EDISON

Alkane Resources

TGO production update

TGO costs halved, DZP all but gets thumbs up

Metals & mining

Alkane's Tomingley Gold Operations (TGO) gold mine has materially improved in terms of its operational performance quarter-on-quarter. Its all-in sustaining costs of production are down 47% from end year FY14 and upgrades to its resources (up 2.2%) and reserves (up a significant 41%) estimates are positive for the TGO's profitability and mine life. The NSW authorities have conditionally approved the Dubbo Zirconia Project (DZP) (although final clarification is still required and is expected by year-end), which should trigger conversion of MoUs to off-take agreements and, in turn, financing of the project.

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	0.9	N/A
06/14e	25.1	(28.2)	(7.6)	0.0	N/A	N/A
06/15e	111.0	24.1	2.3	0.0	10.4	N/A
06/16e	103.4	16.2	1.5	0.0	16.0	N/A

Note: *PBT and EPS are normalised, excluding intangible amortisation, exceptional items and share-based payments. **18-month period to reflect year-end change to 30 June.

Reserves and ore reconciliations positive for LOM

Alkane has re-calculated its resources and reserves to reflect mining depletion at the TGO so far and converting the Caloma Two resource into reserve. The result is a 2.2% increase in resources from 811.7koz to 829.8koz and a significant 41% increase in the TGO's mineable reserves from 209.1koz to 294.7koz.

DZP gets de-facto approval by the NSW state

The New South Wales (NSW) state government's department of planning and environment has progressed Alkane's application for project approval to the planning assessment commission for final approval. In short, the planning and environmental arm of the NSW state government has conditionally approved the DZP. This protracted process, initiated by Alkane back in June 2013, is the final step to before its flagship project, the DZP, enters the financing and development stage.

Valuation: TGO production offsets revised Au prices

Based on management's guidance we increase our TGO gold production forecast to 74koz for FY15. This is conservative if the July to August production numbers are annualised, which would result in 83koz of gold produced. We revise our gold price assumptions as per page 3 (down an average of 3.9% over the TGO's life-of-mine, LOM) and now assume TGO's all-in sustaining cost of production is maintained at A$900/oz to end FY15 (cf A$1,604 recorded for the TGO's ramp-up period during FY14). Factoring in our revised TGO production profile for FY15 only slightly adjusts our base case valuation to A$0.90 from A$0.91 previously. This comprises A$0.71 for the DZP, A$0.14 for the TGO, A$0.01 for its Regis Resources shareholding and A$0.04 for its cash at end June 2014.

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Price	**A$0.24**
Market cap	**A$99m**

Net cash (A$m) at end June 2014	15.6
Shares in issue	412.5m
Free float	72%
Code	ALK
Primary exchange	ASX
Secondary exchange	OTCQX

Share price performance

%	1m	3m	12m
Abs	2.2	(13.0)	(34.7)
Rel (local)	3.7	(14.4)	(37.8)
52-week high/low		A$0.4	A$0.2

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 (100%) and Dubbo rare metal and rare earths (100%) projects. The former entered production in January 2014 and Dubbo is currently planned for first production on 2016.

Next event

Full year results	September 2014

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TGO production performance

Exhibit 1 shows a historical record of quarterly production metrics for the TGO, with our initial forecast for Q115 based on Alkane's July to August numbers adjusted to quarter-end and the remaining three quarters in FY15. Alkane's management has assisted in guiding our forecasts. At this stage quarter-by-quarter estimates of mine production are incredibly difficult to forecast accurately, especially for mines that are at the start of their life like the TGO. As Alkane releases further quarterly production updates we will update the table to show whether it is on target to meet its 60-70koz gold production target, which at present, it looks set to beat by 4koz of gold.

Exhibit 1: TGO past production and FY15 forecasts by quarter and year-end total

	Units	Q114	Q214	Q314	Q414	Q115	Q215	Q315	Q415	FY14	FY15e
Production											
Waste mined	BCM	N/A	696,788	1,906,377	2,032,519	1,502,578	1,502,578	1,502,578	1,502,578	4,635,684	6,010,313
Implied strip ratio	ratio waste:ore	N/A	N/A	11.53	5.35	5.00	5.00	5.00	5.00	8.50	5.00
Ore mined	Tonnes	N/A	0	165,404	380,146	300,500	300,000	300,000	300,000	545,550	1,200,500
Ore grade	g/t	N/A	0.00	1.30	1.47	2.13	2.13	2.13	2.13	1.42	2.13
Ore milled	Tonnes	N/A	0	120,270	238,826	296,393	266,754	266,754	266,754	359,096	1,184,092
Head grade	g/t	N/A	0	2.32	2.20	2.20	2.20	2.20	2.20	2.24	2.20
Recovery	%	N/A	0.0%	89.8%	92.3%	95.4%	95.4%	95.4%	95.4%	91.4%	95.4%
Gold recovered	Ounces	N/A	0	4,363	16,348	20,000	18,000	18,000	18,000	20,711	74,000
Gold sold	A$/oz	N/A	0	798	15,576	20,000	18,000	18,000	18,000	16,374	74,000
Gold revenue	A$m	N/A	0	1.20	22.10	28.24	25.39	26.86	26.86	23.30	107.337
Implied realised gold price/estimated	A$/oz	N/A	0	1,504	1,419	1,412	1,410	1,492	1,492	1,423	1,452
Cost of sales	A$m	N/A	0	12.24	20.97	18.00	16.20	16.20	16.20	33.22	66.60
AISC (C3) operating cost	A$/oz	N/A	0	2,806	1,283	900	900	900	900	1,604	900
Gross Margin	%	N/A	0	-46.4%	10.6%	56.9%	56.7%	65.8%	65.8%	-11.3%	61.3%
Operating profit margin	%	N/A	0	-90.2%	5.4%	56.9%	56.7%	65.8%	65.8%	-29.9%	61.3%
Stockpiles											
Ore for immediate milling	Tonnes	N/A	0	43,067	185,701	189,808	223,054	256,301	289,547	185,701	289,547
Bullion on hand	Ounces	N/A	0	3,565	4,386	5,000	5,000	5,000	5,000	4,386	5,000
Value of bullion on hand	A$m	N/A	0	5.36	6.22	7.06	7.05	7.46	7.46	6.24	7.26

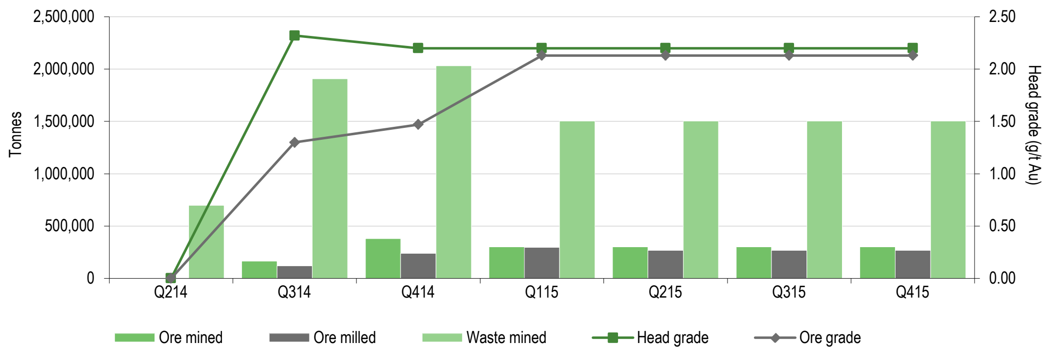
Source: Alkane Resources and Edison Investment Research

Looking at movements over Q414 to Q115 (which corresponds to the first post-ramp up period) indicates a relatively stable volume of ore milled, with a q-o-q increase of 24% recorded. According to Alkane's management, the margin between tonnes mined and milled is set to narrow significantly q-o-q from 37% in Q414 to only 1% in Q115, which is key to the TGO's profitability. Waste tonnages decreased q-o-q by 26%, coinciding with the completion of the ramp up phase at the TGO to its annualised nameplate processing capacity of c 1Mtpa of ore.

Assuming production follows that given in Exhibit 1, we forecast it would be able to sell c 74koz of gold for FY15, equating to A$107.4m in revenue (at our FY15 revised gold price forecast of A$1,452/oz). We have stockpiles accumulating by the margin between ore tonnes mined and tonnes milled. Management has guided that bullion on hand by end FY15 will be around 5koz of gold.

Exhibit 2 shows the TGO's past production and our future quarterly projections to end FY15.

Exhibit 2: Ore mined, milled and associated gold grades



Source: Edison Investment Research

Gold price forecast – revised for actual 2013 US monetary base

Our revised gold price deck is shown in Exhibit 3 below. These numbers are based on the forecast given in our November 2013 sector report Gold – US$2,070 by 2020. However, we have adjusted them for the US monetary base as reported for 2013 and 2014 ytd and Alkane's June financial year end and an implied realised gold price for Alkane's Q115 revenue.

Exhibit 3: Edison's gold price forecasts

USD/AUD exchange rate: 0.90													
Calendar Year	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Gold price (US$/oz)	1,303	1,381	1,334	1,402	1,485	1,474	1,420	1,420	1,411	1,407	1,433	1,466	1,481
Financial Year (ending June)													
Gold price (US$/oz)		1,306	1,357	1,368	1,444	1,480	1,447	1,420	1,415	1,409	1,420	1,450	1,473
Gold price (A$/oz)*		1,452	1,508	1,520	1,604	1,644	1,608	1,578	1,573	1,565	1,578	1,611	1,637

Source: Edison Investment Research

Resources and reserves

Alkane has now included the Caloma Two deposit into its reserve estimate for the TGO, but as yet, has not factored it into any mine plans. However, we expect mining of Caloma Two to combine with the extraction of Caloma after mining the Wyoming and Wyoming Three deposits. Alkane's new resource and reserve statements are given in the following exhibit along with a comparison of the previous estimates.

Exhibit 4: Comparison of previous and current resources and reserves

	Total resources						Total reserves					
Deposit	**2013**			**2014**			**2013**			**2014**		
	Tonnes (Kt)	**Grade (g/t Au)**	**Gold (koz)**	**Tonnes (Kt)**	**Grade (g/t Au)**	**Gold (koz)**	**Tonnes (Kt)**	**Grade (g/t Au)**	**Gold (koz)**	**Tonnes (Kt)**	**Grade (g/t Au)**	**Gold (koz)**
Wyoming One	6,324	1.90	392.4	4,742	2.10	314.1	1,900	1.60	94.5	1,864	1.60	98.4
Wyoming Three	808	1.90	49.9	649	1.70	35.7	500	1.60	28.1	389	1.70	21.4
Caloma	5,453	2.10	369.4	5,909	1.80	335.7	1,200	2.20	86.5	1,928	2.20	136.0
Caloma Two	0	0	0	2,169	2.07	144.3	0	0.00	0.0	239	3.60	27.4
Stockpiles	0	0	0	0	0	0	0	0	0	186	1.90	11.5
Total	12,585	2.00	811.7	13,469	1.92	829.8	3,600	1.80	209.1	4,606	2.00	294.7

Source: Alkane Resources

What is the market's possible view of the DZP's value?

Our standard valuation approach uses a discount rate of 10% to reflect general equity risk. This also allows for broad comparisons to be made between mining companies. However in our sector report Gold – US$2070 by 2020 we consider the implied discount rates applied to our coverage universe by the equity market at any one time to justify their share prices. Please see the sector report for a full explanation of this. In short, this analysis (as of November 2013, the end of the most bearish year in the recent mining cycle) highlighted that a company could expect the following trend in implied discount rates as a project moves from scoping study stage to production from its main asset.

Exhibit 5: Mean discounted dividend flow discount rates by development stage

	Scoping study	PFS	BFS	Development	Ramp-up	Subsidiary production	Production from main asset
Maximum discount rate	69%	66%	64%	62%	60%	57%	55%
Mean discount rate	35%	33%	30%	27%	24%	20%	17%
Minimum discount rate	15%	13%	10%	8%	5%	3%	0%
Difference between maximum and mean discount rate	97.1%	100.0%	113.3%	129.6%	150.0%	185.0%	223.5%
Difference between minimum and mean discount rate	-57.1%	-60.6%	-66.7%	-70.4%	-79.2%	-85.0%	-100.0%

Source: Edison Investment Research sector report Gold – US$2,070 by 2020 page 25

As can be seen from Exhibit 5, the decrease in the mean implied discount rates is slight, at just 2-3% until the main asset of a company enters full production when a significant decrease of 7% in the mean discounted dividend flow discount rate occurs.

Alkane's current share price is c A$0.24. Using the value of the constituents of our base case valuation for the TGO (A$0.14 at 10% discount rate, which is within the lower range of a subsidiary asset in production as per Exhibit 5), Regis Resources' shares (A$0.01) and its cash (A$0.04), implies the market only values the DZP at A$0.05. This value shows the equity market currently applies a 39% discount rate to the project.

Taking the DZP's development stage as equivalent to that of having completed its bankable feasibility study (nearing completion with the detailed front-end engineering design being undertaken by contractors, Hatch), we believe the market could reduce its discount rate for the DZP's value by around 9% from 39% to 30%, which results in a potential market valuation of A$.10. This is a 100% increase over the current implied market valuation of A$0.05 and suggests the market is currently mis-pricing the DZP. This could possibly be due to it being a rare-earth project, albeit one of the most advanced in technical understanding, engineering design, permitting and in securing commercial off-take agreements for all its products.

If Alkane progresses to development, the mean stage discount rate would become 27%. Applying this to our A$2.66 un-risked DZP valuation (A$0.71 at our standard 10% as per our base case valuation), instead implies A$0.13 per share could potentially be added to Alkane's share price.

Note that the difference between the mean and the minimum and maximum discount rates (given in Exhibit 5) for each development stage is very high, which we can assume reflects other risks such as project location, governmental, management, geological, commodity price risk etc.

Financials

In our 13 August 2014 outlook note, Producing gold and Dubbo's prospects intact, we estimated that in FY15 the TGO would produce 70,792 ounces of gold from processing 986,842 tonnes of ore at a head grade of 2.39/gt Au and a metallurgical recovery rate of 93%. Our previous in-house gold price of US$1,507/oz (A$1,604/oz at an A$/US$ forex rate of 0.94) equated to a forecast revenue of A$108.7m and cost of sales of A$52.1m.

Our adjusted gold production target to reflect the TGO's July-August production figures adjusted to end Q115 is 20,000ozs, with our FY15 estimate being 74,000ozs of gold sold. At our revised gold price forecasts this reduces our estimate of Alkane's FY15 total revenue from A$108.7m to A$111.0m. Costs are now A$66.6m based on Alkane maintaining all-in-sustaining costs for the TGO at A$900/oz to end FY15 (previously A$52.1m). Factoring in all other central costs and exploration expenditures, we estimate Alkane will end FY15 with a cash balance of A$17.7m. This is before we apply the following DZP financing assumptions.

Funding the DZP – our assumptions remain unchanged

We forecast total capital expenditure of A$4.2m in FY15 related to the TGO. Then, to develop the DZP we forecast a total 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, from our discussions with management, the financing structure for the 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 up to A$200m; this could be borne of Alkane's relationships with its industry partners; and
- raising the rest (A$196.4m) via an equity placement. For our valuation we have assumed this is raised at 0.30c a share, resulting in dilution of a further 655m shares. However, we expect news concerning DZP's approval process and converting its MoUs into commercial off-take agreements and on securing debt funding for DZP to act as a positive catalyst to Alkane's share price.

This would leave Alkane with a maximum net debt position in FY17 of A$513m, which equates to a gearing (debt/equity) ratio of 85% and a leverage (debt/debt+equity) ratio of 46%. 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 6: Financial summary

A$'000s	2013 (18 months)	2014e	2015e	2016e
Year end 30 June	IFRS	IFRS	IFRS	IFRS
PROFIT & LOSS				
Revenue (includes FY13 gain on sale of investments)	100,753	25,095	110,973	103,428
Cost of Sales	0	(33,217)	(66,600)	(52,115)
Gross Profit	100,753	(8,122)	44,373	51,312
EBITDA	88,339	(26,851)	23,882	47,015
Operating Profit (before GW and except.)	88,172	(30,035)	20,496	16,725
Intangible Amortisation	0	0	0	0
Exceptionals/discontinued	(99,024)	(498)	(498)	(498)
Other	0	0	0	0
Operating Profit	(10,852)	(30,533)	19,998	16,227
Net Interest	4,980	1,795	3,557	(500)
Profit Before Tax (norm)	93,152	(28,240)	24,053	16,225
Profit Before Tax (FRS 3)	(5,872)	(28,738)	23,555	15,727
Tax	5,989	0	0	0
Profit After Tax (norm)	99,141	(28,240)	24,053	16,225
Profit After Tax (FRS 3)	117	(28,738)	23,555	15,727
Average Number of Shares Outstanding (m)	354.6	373.7	1,067.2	1,067.2
EPS - normalised (c)	28.0	(7.6)	2.3	1.5
EPS - FRS 3 (c)	0.0	(7.7)	2.2	1.5
Dividend per share (c)	0.0	0.0	0.0	0.0
Gross Margin (%)	100.0	-32.4	40.0	49.6
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	162,532	173,807	745,415
Intangible Assets	45,278	57,915	67,915	77,915
Tangible Assets	21,093	104,617	105,892	667,500
Investments	8,994	0	0	0
Current Assets	107,836	24,572	426,464	21,302
Stocks	0	1,942	8,951	8,619
Debtors	3,680	1,635	7,536	7,256
Cash	63,073	15,569	404,550	0
Other available for sale financial assets	41,083	5,427	5,427	5,427
Current Liabilities	(9,590)	(4,585)	(7,329)	(157,759)
Creditors	(7,735)	(2,730)	(5,474)	(4,283)
Short term borrowings	0	0	0	(151,620)
Other	(1,855)	(1,855)	(1,855)	(1,855)
Long Term Liabilities	(135)	(135)	(135)	(135)
Long term borrowings	0	0	0	0
Other long term liabilities	(135)	(135)	(135)	(135)
Net Assets	173,476	182,383	592,808	608,823
CASH FLOW				
Operating Cash Flow	(12,823)	(4,374)	13,506	46,228
Net Interest	4,980	1,795	3,557	(500)
Tax	5,989	0	0	0
Capex	(57,777)	(95,259)	(14,662)	(601,898)
Acquisitions/disposals	10,329	40,534	0	0
Financing	102,566	9,800	386,580	0
Dividends	0	0	0	0
Net Cash Flow	53,264	(47,504)	388,981	(556,170)
Opening net debt/(cash)	(9,804)	(63,073)	(15,569)	(404,550)
HP finance leases initiated	0	0	0	0
Other	4	0	0	0
Closing net debt/(cash)	(63,073)	(15,569)	(404,550)	151,620

Source: Company accounts, Edison Investment Research

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