes of Nb_2O_5 equivalent. Average annual growth for the last four years has been near to 14% and an ongoing growth at around 10% is anticipated. During 2007, prices jumped from a recent level base around US\$15/kg to in excess of US\$60/kg. Longer term prices are estimated to range from US\$25 to \$37/kg.

The **yttrium** and **rare earth** industry is also very diverse and products have multiple uses, and hence growth rates vary for individual elements. Overall the rare earth industry has a projected five year growth rate of 12.5% but the use of specific rare earths, such as neodymium, dysprosium and terbium in batteries and permanent magnets is expected to accelerate as these show increasing demand in the developing hybrid and electric car industry.

China currently produces around 90% of the world's consumption of about 117,000 tonnes (as rare earth oxides) and its decision to both restrict export of raw materials and increase the export tax on those rare earths has resulted in a dramatic increase in pricing and demand outside of China. On the basis of current pricing, TZMI indicated that the base value of the yttrium concentrate should be around US\$13/kg and the rare earth concentrate, about US\$8.50/kg. Early in 2008, with further changes in China's rare earth strategy and demand, this price was closer to US\$11/kg.



Using the base case conceptual development of a 200,000tpa ore processing and simple product range of an intermediate zirconium chemical, a niobium-tantalum concentrate and yttrium-rare earth concentrates, TZMI estimated that revenue for the Project would be around US\$42.5 million. The revenue would be closer to US\$52 million if the higher niobium price (US\$37/kg) was achieved.

Forward Program

While the current flow sheet and DPP operation are focussed on the “intermediate” product output, there is considerable scope to improve all products, including further value adding with the production of higher quality products. The ANSTO Division of Materials and Engineering Science (this division developed Synrock for use in safe storage of radioactive waste) is reviewing the zirconium flowsheet to determine the practicality of producing stabilised and advanced zirconias from the existing product stream. These “end” products attract significantly higher prices.

The Dubbo ore deposit contains greater than average yttrium, dysprosium and terbium content than other well known deposits, and ANSTO Minerals is currently reviewing processing options to produce a suite of three products to include yttrium, neodymium with the light rare earths, and dysprosium/terbium with heavy rare earths. This would also result in increased revenue.

Also with increasing demand, particularly with niobium and the rare earths, the potential to increase the start up production rate is significant with the resulting increase in output and revenues. Even at accelerated production rates, the open pit life would be measured in hundreds of years.

Production of uranium remains prohibited in New South Wales but the current flow sheet requires removal of uranium from the zirconium process stream otherwise it contaminates the end products. The uranium recovered by this process would be stabilised and dispersed in to the residue storage facility. The Project would benefit from the flow on effect of less residue management costs and increased revenue from the sale of a uranium product.

Products recovered from the DPP will be distributed to potential consumers around the world for assessment. The data generated from this and the DPP will be used to update the feasibility study. Depending upon the timing of the total DPP operation, the feasibility study could be completed by early 2009.



BACKGROUND

Alkane is a multi commodity explorer and miner with its operations focussed in the **Central West of New South Wales**, centred about 400km northwest of Sydney. Over several years, including experience in developing the Peak Hill Gold Mine, Alkane has built a substantial resource base and is proceeding towards several developments:

The **Tomingley Gold Project** currently has a **606,000 ounce gold resource** within the **Wyoming deposits**, of which 75% is in the Measured and Indicated categories (full details 2006 Annual Report). The recent discovery at **Caloma** could add significantly to the resource base and a substantial drilling program is scheduled to be completed by early 2008 to define this resource. A feasibility study for the development of the deposits is anticipated to be completed late 2008.

The **Dubbo Zirconia Project** is based upon a world class resource of the metals zirconium, hafnium, niobium, tantalum, yttrium and rare earth elements. The deposit also contains significant uranium. Over several years Alkane has developed a flow sheet which can recover a variety of products which have expanding applications in electronics, ceramics, special alloys and glasses, fuel cells, nuclear power and as environmental drying agents and catalysts. A feasibility study is in progress, which includes the construction and operation of a Demonstration Pilot Plant, and a development commitment is anticipated early 2009.

Near **Orange**, the Company has a joint venture (**ODEJV**) with Newmont, one of the world's largest gold miners, which resulted in the discovery in 2006 of a potentially significant gold deposit at **McPhillamys** within the **Moorilda Project**. This discovery includes intersections of 123 metres grading 1.96g/t gold and 77 metres at 1.65g/t gold within a 300 metre by 200 metre mineralised zone. Late in 2007 two deep core holes produced substantial gold intercepts in KPD002 of 225 metres grading 1.16g/t gold and KPD003 with 263 metres at 1.30g/t gold, and within both holes there were several higher grade intervals (e.g. KPD002 51 metres at 1.67g/t gold and 52 metres at 1.55g/t gold; KPD003 26 metres at 3.75g/t gold and 48.7 metres at 2.74g/t gold)

Elsewhere within the region, Alkane has defined a 2 million tonne 1.00% copper Indicated Resource (details 2006 Annual Report) which is being reviewed for its development potential at **Galwadgere** within the **Wellington Project**, and several other advanced exploration projects with encouraging drill intercepts.

In **Western Australia** the Company holds 9 million shares (15.15%) of listed iron ore explorer **BC Iron Limited** and a diluting 25% residual interest in a nickel sulphide joint venture with **Xtrata Nickel (Jubilee)** near **Leinster**.

Mr D I Chalmers, FAusIMM, FAIG, (director of the Company) has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as Competent Person as defined in the 2004 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Ian Chalmers consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.