# **ASX and MEDIA RELEASE**

17 JULY 2013



## ALKANE SIGNS AGREEMENT WITH AUSTRIA'S TREIBACHER INDUSTRIE AG FOR DZP PRODUCTION OF FERRO-NIOBIUM

## DUBBO ZIRCONIA PROJECT (DZP)

- Alkane Resources Ltd, through its wholly owned subsidiary Australian Zirconia Limited (AZL), has signed a Joint Venture Framework Agreement with Treibacher Industrie AG (TIAG). This replaces the MoU announced on 26 October 2011.
- The intended Joint Venture activities are the production and marketing of ferro-niobium (FeNb) using niobium concentrate from the DZP.
- The parties will form a company, initially wholly owned by AZL, to use TIAG's proprietary technology to process DZP niobium concentrate at a facility in Australia (or other agreed location) to produce FeNb.
- TIAG will have the option to purchase 50% of the new company within three years of commissioning of the plant and will have exclusive rights to market the FeNb.
- The Joint Venture expects to produce over 3,000 tonnes of FeNb utilising all of the niobium concentrate produced from the 1 million tonnes per annum development of the DZP.
- At current prices, annual production of FeNb will generate revenue of approximately US\$90 million with AZL's share estimated to be about A\$80 million (depending upon A\$/US\$ exchange rate), which is 16% of total anticipated annual project revenue as determined by the recently completed definitive feasibility study (ASX announcement 11 April 2013).
- AZL will be the only producer of niobium in Australia once production commences in 2016.
- The EIS for DZP was lodged with the NSW Department of Planning and Infrastructure on 28 June 2013 marking the start of the approval process for this State Significant Project.

The following summarises TIAG's obligations under this agreement:

:	IAN CHALMERS, MANAGING DIRECTOR, ALKANE RESOURCES LTD, TEL +61 8 9227 5677
:	NATALIE CHAPMAN, CORPORATE COMMUNICATIONS MANAGER, TEL +61 418 642 556
:	WESTBROOK COMMUNICATIONS, CONTACT: IAN WESTBROOK, TEL +61 2 9231 0922 OR +61 407 958 137
65 Burswood Road, Burswood WA 6100, AUSTRALIA (PO Box 4384, Victoria Park WA 6979, AUSTRALIA) Telephone: +61 8 9227 5677 Facsimile: +61 8 9227 8178	
	www.alkane.com.au mail@alkane.com.au
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- undertake a marketing study of the business, identify potential customers for off-take agreements and determine the design, capital and operating costs of the FeNb facility
- jointly fund and undertake a research project at ANSTO using their specialised knowledge and expertise to optimise the DZP concentrate for production of FeNb
- develop and provide AZL with technology and process design plans for the construction and operation of an FeNb plant
- provide ongoing technical support for the FeNb plant once in operation.

## RARE EARTH OFF-TAKE

Apart from FeNb, TIAG has expressed an interest to purchase from AZL certain separated rare earth products that will be generated through AZL's agreement with Shin-Etsu Chemical Co., Limited of Japan or other processing facility. Any such purchases would be subject to a separate off-take agreement.

## ABOUT TREIBACHER INDUSTRIE AG

Treibacher Industrie AG is a privately owned international metal alloy and chemical products company based in Althofen, Austria. In 1885 Carl Auer von Welsbach invented the gas mantle light and went on to establish Treibacher Chemische Werke in 1898, a company which focused mainly on rare earth products which remain a key part of the company's operations today.

In 1916 TIAG commenced the production of ferro-alloys and in 1969 vanadium oxides, and now produces 6,000 tpa of ferro-vanadium (FeV) and ferro-molybdenum (FeMo).

TIAG has since developed into a leading European company that specialises in the production of advanced materials through its chemical and metallurgical expertise and distributes metals, alloys, ferro-alloys, oxides and non-oxide performance materials to consumers globally, with turnover on 2012 being €451M (>AUD\$600M).

TIAG manufactures alloys with vanadium and molybdenum, while its Recycling Division treats industrial metals from waste product by recycling vanadium, nickel, and molybdenum. TIAG's Hard Metal Powder division produces carbide powders used to manufacture tools and electrical parts, and products from the company's High Performance Ceramics, Rare Earths and Chemicals units are used to manufacture catalysts, special ceramics, electronics and pharmaceuticals.

The global steel industry is the main driver for niobium consumption and about 80% of all niobium produced is used in the manufacture of high strength low alloy steels (HSLA). The niobium is added as ferro-niobium (FeNb) which typically contains 60-70% niobium. About 75% of HSLA steel is used for structural work such as bridge steel and high pressure pipelines followed by automotive use where the steel can provide weight savings of 10% in a standard vehicle.



Niobium is also used to form alloys which are very resistant to high temperature and highly corrosive conditions, and it also has particular electrical conductivity properties which make it suitable for use as a capacitor material in electronic circuits and as a superconductor.

#### **DZP MARKETING UPDATE**

#### Zirconium

Recent marketing trips to Japan, China and Europe have confirmed significant interest in the DZP zirconium output and this interest will be supported by distribution of samples from the demonstration pilot plant (DPP) at ANSTO for testing by potential customers. In all cases, there is a very good appreciation of the strategic significance of the DZP which is independent of the zircon supply chain and traditional downstream suppliers.

The separate but parallel project initiated by AZL for the zirconia (ZrO<sub>2</sub>) development facility established in Perth at TZ Minerals International Pty Ltd's wholly owned AML laboratory has commenced operation. The AZL facility will establish manufacturing pathways and produce a number of samples for customers to evaluate in specific end use applications.

#### **Rare Earths**

AZL's MoU partner Shin-Etsu Chemical is currently focused on improving recoveries of individual rare earth elements from the heavy rare earth concentrate supplied from the DPP.

In anticipation that the toll treatment joint venture with Shin-Etsu will provide AZL with the full suite of separated rare earth oxides, the marketing effort to secure off-take agreements in Europe and Japan for those not required by Shin-Etsu has been advanced.

#### Competent Person

#### Disclaimer

This report contains certain forward looking statements and forecasts, including possible or assumed reserves and resources, production levels and rates, costs, prices, future performance or potential growth of Alkane Resources Ltd, industry growth or other trend projections. Such statements are not a guarantee of future performance and involve unknown risks and uncertainties, as well as other factors which are beyond the control of Alkane Resources Ltd. Actual results and developments may differ materially from those expressed or implied by these forward looking statements depending on a variety of factors. Nothing in this report should be construed as either an offer to sell or a solicitation of an offer to buy or sell securities.

This document has been prepared in accordance with the requirements of Australian securities laws, which may differ from the requirements of United States and other country securities laws. Unless otherwise indicated, all ore reserve and mineral resource estimates included or incorporated by reference in this document have been, and will be, prepared in accordance with the JORC classification system of the Australasian Institute of Mining, and Metallurgy and Australian Institute of Geosciences.

Unless otherwise advised above, the information in this report that relates to exploration results, mineral resources and ore reserves is based on information compiled by Mr D I Chalmers, FAusIMM, FAIG, (director of the Company) who 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 a 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 this report of the matters based on his information in the form and context in which it appear



#### ABOUT ALKANE - www.alkane.com.au - ASX: ALK and OTCQX: ANLKY

Alkane is a multi-commodity company focused in the Central West region of NSW Australia. Currently Alkane has two projects heading towards production in 2014/2016 - the Tomingley Gold Project (TGP) and the nearby Dubbo Zirconia Project (DZP). Tomingley received project approval for its development early 2013 and is scheduled to commence production early 2014. Cash flow from the TGP will provide the funding to maintain the project development pipeline and will assist with the development of the DZP.

The DZP environmental impact statement has been completed and a development decision is anticipated early 2014. This project will make Alkane a strategic and significant world producer of zirconium products and heavy rare earths.

Alkane's most advanced gold copper exploration projects are at the 100% Alkane owned Wellington and Bodangora prospects. Wellington has a small copper-gold resource which can be expanded, while at Bodangora a large 12km<sup>2</sup> monzonite intrusive complex has been identified with porphyry style copper-gold mineralisation. Encouraging gold-zinc mineralisation and alteration associated with a monzonite intrusive, has been identified at Cudal.

