

24 November 2011

Alkane Resources

ALK

\$0.96/share

BUY

Rare earth pricing highlights upside

Despite the recent pullback, rare earth prices remain at levels significantly above our forecasts (Figs. 1-2). Additionally, heavy rare earths are expected to remain in short supply over the long term benefiting ALK given its strong heavy rare earth content (24%) versus peers (1-3%). ALK continues to receive significant interest from several potential customers for long term rare earth offtake. We recommend buying ALK with 406% upside to NPV of A\$4.86/share.

Rare earths market and pricing

- Heavy rare earth prices remain very strong (Figs. 1-2).
- Light rare earths are correcting but remain attractive.
- Petra forecast prices are well below market (Fig. 2).
- Global demand to rise 8%pa to 175ktpa 2015 (Fig. 3).
- Deficits expected for heavy rare earths (Fig.4).
- Light rare earths may come into balance by 2015.

China dominates the rare earth industry

- Supplies 95% of global REE and consumes ~70%.
- Continuing to develop the downstream industry.
- Focussed on job retention and creation.
- REE production and exports are being constrained.
- Consolidation of the industry has commenced.
- Environmental legislation is being enforced.
- China is long light REEs, and short heavy REEs.

Opportunity

- Customers cannot rely on Chinese supply.
- Opportunity for new producers ex-China.
- First mover advantage exists.
- Long lead times required to develop new projects.
- From resource to BFS can take 5-12 years.
- Pilot plant testing essential for commercialisation.

Alkane is in an excellent position to benefit

- Dubbo project enriched in heavy rare earths.
- Pilot plant extensively tested for over 3 years.
- Products successfully produced and tested.
- Strong customer demand from Asia, Europe, America.

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	\$258.2M
12 month low/high	\$0.73 / \$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	24.6	83.1	341.9	617.4
Costs (\$M)	1.5	2.2	15.8	48.9	147.4	253.3
EBITDA (\$M)	-2.1	-2.2	8.8	34.2	194.5	364.1
NPAT (\$M)	-1.8	-2.3	-10.3	-29.9	71.7	187.9
EPS (¢ps)	-0.7	-0.9	-3.8	-11.1	26.6	69.8
PER (x)	na	na	na	na	3.6	1.4
Cashflow (Gross-\$M)	-1.2	-2.3	-6.0	-15.3	130.0	280.6
CFPS (¢/sh)	-0.5	-0.9	-2.2	-5.7	48.3	104.3
PCFPS (x)	na	na	na	na	2.0	0.9
Enterprise Value (\$M)	244	261	698	1215	1110	855
EV / EBITDA (x)	-na	na	79.7	35.5	5.7	2.3

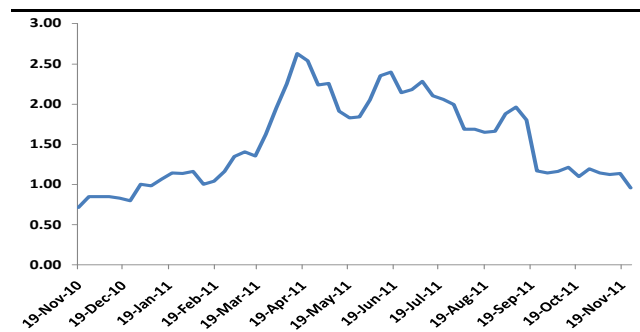
Substantial Shareholders (FPO)

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 OTCQX) 24-Nov-11 Year End 31 Dec							RESOURCES								
PROFIT & LOSS	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	42.3	Grade (gold)	g/t	42.3	42.3	42.3	42.3	42.3	42.3
EBIT	\$M	(2.1)	(2.2)	(2.5)	13.0	167.2	321.9	Contained Gold	Moz	2.96	2.96	2.96	2.96	2.96	2.96
Net Interest	\$M	(0.3)	0.1	15.0	50.3	65.6	54.0	Dubbo Zirconia (NSW)							
Pre-Tax Profit	\$M	(1.8)	(2.3)	(17.5)	(37.4)	101.6	267.8	Tonnes	Mt	73.2	73.2	73.2	73.2	72.7	71.7
Tax	\$M	0.0	0.0	0.0	0.0	30.5	80.4	Zirconium (ZrO ₂)	%	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)	(17.5)	(37.4)	71.1	187.5	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)	(17.5)	(37.4)	71.1	187.5	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 - ZrO ₂ products	t	0	0	0	0	8,036	16,715
Retained Earnings	\$M	(16.6)	(19.0)	(36.5)	(73.8)	(2.7)	184.8	DZP - Niobium	t	0	0	0	0	1,617	3,363
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)	(15.0)	(50.3)	(65.6)	(54.0)	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	(30.5)	Total	\$M	0.2	0.0	0.0	58.2	341.9	617.4
Gross Cash Flow	\$M	(1.2)	(2.3)	(17.5)	(27.3)	128.8	279.6	COSTS							
Net Capex	\$M	(1.0)	(25.0)	(430.0)	(501.3)	(24.7)	(24.7)	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)	(447.5)	(528.6)	104.2	255.0	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	450.0	525.0	(50.0)	(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	350.0	500.0	23.4	23.4
Surplus Cash Flow	\$M	(0.3)	12.6	2.5	(3.6)	54.2	55.0	Other	\$M	-1.0	0.0	0.0	0.0	0.0	0.0
BALANCE SHEET							DEPRECIATION								
Cash	\$M	4.6	17.2	19.7	16.1	70.3	125.2	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	27.4
Total Current	\$M	5.0	27.2	29.7	27.7	90.8	168.4	Other	\$M	0.0	0.0	0.0	0.0	0.0	0.0
Fixed Assets	\$M	2.1	27.1	457.1	948.3	945.7	928.1	Total	\$M	1.0	25.0	430.0	501.3	24.7	24.7
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	495.6	986.8	982.2	928.6	Other	\$M	-2.1	0.0	0.0	0.0	0.0	0.0
TOTAL ASSETS	\$M	46.8	90.8	525.3	1,014.5	1,073.0	1,097.1	Total	\$M	-2.1	0.0	0.0	26.0	198.0	367.6
Total Debt	\$M	0.0	20.0	470.0	995.0	945.0	745.0	HEDGING							
Current Liab	\$M	1.1	1.1	1.1	1.1	31.6	81.4	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	479.6	1,006.2	993.6	830.1	Hedged price	A\$/oz	0	0	0	0	0	0
NET ASSETS	\$M	45.6	63.2	45.7	8.3	79.4	266.9	Sales hedged	%	0%	0%	0%	0%	0%	0%
SH/HLDRS FUNDS	\$M	45.6	63.2	45.7	8.3	79.4	266.9	Ave. deliverable price	US\$/oz	1226	1594	1750	1600	1450	1300
RATIO ANALYSIS							ASSUMPTIONS								
EPS	¢	(0.7)	(0.9)	(6.5)	(13.9)	26.4	69.7	Exchange Rate	A\$/US\$	0.92	1.04	1.02	0.95	0.90	0.85
PER	x	na	na	na	na	3.6	1.4	Gold Price	US\$/oz	1226	1594	1750	1600	1450	1300
EPS Growth	%	0.8	18.9	652.9	113.5	(290.3)	163.6	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	-117.4	-103.3	11.2	1.3	0.7	LREE Price	US\$/kg	35.00	35.00	35.00	55.00	45.00	40.00
EV/EBITDA	x	-117.1	-118.7	-283.4	53.7	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)	(6.5)	(10.1)	47.9	104.0	90 day Bank Bills	%	4.68	4.95	5.00	5.25	5.25	5.25
PCFR	x	na	na	na	na	2.0	0.9	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	Tomingley Gold							
Payout Ratio	%	0%	0%	0%	0%	0%	0%	Dubbo Zirconia							
Gearing D/E	%	na	4.5	985.6	11,764.2	1,101.1	232.2	McPhillamys							
Interest Cover	x	6.5	na	na	0.3	2.5	6.0	Other							
EBITDA Margin	%	na	na	na	39.6	56.9	59.0	Net Cash (Debt)							
EBIT Margin	%	na	na	na	22.3	48.9	52.1	Total							
Return On Assets	%	(4.6)	(2.4)	(0.5)	1.3	15.6	29.3								
Return On Equity	%	(4.0)	(3.7)	(38.3)	(449.1)	89.5	70.2								
Eff Tax rate	%	0	0	0	0	30	30								

Source: Petra Capital

Rare Earth Pricing

Rare earth prices soared in previous quarters reflecting increasing demand coupled with reduced export quotas from China. More recently the extreme prices have resulted in some substitution and recycling of the light rare earths such as lanthanum and cerium. Subsequently prices have retreated from their highs but remain at very attractive levels. Heavy rare earth prices have remained strong and are expected to be in short supply over the long term. Our forecast prices of US\$35/kg for lights and US\$70/kg for heavies are very conservative compared to current prices of US\$101/kg and US\$377/kg respectively.

Figure 1: Rare Earth Pricing (US\$/kg FOB China)

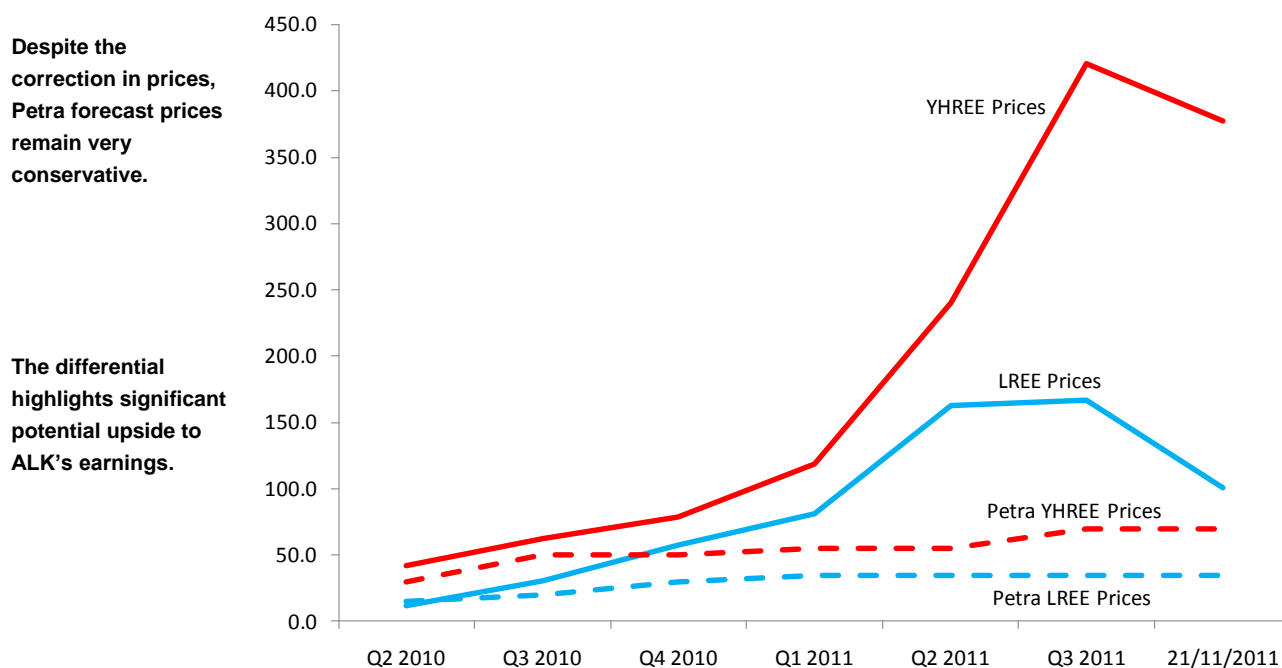
	Q2 2010	Q3 2010	Q4 2010	Q1 2011	Q2 2011	Q3 2011	21/11/2011
Light Rare Earth (LREE)							
Lanthanum	7	26	53	75	138	128	65
Cerium	6	25	50	77	138	126	55
Praseodymium	31	48	77	118	215	242	210
Neodymium	31	50	80	125	253	313	240
Samarium	5	22	34	69	120	128	90
Heavy Rare Earth (YHREE)							
Europium	522	570	625	723	1867	5133	3800
Gadolinium	8	29	44	81	167	192	135
Terbium	545	570	605	693	1767	3967	2820
Dysprosium	197	275	295	405	983	2433	2020
Yttrium	11.4	26	56	93	158	172	130
Dubbo LREE	12.1	30.6	57.2	81.0	163.0	167.2	100.9
Dubbo YHREE	42.2	62.3	78.7	119.0	240.0	421.0	377.3
Petra LREE Fcst	15.0	20.0	30.0	35.0	35.0	35.0	35.0
Petra YHREE Fcst	30.0	50.0	50.0	55.0	55.0	70.0	70.0

Prices remain at very attractive levels.

Around 70% of ALK's product value is tied up in neodymium, yttrium and dysprosium.

Source: IMCOA

Figure 2: Rare Earth Pricing (US\$/kg FOB China)



Source: IMCOA, Alkane Resources, Petra Capital

Rare Earth Market

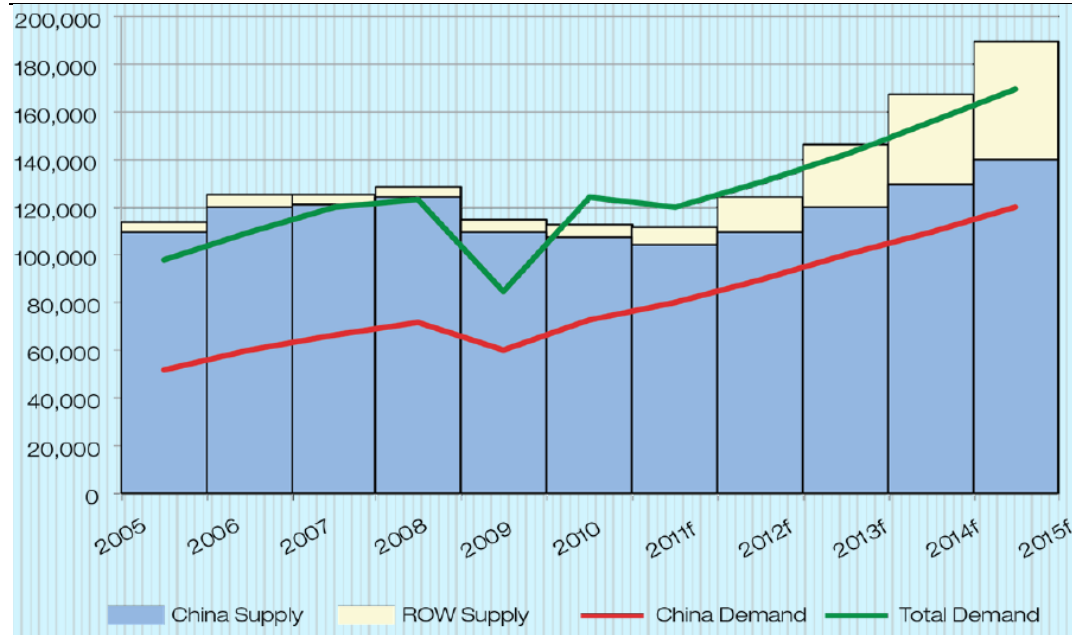
Customers are keen to lock in long term agreements with ALK.

The strategic importance of REE in growing high-tech markets means that developed economies currently dependent on Chinese REE supply are intent on finding alternative supplies. ALK reports the interest in its ability to produce REE concentrates for separation at existing non-Chinese refineries remains intense. Numerous visits to their pilot plant and discussions of partnerships have featured in the development of the REE product and marketing strategy. In the Dubbo Project, over 70% of the REE product value is found in three elements; neodymium (31%), yttrium (25%) and dysprosium (15%). These are all forecast to be increasingly in short supply.

Whilst supply is forecast to exceed demand by 2015, this primarily reflects the increase in light rare earth production from Molycorp and Lynas.

Heavy rare earths are expected to remain in short supply.

Figure 3: Rare Earth Supply and Demand (ktpa)



Source: IMCOA

Figure 4: Supply and Demand (ktpa) for Individual rare earths (2015, ±20%)

Based on IMCOA's forecast: neodymium, europium, terbium, dysprosium, erbium and yttrium are expected to be in deficit.

Rare Earth Oxide	Demand		Supply		Surplus/Deficit	Tonnes
	Tonnes	%	Tonnes	%		
Lanthanum (light)	44,000	25.9%	50,500	27%	Surplus	+6500
Cerium (light)	63,700	37.5%	76,000	40%	Surplus	+12300
Praseodymium (light)	7,500	4.4%	9,250	5%	Surplus	+1750
Neodymium (light)	33,500	19.7%	31,100	16%	Deficit	-2400
Samarium (light)	1,250	0.7%	4,000	2%	Surplus	+2750
Europium (heavy)	750	0.4%	500	1%	Deficit	-250
Gadolinium (heavy)	2,500	1.5%	3,000	0%	Surplus	+500
Terbium (heavy)	500	0.3%	375	2%	Deficit	-125
Dysprosium (heavy)	2,000	1.2%	1,675	0%	Deficit	-325
Erbium (heavy)	1,350	0.8%	900	1%	Deficit	-450
Yttrium (heavy)	12,750	7.5%	11,200	1%	Deficit	-1550
Ho-Tm-Yb-Lu (heavy)	200	0.1%	1,500	6%	Surplus	+1300
Total	170,000	100.0%	190,000	100%		

Source: IMCOA

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