EDISON

Alkane Resources

Q415 results

TGO hits targets, DZP hafnium aids upside

Metals & mining

The Tomingley Gold Operation (TGO) hit its FY15 production target and mining has followed plans with production reconciling well with resource models. Coupled with a significantly weaker Australian dollar and well managed costs, the TGO generated A$23.7m in cash flow in FY15 (after operating and development costs), A$15m of which was invested straight back into the Dubbo Zirconium Project (DZP). In our view, the market's slight negative reaction to Alkane's Q4 results relates to a broad pessimism towards commodities and a view on quarterly financials rather than considering the full-year performance data – which shows the TGO to be a solid, profitable gold mine operating in line with expectations.

Year end	Revenue (A$m)	PBT* (A$m)	EPS* (c)	DPS (c)	P/E (x)	Yield (%)
06/13	100.8	93.2	28.0	0.0	0.8	N/A
06/14	35.5	3.4	(0.4)	0.0	N/A	N/A
06/15e	102.1	6.8	1.3	0.0	17.7	N/A
06/16e	108.8	17.7	3.0	0.0	7.7	N/A

Note: *PBT and EPS are normalised, excluding intangible amortisation, exceptional items and share-based payments.

TGO – production and development in line with plans

FY15 gold production was 69,912oz at an average all-In sustaining cost of production of A$1,249/oz, which compares well to the average FY15 realised Australian dollar denominated gold price of A$1,441/oz. The amount of gold sold was 70,734oz, which was aided by a c 18% weakening of the Australian dollar against the US dollar during FY15. Final quarter production and development followed plan with waste stripping all but completed to allow for Wyoming One to come online during Q216 as mining at Wyoming Three ceases. As stripping completes and grades improve through H116, we expect costs to reduce back to plan at c A$1,000/oz (Q415: A$1,700/oz).

DZP gets TGO cash, keeping funding off market

Development of Alkane's flagship DZP HREE and niobium enriched zirconium project is currently funded via TGO cash flow keeping dilution off market until capex financing of the DZP occurs over the next 12 months. Further pilot plant work is being undertaken on product development with a focus to include hafnium in the product mix. In our view, including this metal could be a significantly positive for the economics of the DZP.

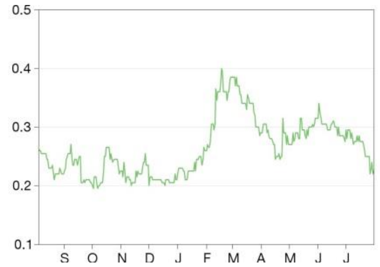
Valuation: DZP hafnium provides upside

Including TGO production data, Q4 cash flow data and moving our valuation forward to FY16, slightly increases our SOTP value for Alkane's shares to A$0.89, (previously A$0.85). For illustrative purposes, we demonstrate a value for 200tpa of potential new hafnium metal production, using a notional 5% and 5% increase in opex and capex respectively, to reflect development costs. On this basis, our DZP only value increases 97% to A$1.34. We view hafnium pilot testing results (now underway and due in Q2 FY16) as pivotal to a re-rating of Alkane's shares.

3 August 2015

Price	**A$0.23**
Market cap	**A$95m**
	US$/A$:0.85
Net cash (A$m)	14.8
Shares in issue	414.2m
Free float	73%
Code	ALK
Primary exchange	ASX
Secondary exchange	OTC-QX

Share price performance



%	1m	3m	12m
Abs	(22.8)	(24.1)	(21.4)
Rel (local)	(23.4)	(19.0)	(21.5)
52-week high/low		A$0.40	A$0.20

Business description

Alkane Resources is a multi-commodity explorer and developer, with projects in the central west region of New South Wales in Australia. Alkane owns the Tomingley Gold Operation (TGO) and Dubbo Zirconium Project (DZP) rare metal and rare earths projects (both 100%). TGO entered production in January 2014 and DZP is currently planned for first production during FY17.

Next events

FY15 audited results	September 2015
DZP bankable study	Q216
Hafnium pilot results	Q216

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‘Free’ hafnium could provide c 33% increase in DZP revenues

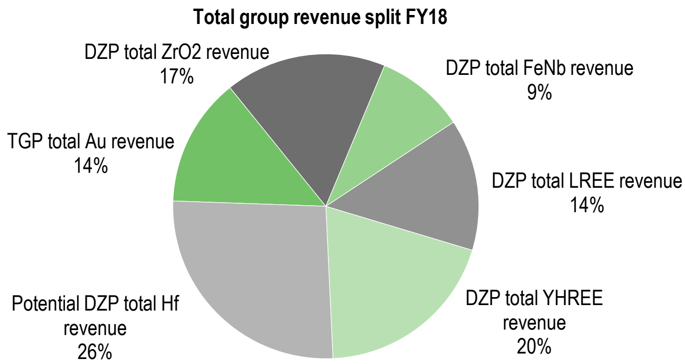
The DZP has been mainly focused on the development of zirconium-based products, ferro-niobium and strategic rare earth element concentrates. However, Alkane is now seriously investigating the potential of hafnium production at the DZP off the back of increased interest from the aerospace industry seen during its FY15 marketing trips to Europe and the US. A glance at the hafnium market indicates a considerable increase of c 37% in the hafnium metal price since late last year and it currently trades at US$1,200/kg with major hafnium producer Areva stating it expects 20-30% growth in aerospace demand (source: Metal-Pages).

Product development at Alkane’s ANSTO research facility in Sydney has historically focused on strategic heavy rare earth elements, zirconium products and ferro-niobium. While the flowsheet required to process DZP ores has been defined and tested over many years and is currently being priced for development by consultants Hatch Engineering, flexibility within the back end of the processing circuits allows for further refinement and development of entirely new products without affecting development timelines. This has been known for many years and was understood during our visit to the ANSTO facility in 2011.

In its Q415 quarterly report, Alkane’s management states long-term hafnium prices in the range of US$600/kg to US$800/kg.

The following exhibit provides our illustrative view of Alkane’s group revenue by commodity including hafnium, for the first year of DZP full production (FY18e).

Exhibit 1: DZP group revenues by product for first full year of production (expected FY18)



Source: Edison Investment Research

Exhibit 1 is based on a A$1,669/oz gold price, an average A$9,000/t for zirconium-based products, A$40,000/t for ferro-niobium, A$25,000/t for light rare earth concentrates and A$125,000/t for heavy rare earth concentrates. We use a long-term hafnium price of A$824/t. All Australian dollar prices are converted on the basis of a long-term US$/A$ exchange rate of 0.85, in line with the April 2013 DZP DFS.

Illustrative view of potential hafnium value

Accurate cost data relating to the feasibility of hafnium production at the DZP is still being prepared by Alkane (we expect this to be announced along with the bankable level feasibility study due during Q216). In the absence of this information, we have taken Alkane’s stated price guidance for hafnium (in its Q415 quarterly report). Note, that as for all DZP end-products, none trade on an open market and the prices fetched for each will be the subject of offtake agreements.

Hafnium within the Toongi deposit (ie the deposit that will be mined at the DZP) is intimately associated with zirconium. Therefore hafnium production is effectively incidental to zirconium production. Also, hafnium is a ‘contaminant’ affecting the quality of the zirconium-based products sold. The removal of hafnium will be within the zirconium refining circuit and will not affect the existing flowsheet. Hafnium production therefore both increases zirconium-based product purity and also provides another revenue stream, diversifying risk into a new distinct growth end market.

Our DZP production model uses cost inputs as detailed in the April 2013 definitive feasibility study. We will revisit our model once Alkane releases the bankable level study during Q216. We note that in the current climate, certain consumable and material costs could reduce due to low demand for mining equipment. Our cost per kilo of product generated at the DZP is US$7 and is in line with Alkane’s guidance of US$7-$8 given in its Q415 quarterly report.

Hafnium production is envisaged at 200t per annum, making the DZP a major producer of the metal once it fully ramps up production (by FY18 on our assumptions). We have tentatively included a hafnium revenue stream into our DZP model. A 200t per annum production rate at a US$700/kg hafnium price equates to US$140m in additional revenues, or based on our pricing assumptions for the DZP basket of goods in FY18, 26% of total group revenues (Exhibit 1). We also consider that the increased purity levels of zirconium production achieved from the removal of hafnium should result in a higher price achieved for zirconium products.

Further, concerning financing, hafnium metal production may provide a portion of the c A$1bn required to develop the DZP, via offtake agreements with aerospace companies.

Hafnium production could significantly positively affect the DZP value

For illustrative purposes only, applying a 5% increase in costs and a 5% increase in development capex and the hafnium revenues as above to our dividend discount value of the DZP, could increase our A$0.68 per share value by a very significant 97% for the DZP to A$1.34.

TGO: Revised mine plan should improve grades in H116

Quarter-by-quarter and full-year production data for the TGO is given in Exhibit 2. There is no significant item in the table that was contrary to the operational plan put in place at the start of the TGO in Q214. Recoveries have followed grade fluctuations as expected, and Alkane has managed its revenues through the use of its Commonwealth Bank of Australia hedge facility. This facility at 30 June 2015 allows Alkane to sell up to 24koz of gold at an average forward price of A$1,577/oz. As we move into FY16 the importance of Alkane’s hedge facility will grow, as we expect the market to intensify its bearish sentiment towards gold.

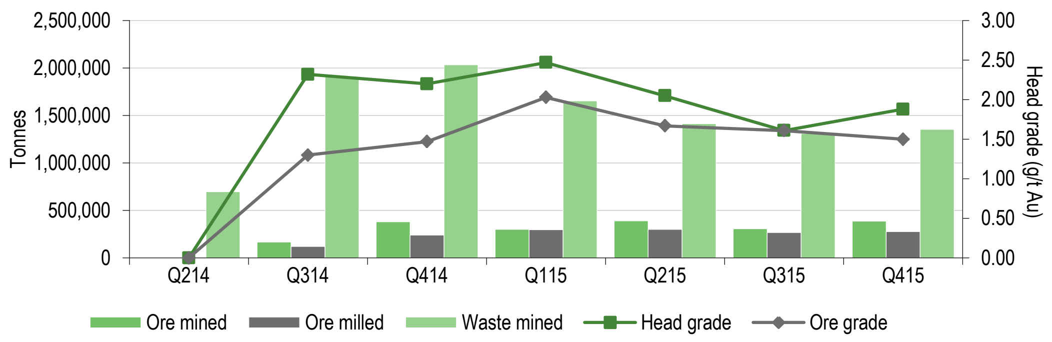
Exhibit 2: TGO quarterly and full year production data

Production		Q115	Q215	Q315	Q415	FY15 (unaudited)
Waste mined	BCM	1,653,357	1,414,557	1,308,783	1,353,965	5,730,661
Ore mined	Tonnes	300,493	389,242	308,504	388,052	1,386,291
Ore grade	g/t	2.03	1.67	1.61	1.50	1.66
Ore milled	Tonnes	296,012	300,971	266,913	276,808	1,140,704
Head grade	g/t	2.47	2.05	1.61	1.88	3.01
Recovery	%	95.4	94.4	93.1	92.0	93.9
Gold recovered	Ounces	22,363	19,175	13,947	14,128	69,612
Gold sold	A$/oz	22,363	16,500	16,000	14,500	70,734
Gold revenue	A$m	33.40	23.50	23.55	21.43	101.883
Implied realised gold price	A$/oz	1,408	1,426	1,472	1,478	1,441
Cost of sales	A$m	19.39	18.70	22.15	24.02	86.95
AISC (C3) operating cost	A$/oz	867	1,116	1,588	1,700	1,249
Operating profit margin	%	72.3	25.7	6.3	(10.8)	23.4
Stockpiles						
Ore for immediate milling	Tonnes	192,966	301,326	374,224	468,032	468,032
Bullion on hand	Ounces	2,938	5,611	3,553	3,169	3,169
Value of bullion on hand	A$m	4.14	8.00	5.23	4.68	4.68

Source: Alkane Resources, Edison Investment Research

Over the first three quarters of FY15 the TGO saw its head grade reduce by c 35% (Exhibit 3) as mining took place through a scheduled lower grade ore zone and progressed deeper away from oxidised material which yields higher gold recoveries.

Exhibit 3: Quarterly production data for the TGO since mining commenced in Q214



Source: Edison Investment Research

We expect grades to improve from their current level (1.88g/t in Q415) as Alkane completes optimisation pit models and resource/reserves statements for the mining of a combined Caloma and Caloma Two open-pit, which should involve greater amounts of oxidised gold ores from Caloma Two (post-stripping) and also from mining at Wyoming One.

Valuation

Factoring in all TGO operational and cash flow data for FY15 results in a value of A$0.14 per share. A$0.04 per share should be added for the cash at end June (A$14.8m) and our base case DZP value of A$0.71 per share for a total SOTP value for Alkane of A$0.89 (A$0.85 previously). Our valuation base has been moved forward from FY15 to FY16.

Financials

Alkane finished FY15 with A$14.8m, a y-o-y decrease of 5.7% (FY14 A$15.7m). This relatively flat cash position y-o-y reflects an 18% weakening in the Australian dollar against the US dollar significantly outpacing the 7.7% decline in the US$-denominated gold price during FY15. It also reflects the use of a hedge facility paying an average forward price of A$1,577/oz during periods of increased gold price weakness. We expect Alkane to fully use its remaining 24koz hedge to maintain cash flows from the TGO throughout FY16. We note it may have the opportunity to strengthen its hedge book as its agreement is with Commonwealth Bank of Australia – a member of its three-strong financing team tasked with funding the DZP. Full year audited accounts are due in September 2015.

Our financing assumptions for the DZP

Alkane's financing team (led by Sumitomo Mitsui Banking Corporation) continues to pursue the A$996.4m initial capex required to bring the DZP to production. Alkane's plan is to sell a small stake in Australian Zirconia (Alkane's wholly owned subsidiary containing the DZP). Alkane is also pursuing Export Credit Agency (ECA) funding, which may provide hundreds of millions of Australian dollars in the form of loans at very low interest rates. These two financing routes would be joined with more conventional debt and equity financing to satisfy the requirement.

Along with the efforts of its financing team, we believe Alkane's continued progress in marketing the DZP suite of products, and specifically establishing commercial offtake agreements with major speciality metal consumers, would trigger the formalisation of certain financing aspects of the DZP (ie attracting ECA funding, bank debt). Further, the announcement of commercial offtake agreements should have a positive effect on Alkane's share price, thereby reducing the risk of financing the equity component of the project. As a result of discussions with management, we understand commercial offtake agreements could occur during H2 CY15.

To develop the DZP we forecast total outlay of A$592m in FY16 (including A$3.6m in TGO capex), followed by A$411m in FY17 to complete the DZP (which includes A$2.7m of TGO capex).

The exact financing structure of the DZP has not been finalised. However, we understand from discussions with management that the financing structure for the total A$996.4m required to develop the DZP could be secured by:

- selling 10% of the DZP through Australian Zirconia to a strategic partner or partners for c A$100m, this could result from Alkane's relationships with its industry partners; and
- raising c A$200m via an equity placement or shareholder issue. For the purpose of our valuation, we have assumed A$194m (gross) is raised at a notional 0.30c per share during FY16, resulting in dilution of a further 647m shares. We expect news concerning the conversion of its MoUs into commercial offtake agreements and on securing debt funding for DZP to act as a positive catalyst to Alkane's share price and potentially limit the dilution of the equity issue.

We estimate that this would leave Alkane with a maximum net debt position in FY17 of A$619m, which equates to a gearing (debt/equity) ratio of 124% and a leverage (debt/debt+equity) ratio of 55%. Alkane is looking to cover this requirement using c A$300m secured via government (termed ECA) loans incurring very favourable interest rates and c A$300m secured via more conventional project financing routes, potentially incurring higher interest rates.

Exhibit 4: Financial summary

A$000s	2013	2014	2015e	2016e
Year end 30 June	IFRS	IFRS	IFRS	IFRS
PROFIT & LOSS				
Revenue	100,753	35,474	102,117	108,816
Cost of Sales	0	(25,692)	(86,945)	(52,115)
Gross Profit	100,753	9,782	15,171	56,700
EBITDA	88,339	3,890	15,458	54,430
Operating Profit (before GW and except.)	88,172	3,890	5,438	17,505
Intangible Amortisation	0	0	0	0
Exceptionals/discontinued	(99,024)	(4,798)	(157)	99,843
Other	0	0	0	0
Operating Profit	(10,852)	(908)	5,281	117,348
Net Interest	4,980	(471)	1,328	223
Profit Before Tax (norm)	93,152	3,419	6,765	17,728
Profit Before Tax (FRS 3)	(5,872)	(1,379)	6,608	117,571
Tax	5,989	(4,893)	0	0
Profit After Tax (norm)	99,141	(1,372)	5,526	17,728
Profit After Tax (FRS 3)	117	(6,272)	6,608	117,571
Average Number of Shares Outstanding (m)	354.6	373.7	413.4	742.0
EPS - normalised (c)	28.0	(0.4)	1.3	3.0
EPS - FRS 3 (c)	0.0	(1.7)	1.6	15.8
Dividend per share (c)	0.0	0.0	0.0	0.0
Gross Margin (%)	100.0	27.6	14.9	52.1
EBITDA Margin (%)	N/A	N/A	N/A	N/A
Operating Margin (before GW and except.) (%)	N/A	N/A	N/A	N/A
BALANCE SHEET				
Fixed Assets	75,365	160,174	168,649	738,108
Intangible Assets	45,278	53,406	67,891	82,376
Tangible Assets	21,093	100,032	94,022	648,996
Investments	8,994	6,736	6,736	6,736
Current Assets	109,057	40,811	31,431	17,612
Stocks	0	15,391	8,490	9,049
Debtors	3,680	4,906	7,148	7,619
Cash	64,294	15,569	14,849	0
Other available for sale financial assets	41,083	4,945	944	944
Current Liabilities	(9,590)	(14,726)	(8,117)	(261,886)
Creditors	(7,735)	(13,755)	(7,146)	(4,283)
Short term borrowings	0	0	0	(256,631)
Other	(1,855)	(971)	(971)	(971)
Long Term Liabilities	(135)	(12,039)	(12,039)	(12,039)
Long term borrowings	0	0	0	0
Other long term liabilities	(135)	(12,039)	(12,039)	(12,039)
Net Assets	174,697	174,220	179,924	481,795
CASH FLOW				
Operating Cash Flow	(12,823)	(3,508)	10,500	50,380
Net Interest	4,980	(369)	89	223
Tax	5,989	0	0	0
Capex	(57,777)	(95,281)	(14,485)	(606,383)
Acquisitions/disposals	10,329	40,534	3,151	100,000
Financing	102,566	9,826	0	184,300
Dividends	0	0	0	0
Net Cash Flow	53,264	(48,798)	(746)	(271,480)
Opening net debt/(cash)	(11,026)	(64,294)	(15,569)	(14,849)
HP finance leases initiated	0	0	0	0
Other	4	73	26	0
Closing net debt/(cash)	(64,294)	(15,569)	(14,849)	256,631

Source: Company Accounts, Edison Investment Research. Note: FY15 results are unaudited and FY16 forecasts include our financing assumptions for the DZP, which may change depending on the success of Alkane's financing.

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