

5 December 2011

## Alkane Resources

**ALK**

**\$1.02/share**

### Site visit highlights

**BUY**

We conducted a site visit last week to ALK's pilot plant (Sydney) and mining projects in the Central West of New South Wales (Figs. 1-6). The visit reinforced the robust nature of the Dubbo Zirconia Project (DZP) and attractive pro-mining location. Infrastructure is excellent and community support for the project appears strong. We recommend buying ALK with 372% upside to NPV of A\$4.82/share.

#### Dubbo Zirconia Project

- Excellent infrastructure with access to road and rail.
- Appealing location to entice skilled labour/workforce.
- Community support appears strong.
- No native title.
- Majority of land (>80%) secured via call options.
- DZP ore has low level Ur (100ppm) & Th (400ppm).
- ALK management has solid operational experience.
- Plant is modular and designed to be expanded.
- Additional project cost savings have been identified.

#### Funding – several options exist

- Strong interest from offtakers to acquire project equity.
- ALK believe 10% sell-down could provide \$300M cash.
- Strong interest from govt agencies to provide debt.
- Up to \$700M in funding likely from offtakers and debt.
- Newmont reviewing options for McPhillamys (Mar qtr).
- ALK's 49% stake could attract >\$100M.

#### Tomingley Gold

- Production – 50-60kozpa with potential for +80kozpa.
- Reserves / resources – 209koz / 689koz (respectively).
- Mine Life – 7.5 years but up to 12 years potential.
- Strong exploration upside.

#### Peak Hill

- ALK operated Peak Hill from 2002-2006 for 152koz.
- Sulphide resource of 467koz exists below the pit.
- Potential source of cheap sulphur for DZP.

#### Newsflow ahead

- Q1 2012 – Resource/reserve upgrade Tomingley.
- Q1 2012 – Drilling at Dubbo and Bodangora.
- Q1 2012 – Rare earth MOUs.
- Q1 2012 – Tomingley project approval.
- Q2/3 2012 – Dubbo financing.
- Q1/2 2013 – First production Tomingley.
- Q2/3 2014 – First production Dubbo.

#### Company Data

Shares - ordinary	269.0M
Options	0M
Total (fully diluted)	269.0M
Market Cap	\$274.4M
12 month low/high	\$0.79 / \$2.73
Average monthly turnover	\$54.8M

#### Financial Summary (fully diluted) – 1Mtpa rates

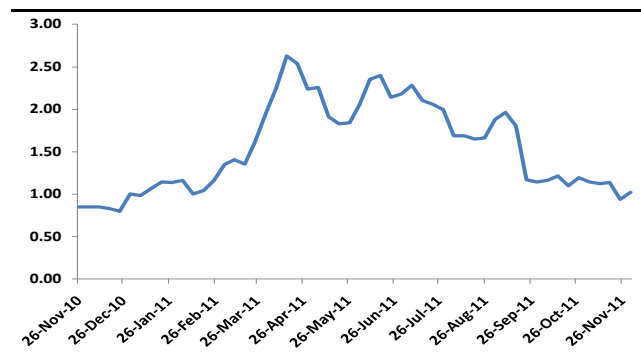
Year end June	2010A	2011F	2012F	2013F	2014F	2015F
Revenue (\$M)	0.2	0.0	0.0	58.2	341.9	617.4
Costs (\$M)	1.5	2.2	2.5	35.1	147.4	253.3
EBITDA (\$M)	-2.1	-2.2	-2.5	23.0	194.5	364.1
NPAT (\$M)	-1.8	-2.3	-14.2	-30.0	74.4	188.9
EPS (¢ps)	-0.7	-0.9	-5.3	-11.2	27.7	70.2
PER (x)	na	na	na	na	3.7	1.5
Cashflow (Gross-\$M)	-1.2	-2.3	-14.2	-19.9	133.5	280.1
CFPS (¢/sh)	-0.5	-0.9	-5.3	-7.4	49.6	104.1
PCFPS (x)	na	na	na	na	2.1	1.0
Enterprise Value (\$M)	244	277	621	1143	1132	873
EV / EBITDA (x)	na	na	na	49.6	5.8	2.4

Substantial Shareholders (FPO)	Shares (M)	(%)
Abbotsleigh	70.9	26.4%

#### Board

Director	Position	Executive	Independent
Ian Chalmers	MD	Executive	-
John Dunlop	Chairman	Non-Exec	Independent
Ian Gandel	Director	Non-Exec	Independent
Tony Lethlean	Director	Non-Exec	Independent

#### Alkane Resources – performance over one year



#### Disclosure and Disclaimer

This report must be read with the disclosure and disclaimer on the final page of this document. Petra Capital was a broker to the issue of 20M shares at \$1.05/share in February 2011, raising A\$21.0M. A fee was received.

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## Analysis

ALKANE RESOURCES (ALK AU) (ALKNY OTQXX) 5-Dec-11 Year End 31 Dec							Share Price (\$) 1.02 Iss. Shares (M) 269.0 Iss. Options (M) 0.0 Mkt Cap. (\$M) 274.4						
PROFIT & LOSS							RESOURCES						
2010A 2011F 2012F 2013F 2014F 2015F							2010A 2011F 2012F 2013F 2014F 2015F						
Sales Revenue \$M 0.0 0.0 0.0 58.2 341.9 617.4							Tomingley Gold (NSW)						
Other Income \$M 0.2 0.0 0.0 0.0 0.0 0.0							Tonnes Mt 11.3 11.3 11.3 10.6 9.6 8.6						
Operating Costs \$M 1.5 2.2 2.5 35.1 147.4 253.3							Grade (gold) g/t 1.8 1.8 1.8 1.8 1.9 1.9						
Exploration \$M 0.8 0.0 0.0 0.0 0.0 0.0							Contained Gold oz 661,212 661,212 661,212 624,078 571,029 517,981						
Other \$M 0.0 0.0 0.0 0.0 0.0 0.0							McPhillamys Gold (NSW)						
EBITDA \$M (2.1) (2.2) (2.5) 23.0 194.5 364.1							Tonnes Mt 91.9 91.9 91.9 91.9 91.9 91.9						
Depreciation & Amort. \$M 0.0 0.0 0.0 10.1 27.2 42.1							Grade (gold) g/t 1.0 1.0 1.0 1.0 1.0 1.0						
EBIT \$M (2.1) (2.2) (2.5) 13.0 167.3 322.0							Contained Gold Moz 2.96 2.96 2.96 2.96 2.96 2.96						
Net Interest \$M (0.3) 0.1 11.7 43.0 61.0 52.1							Dubbo Zirconia (NSW)						
Pre-Tax Profit \$M (1.8) (2.3) (14.2) (30.0) 106.3 269.9							Tonnes Mt 73.2 73.2 73.2 73.2 72.7 71.7						
Tax \$M 0.0 0.0 0.0 0.0 31.9 81.0							Zirconium (ZrO2) % 2.0% 2.0% 2.0% 2.0% 2.0% 2.0%						
Minorities \$M 0.0 0.0 0.0 0.0 0.0 0.0							Niobium % 0.5% 0.5% 0.5% 0.5% 0.5% 0.5%						
Net Profit \$M (1.8) (2.3) (14.2) (30.0) 74.4 188.9							Yt + REE % 0.9% 0.9% 0.9% 0.9% 0.9% 0.9%						
Abnormal \$M 9.6 0.0 0.0 0.0 0.0 0.0							Contained product Mt 2.4 2.4 2.4 2.4 2.4 2.4						
Reported Profit \$M 7.8 (2.3) (14.2) (30.0) 74.4 188.9							ATTRIBUTABLE PRODUCTION						
Dividends Paid \$M 0.0 0.0 0.0 0.0 0.0 0.0							Tomingley Gold oz - - - 34,535 49,335 49,335						
Adjustments \$M 0.0 0.0 0.0 0.0 0.0 0.0							DZP - ZrO2 products t 0 0 0 0 8,036 16,715						
Retained Earnings \$M (16.6) (19.0) (33.1) (63.1) 11.3 200.2							DZP - Niobium t 0 0 0 0 1,617 3,363						
							DZP - LREE t 0 0 0 0 1,713 3,564						
							DZP - YHREE t 0 0 0 0 563 1,171						
							Other t 0.0 0.0 0.0 0.0 0.0 0.0						
							Total - Dubbo t 0 0 0 0 11,929 24,813						
CASH FLOW							REVENUE						
Revenue \$M 0.0 0.0 0.0 58.2 341.9 617.4							Tomingley Gold \$M 0.0 0.0 0.0 58.2 79.5 75.5						
Costs \$M (1.5) (2.2) (2.5) (35.1) (147.4) (253.3)							Dubbo Zirconia \$M 0.0 0.0 0.0 0.0 262.4 541.9						
Net Interest \$M 0.3 (0.1) (11.7) (43.0) (61.0) (52.1)							Other \$M 0.2 0.0 0.0 0.0 0.0 0.0						
Tax Paid \$M 0.0 0.0 0.0 0.0 0.0 (31.9)							Total \$M 0.2 0.0 0.0 58.2 341.9 617.4						
Gross Cash Flow \$M (1.2) (2.3) (14.2) (19.9) 133.5 280.1							COSTS						
Net Capex \$M (1.0) (25.0) (330.0) (501.3) (122.6) (21.9)							Tomingley Gold A\$/oz 0 0 930 930 930 930						
Exploration \$M (7.8) 0.0 0.0 0.0 0.0 0.0							Tomingley Gold \$M 0.0 0.0 0.0 32.1 45.9 45.9						
Dividends \$M 0.0 0.0 0.0 0.0 0.0 0.0							Dubbo Zirconia \$M 0.0 0.0 0.0 0.0 98.0 203.9						
Other \$M 0.2 0.0 0.0 0.0 0.0 0.0							Other \$M 1.5 2.2 2.5 3.0 3.5 3.5						
Free Cashflow \$M (9.9) (27.3) (344.2) (521.2) 11.0 258.2							Total \$M 1.5 2.2 2.5 35.1 147.4 253.3						
Equity Issues \$M 0.0 20.0 0.0 0.0 0.0 0.0							CAPEX						
Net Borrowings \$M 0.0 20.0 350.0 525.0 0.0 (200.0)							Tomingley Gold \$M 2.0 10.0 80.0 1.3 1.3 1.3						
Net Investments \$M 9.6 0.0 0.0 0.0 0.0 0.0							Dubbo Zirconia \$M 0.0 15.0 250.0 500.0 121.3 20.6						
Surplus Cash Flow \$M (0.3) 12.6 5.8 3.8 11.0 58.2							Other \$M -1.0 0.0 0.0 0.0 0.0 0.0						
							Total \$M 1.0 25.0 330.0 501.3 122.6 21.9						
BALANCE SHEET							DEPRECIATION						
Cash \$M 4.6 17.2 23.0 26.8 37.8 95.9							Tomingley Gold \$M 0.0 0.0 0.0 10.1 14.6 14.9						
Other Current \$M 0.4 10.0 10.0 11.6 20.5 43.2							Dubbo Zirconia \$M 0.0 0.0 0.0 0.0 12.6 27.2						
Total Current \$M 5.0 27.2 33.0 38.4 58.3 139.1							Other \$M 0.0 0.0 0.0 0.0 0.0 0.0						
Fixed Assets \$M 2.1 27.1 357.1 848.3 943.6 923.4							Total \$M 0.0 0.0 0.0 10.1 27.2 42.1						
Exploration \$M 39.3 36.0 38.0 38.0 36.0 0.0							EBITDA						
Intangibles \$M 0.0 0.0 0.0 0.0 0.0 0.0							Tomingley Gold \$M 0.0 0.0 0.0 26.0 33.6 29.6						
Other \$M 0.5 0.5 0.5 0.5 0.5 0.5							Dubbo Zirconia \$M 0.0 0.0 0.0 0.0 164.4 338.1						
Total NC Assets \$M 41.8 63.6 395.6 886.8 980.1 923.9							Other \$M -2.1 0.0 0.0 0.0 0.0 0.0						
TOTAL ASSETS \$M 46.8 90.8 428.6 925.2 1,038.4 1,063.1							Total \$M -2.1 0.0 0.0 26.0 198.0 367.6						
Total Debt \$M 0.0 20.0 370.0 895.0 895.0 695.0							HEDGING						
Current Liab \$M 1.1 1.1 1.1 1.1 33.0 82.0							Gold hedged oz 0 0 0 0 0 0						
Non Current Liab \$M 0.2 6.5 8.5 10.1 17.0 3.7							Hedged price US\$/oz 0 0 0 0 0 0						
TOTAL LIAB \$M 1.3 27.6 379.6 906.2 945.0 780.7							Hedged price A\$/oz 0 0 0 0 0 0						
NET ASSETS \$M 45.6 63.2 49.0 19.0 93.4 282.3							Sales hedged % 0% 0% 0% 0% 0% 0%						
SH/HLDRS FUNDS \$M 45.6 63.2 49.0 19.0 93.4 282.3							Ave. deliverable price US\$/oz 1226 1594 1750 1600 1450 1300						
							Ave. deliverable price A\$/oz 1,333 1,526 1,716 1,684 1,611 1,529						
RATIO ANALYSIS							ASSUMPTIONS						
EPS ¢ (0.7) (0.9) (5.3) (11.2) 27.7 70.2							Exchange Rate A\$/US\$ 0.92 1.04 1.02 0.95 0.90 0.85						
PER x na na na na 3.7 1.5							Gold Price US\$/oz 1226 1594 1750 1600 1450 1300						
EPS Growth % 0.8 18.9 509.5 111.7 (348.1) 153.8							Gold Price A\$/oz 1333 1526 1716 1684 1611 1529						
EBITDA per share ¢ -0.8 -0.8 -0.9 8.6 72.3 135.4							Zirconia price US\$/kg 6.00 7.00 11.00 12.00 11.50 11.00						
EBITDA Multiple x -119.3 -124.7 -109.8 11.9 1.4 0.8							LREE Price US\$/kg 35.00 35.00 35.00 55.00 45.00 40.00						
EV/EBITDA x -117.1 -126.0 -248.5 49.6 5.8 2.4							YHREE Price US\$/kg 50.00 110.00 110.00 100.00 90.00 80.00						
CFPS ¢ (0.5) (0.9) (5.3) (7.4) 49.6 104.1							90 day Bank Bills % 4.68 4.95 5.00 5.25 5.25 5.25						
PCFR x na na na na 2.1 1.0							10 Yr Bond rate % 5.38 5.12 5.00 5.50 5.50 5.50						
DPS ¢ 0.0 0.0 0.0 0.0 0.0 0.0							Interest Rate Charged % 5.88 5.62 5.50 6.00 6.00 6.00						
Yield % 0.0 0.0 0.0 0.0 0.0 0.0							VALUATION						
Franking % 0 0 0 0 0 0							ASM A\$ps						
Payout Ratio % 0% 0% 0% 0% 0% 0%							Tomingley Gold 77.1 \$ 0.29						
Gearing D/E % na 4.5 707.8 4,564.0 917.4 212.2							Dubbo Zirconia 1,121.9 \$ 4.17						
Interest Cover x 6.5 na na 0.3 2.7 6.2							McPhillamys 74.0 \$ 0.28						
EBITDA Margin % na na na 39.6 56.9 59.0							Other 10.0 \$ 0.04						
EBIT Margin % na na na 22.3 48.9 52.2							Net Cash (Debt) 13.0 \$ 0.05						
Return On Assets % (4.6) (2.4) (0.6) 1.4 16.1 30.3							Total 1,296.0 \$ 4.82						
Return On Equity % (4.0) (3.7) (28.9) (157.7) 79.6 66.9													
Eff Tax rate % 0 0 0 0 30 30													

Source: Petra Capital

**Figure 1: Project Location Map – Central West New South Wales**

Assets are located  
~400km northwest of  
Sydney with the  
following projects in  
the region:

- Cadia (Newcrest)
- Northparkes (Rio)
- Cowal (Barrick)



Source: Petra Capital

**Figure 2: Dubbo Zirconia Project (DZP)**

The DZP orebody  
outcrops on a hill  
and contains one of  
the world's largest  
known, in-ground  
resources of  
zirconium, niobium,  
yttrium and rare  
earth elements.

Power lines run  
through the  
tenements.



Source: Petra Capital



Strip ratio is extremely low at 0.1:1 reflecting the existence of ore from surface.

**Figure 3: Outcropping DZP ore**



Source: Petra Capital

Around 500t of ore was crushed and stockpiled. The picture shows the remaining 400t after 100t has been processed through the pilot plant.

**Figure 4: Stockpiled DZP ore**



Source: Petra Capital



**Figure 5: Core Shed**

Drill core from the DZP, Tomingley and Peak Hill projects are stored at a central core shed.



*Source: Petra Capital*

**Figure 6: Peak Hill Mine**

ALK operated the Peak Hill gold mine from 2002-2006. A sulphide resource of 467koz exists below the pit.



*Source: Petra Capital*

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