

## Alkane (ALK AU)

(Last price A\$1.70)

**Conviction BUY**

### Alkane DFS

Commodities

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Alkane has released the definitive feasibility study for its flagship Dubbo Zirconium Project (DZP) in central New South Wales. The DZP will produce zirconium products, niobium concentrate and both light and heavy rare earths. The DFS includes full assessment of 400ktpa throughput and preliminary assessment of 1mtpa, noting the company's and customer's preference to pursue the latter. A detailed analysis of the 1mtpa scenario has already commenced and should be completed in the first quarter of 2012. Our analysis assumes the 1mtpa case is adopted as this is almost certain to be the chosen path going forward.

Alkane estimates the 1mtpa scenario project NPV at \$1.2b, or \$4.49/share (8% discount rate). This compares to our previous estimate of \$1.1b, or \$4.03/share (at 10% discount rate). In short, whilst capex is higher than our estimates, opex is lower. Financing options remain highly favourable, with the potential for strategic partners to pay a considerable premium to gain minority involvement in the project and secure off take. The remaining financing is likely to include a mixture of debt, project finance, and equity. We currently assume that \$100m of equity (22% of current market cap) will need to be raised. We emphasise that given the very robust economics of the project; with cash flows of \$300m per annum and a CAPEX payback period of 3 years, the net return to shareholders is not highly sensitive to our dilution scenarios, with equity upside a multiple of the current share price. Following the DFS announcement, we expect further MOUs to be signed in the coming weeks and months covering the remaining off take agreements and financing.

### Key points

#### CAPEX

- » CAPEX was estimated at \$893m, including EPC fees and a conservative 20% contingency fund.
- » This is an 80% or \$350m increase compared to previous guidance taken from scoping studies completed years ago. We estimate approximately \$150m of this is due to 'bad' industry cost inflation. A further \$200m is largely due to 'good' scope and design changes to improve operating margins via higher overall recoveries, a more favourable heavy-to-light rare earth mix, greater plant efficiency, and lower cost. (e.g. Acid recovery plant, rare earth circuit design, and more owner operated equipment)

#### Volume, prices and costs

- » Alkane's volume predictions have improved with better recoveries of REOs. The REO product mix has also improved with the more valuable heavy REOs increasing to 27%. (we had assumed 23%)
- » Pricing assumptions are broadly in line with our estimates and are substantially below current spot prices.
- » Costs are well below our estimates. Alkane predicts average annual operating costs of \$196m, well below our estimate of \$260m based on like-for-like volume assumptions.

(mostly due to improvements as more plant design and implementation work is completed, and the benefits of the capex scope changes)

#### **Off take**

- » To date 3 MOUs have been signed covering off-take agreements of the zirconium products, covering 100% of the 1mtpa output. We expect 100% of the niobium output to be under MOU in the next month.
- » REO off take agreements are expected to take a few more months. This timeframe reflects Alkane's strategic aim to form a joint venture for realising the value added in downstream processing of the REO. We believe a number of potential joint venture partners have shown interest in this scenario and have been conducting test work on Alkane's material. Toll treating the REO is also an option.
- » Working in Alkane's favour is the fact that it has one of the highest proportions of heavy REO of any competitor, and is small enough to be factored into the current and planned processing capacity of existing downstream producers. (i.e. Proven producers)

#### **Financing**

- » In line with the DFS, we anticipate a mixture of financing options to be put in place.
- » A 10% sell down (at the DZP project level) has been suggested for some time. Based on recent market transactions, it is likely that this minority sale would occur at a considerable premium to the overall NPV. We consider a premium of 2-3x possible as producers (ex China) seek to secure supply. This could yield \$250-350m to reduce the capex burden at the parent level.
- » The remaining \$350-450m would be made up of debt and equity. Assuming a debt/equity split of 75/25 we expect an equity raising in the vicinity of \$100m. The terms of this debt are likely to be highly favourable given lending initiatives from countries that deem such projects and products as critical to industry e.g. Japan.
- » The environmental assessment is expected to be lodged by March 2012, with the consent process expected to take up to 6 months (MF view could take up to 12mths given the recent pace of approvals under current Government). Construction is scheduled to begin immediately following approval with commercial production expected from early 2014.

**NOTE:** Alkane also has a good quality portfolio of prospective gold exploration and mining licenses in New South Wales, which we believe are worth circa \$200m at the current stage of development, and will provide steady and diversified cashflow once developed.

**RISKS:** The key risk is in receiving the environmental and social approvals (E-4 expected post September 2012) and successful scaling up of the pilot plant to commercial scale.

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