



## QUARTERLY REPORT TO 30 SEPTEMBER 2011

(ASX : ALK) (OTCQX : ANLKY)

### HIGHLIGHTS

#### ➤ DUBBO PROJECT – DFS and TWO NEW MOUs COMPLETED

- The completed Definitive Feasibility Study (DFS) is being expanded to incorporate the larger 1Mtpa development project, with the overall project time frame unaltered.
- The study indicates the intended 1Mtpa development returns an EBITDA of A\$6 billion and NPV of A\$1.2 billion for an initial 20 year mine life.
- Two new MOUs signed to complete 100% sale of zirconium product output and 100% sale of niobium product output, accounting for 61% of total project estimated annual income of about A\$500M.

	Zirconium	Niobium	LREE	YHREE
100%	Estimated to be 39% of total revenue	Estimated to be 22% of total revenue	Anticipated to be 21% of total rev	Anticipated to be 18% of total rev
75%				
50%				
25%				
0%				

- Negotiations are continuing with a number of parties expressing interest in signing MOUs for the heavy rare earth concentrate and the light rare earth concentrate.
- Despite some recent weakness in certain light rare earth products, overall DZP prices remain strong and at levels above the DFS, with zirconium and heavy rare earth prices expected to continue to increase.
- **TOMINGLEY GOLD PROJECT–ADDITIONAL RESOURCE POTENTIAL**
- RC drilling at Caloma Two produced multiple high grade gold intercepts and the resource potential is being assessed.
- RC drilling within the Caloma deposit proposed open pit also generated several significant intersections. These are being incorporated into the geological model and revised resources and reserves will be calculated.
- Early EPCM works initiated to minimise potential for delays to development.
- The NSW Government has offered infrastructure financial support for the development of the TGP.

### Corporate Profile

Alkane Board  
 J S F Dunlop (Chairman)  
 D I Chalmers (Managing Dir)  
 A D Lethlean (Director)  
 I J Gandel (Director)  
 L A Colless (Joint Secretary)  
 K E Brown (Joint Secretary)

Contact  
 Ian Chalmers  
 Managing Director  
 Email: [ichalmers@alkane.com.au](mailto:ichalmers@alkane.com.au)

12 month share price range  
 A\$0.65 - \$2.73

Market Cap 26 October 2011  
 ~A\$305 million

ASX Code: **ALK**  
 269 million shares

OTCQX Code: **ANLKY**  
 ADR ratio 1:10

30 September 2011  
 Cash ~A \$13.2 million  
 No debt

Senior Management  
 Terry Ransted – Chief Geologist  
 Mike Sutherland – GM NSW  
 Tony Wright – Commercial Manager  
 Alister MacDonald – DZP Marketing

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## NEW SOUTH WALES

### TOMINGLEY GOLD PROJECT (TGP) - gold

Alkane 100%

The TGP is located in the Central West of New South Wales, about 400 kilometres northwest of Sydney. The TGP is based on three gold deposits located 14 kilometres north of the Company's Peak Hill Gold Mine (Figure 1). Identified Mineral Resources, excluding the recent drilling, total 660,000 ounces of gold (*ASX Reports dated 25 March 2009 and 2 October 2009*) and a Definitive Feasibility Study (DFS) was completed late 2010 (*ASX Report dated 13 December 2010*).

Noah's Rule Pty Ltd is advising the Company on the appropriate financing strategies for the development of the TGP and as reported in the ASX Announcement of 20 April 2011, Alkane granted a mandate for Credit Suisse (CS) to act exclusively as arranger and underwriter in respect of a Project Loan Facility and associated Gold Hedging Facility for use in the construction, start-up and operation of the TGP development. This financing will indicatively comprise of a Project Loan Facility of up to **A\$45 million** and a Gold Hedging Facility of up to **163,000 ounces**. Alkane has entered into an initial 90,000 ounce gold forward sale that will underwrite a minimum price of approximately A\$1,600 per ounce for the first two and a half years of production from the Project.

The Environmental Assessment (EA) for the project is proceeding slowly through the "review for adequacy" stage with the NSW Department of Planning and Infrastructure, but the Company remains optimistic that it will go on public exhibition shortly, with formal approval anticipated by the end of the year.

The Compass Resources Limited (subject to Deed of Company Arrangement) (Receivers and Managers Appointed) royalty remains unresolved.

### Exploration

As advised in ASX Announcements of 17 August and 4 October 2011, RC drilling tested the Caloma Two deposit for resource potential and the main Caloma deposit to improve the resource status. The drilling comprised 13 holes for 2,100 metres at Caloma Two and 69 holes for 6,756 metres at Caloma.

Significant mineralisation was intersected at Caloma Two, which is located about 250 metres south of the planned Caloma open pit, confirming a total strike length of at least 300 metres. The mineralisation is located in three vertically dipping, east-west structures within an 80 metre wide corridor hosted by andesitic porphyry, but there is also evidence of internal linking veins and mineralisation associated with a contact of the porphyry with a sediment wedge within the porphyry. The mineralisation remains open down dip, and is covered by approximately 30 metres of transported clay in the west which thins to less than 10 metres on the east.

Caloma Two results are summarised in Table 1 below:

HOLE NO.	INTERSECTION
PE667	15 metres grading 4.13g/t gold from 48 metres
PE672	9 metres grading 4.35g/t gold from 76 metres
PE673 including also	10 metres grading 19.95g/t gold from 92 metres 4 metres grading 38.93g/t gold from 93 metres 14 metres grading 2.40g/t gold from 214 metres
PE689	5 metres grading 9.07g/t gold from 51 metres



At Caloma the drilling was within the current planned open pit and was designed to raise Inferred Resources to Indicated and increase the ore reserves available for the mining model. The drilling confirmed that the Caloma deposit consists of a series of shallow west dipping mineralised structures within the steep west dipping feldspar porphyry host. These structures trend north-south over a strike length of 500 metres and range in width from a few metres to in excess of 20 metres, and appear to extend across the full width of the porphyry. The new drilling data is being incorporated into the geological model to estimate revised resources and reserves.

Caloma results are summarised in Table 2 below:

HOLE NO.	INTERSECTION
PE715 including	13 metres grading 4.44g/t gold from 50 metres 4 metres grading 11.05g/t gold from 51 metres
PE716 including	17 metres grading 3.05g/t gold from 51 metres 3 metres grading 7.38g/t gold from 64 metres
PE726 including and	23 metres grading 3.54g/t gold from 55 metres 2 metres grading 10.13g/t gold from 55 metres 2 metres grading 10.32g/t gold from 72 metres
PE727 and including	7 metres grading 9.08g/t gold from 50 metres 2 metres grading 7.70g/t gold from 72 metres 23 metres grading 2.29g/t gold from 80 metres 4 metres grading 8.72g/t gold from 80 metres
PE739B including and including	6 metres grading 16.69g/t gold from 36 metres 2 metres grading 34.50g/t gold from 37 metres 14 metres grading 4.48g/t gold from 139 metres 3 metres grading 14.66g/t gold from 146 metres
PE755 including and including and including	24 metres grading 1.81g/t gold from 114 metres 3 metres grading 4.08g/t gold from 132 metres 6 metres grading 4.33g/t gold from 198 metres 3 metres grading 7.62g/t gold from 201 metres 18 metres grading 2.03g/t gold from 237 metres 3 metres grading 8.29g/t gold from 237 metres
PE755	18 metres grading 4.14g/t gold from 6 metres

### *EPCM – Early Works Program*

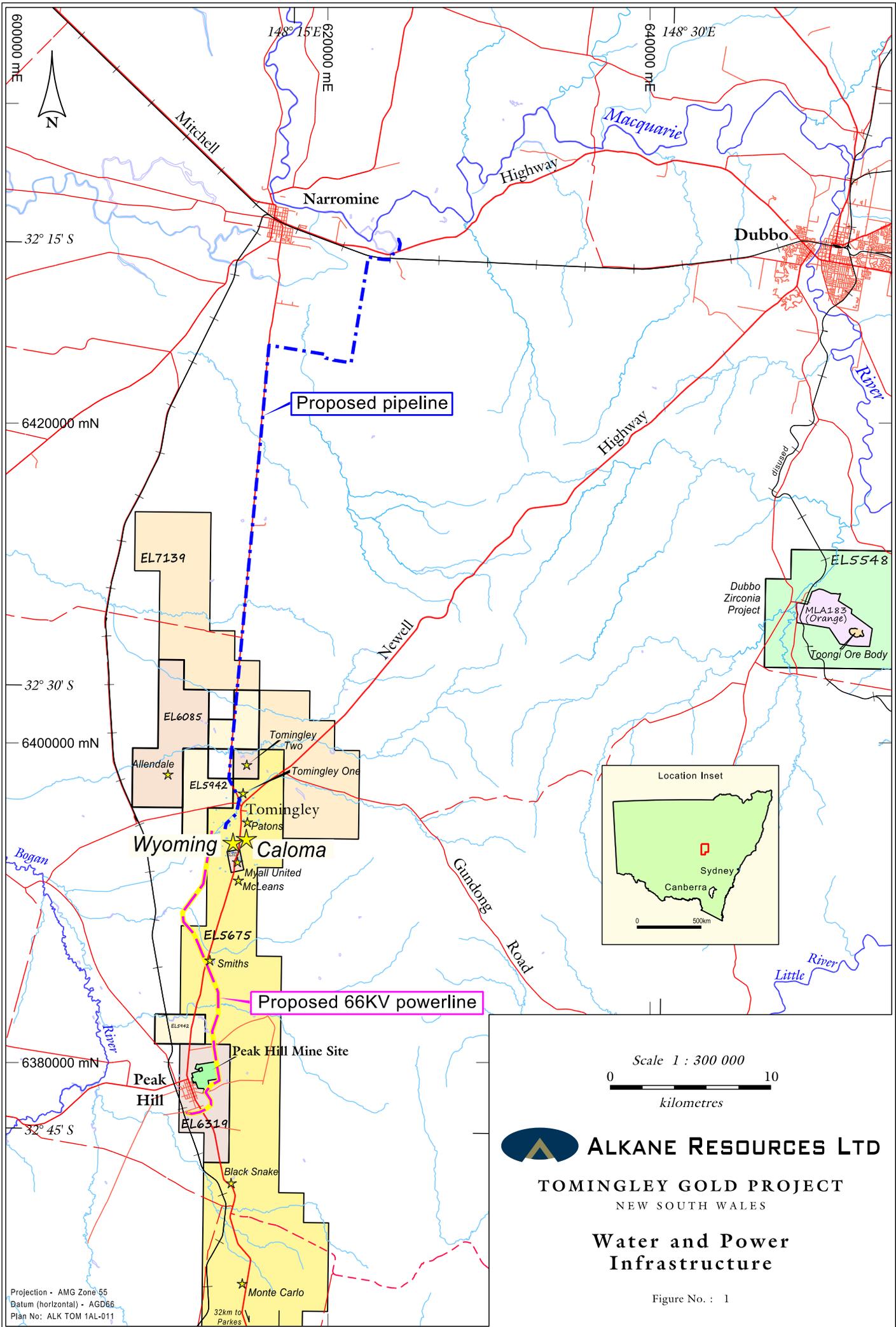
In an effort to accelerate the construction timetable, a number of programs have been initiated to minimise any potential delays in the acquisition of long lead time items. These include:

- exercise of an option to acquire a 1,000ML Water Access Licence;
- placement of an order for the ball mill;
- letting of a contract for the water pipeline;
- preparation of an order for the power transformers; and
- issue of tender documents for the site civil works.

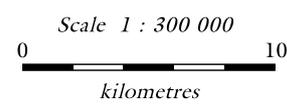
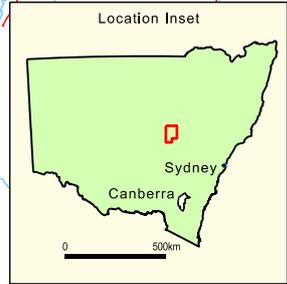
### *Infrastructure Support from the NSW State Government*

As advised in the ASX Announcement on 18 October 2011, Alkane signed a Deed of Agreement with the **NSW Department of Trade and Investment, Regional Infrastructure and Services (DTIRIS)** to receive financial assistance for infrastructure in the development of the Tomingley Gold Project (TGP).

This assistance by the Government of New South Wales forms part of its objective to promote economic development in regional NSW. The assistance is for a proportion of the total water and power infrastructure cost budgeted at \$9.7M, subject to formal development approval. At the end of the mine life, the water pipeline and upgraded electricity supply will remain and will provide sustainable alternate development opportunities for the local community.



Projection - AMG Zone 55  
 Datum (horizontal) - AGD66  
 Plan No: ALK TOM 1AL-011



**ALKANE RESOURCES LTD**  
**TOMINGLEY GOLD PROJECT**  
 NEW SOUTH WALES  
**Water and Power Infrastructure**

Figure No. : 1



## DUBBO ZIRCONIA PROJECT (DZP) – zirconium, niobium, yttrium, rare earth elements

Australian Zirconia Ltd (AZL) 100%

The Dubbo Zirconia Project (DZP) is located 30 kilometres south of the large regional centre of Dubbo (Figure 1) in the Central West Region of New South Wales. The DZP is based upon one of the world's largest in-ground resources of the metals **zirconium, hafnium, niobium, tantalum, yttrium, and rare earth elements**. Over several years the Company has developed a flow sheet consisting of sulphuric acid leach followed by solvent extraction recovery and refining to produce several products.

The **Demonstration Pilot Plant (DPP)** has been operating at the laboratory facilities of **ANSTO Minerals** at Lucas Heights south of Sydney since May 2008 and to date has recovered substantial quantities of zirconium products and niobium concentrate. The DPP has continued to operate for short periods to trial engineering and process innovations, and has also demonstrated recovery of an yttrium rich heavy rare earth concentrate and a light rare earth concentrate.

### *Definitive Feasibility Study – DFS*

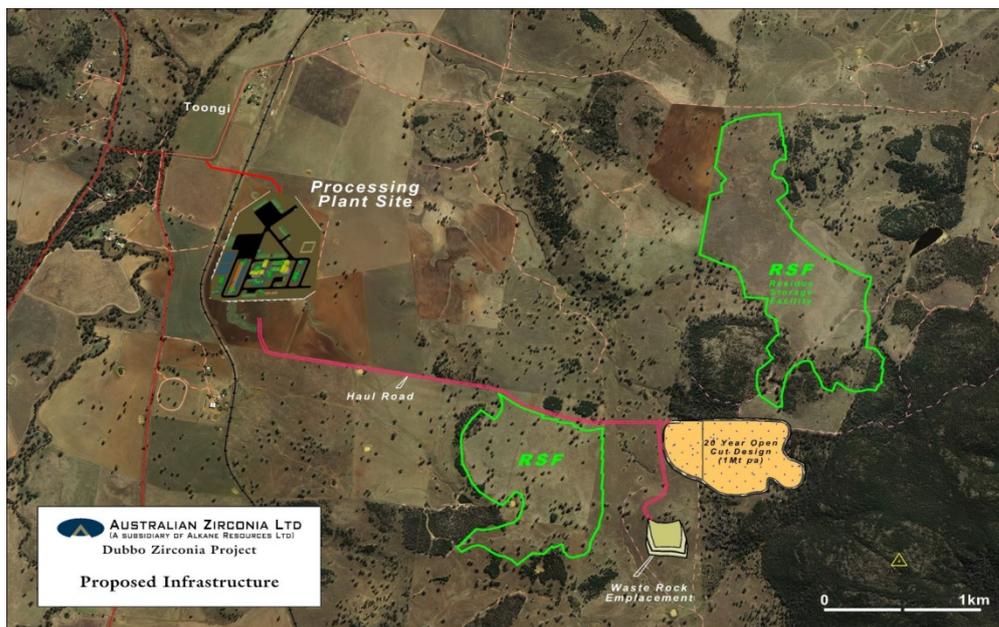
The DFS results were summarised in ASX Announcement of 19 September 2011. The study was prepared by TZ Minerals International Pty Ltd (TZMI) with input from Alkane personnel and specific industry consultants.

TZMI compiled the information and opinion in the study from a combination of sources. A principal source of information was the September 2002 document prepared by SNC Lavalin Australia (SNC). The current study has been essentially an update of the SNC 2002 report, having regard for recent test work, scale changes, and movements in costs from 2002 up to 2011. The project was set at 400,000 tonnes per annum throughput but now also includes recovery of rare earth element (REE) concentrates and an onsite sulphuric acid plant which were not included the 2002 study.

Product volumes have been calculated from recovery data based on results from the DPP. Prices for the suite of products were supplied by specialist marketing consultants, Technical Ceramic Marketing Services Pty Ltd (TCMS) and the Industrial Mineral Company of Australia Pty Ltd (IMCOA).

**The planned processing facility is a unique development using novel process technology that has been developed for the specific characteristics of the Dubbo orebody.**

**Figure 2 Proposed Site Infrastructure**





As a result of the dramatic changes in the market for the DZP's products since the DFS was initiated, TZMI reviewed the impact of starting the project at 1 million tpa of ore processed. Much of the review has employed typical 'scaling' factors for the capital cost. While some operating costs are proportional to production, such as reagent consumption, others are unchanged by the scale (labour numbers for example).

The headline project attributes at the higher scale are shown in Table 3 below, with the 400,000tpa results summary for comparison. The increased scale at 1 million tpa has significant financial benefits given that both operating and capital costs are proportionately lower than the 400,000 tpa case.

In order to gauge the impact of increasing scale to 1 million tonnes of ore processed per year, TZMI also made some projections of current test work initiatives and assumed certain results from these would adjust the process.

Five roaster kilns (two in the base case) have been assumed, otherwise all other process plant has been scaled up for the higher throughput, with anticipated capital cost scale benefits. Minor additions were made to the operating staff numbers. Site infrastructure such as workshops, offices, laboratory and maintenance workshops are assumed to be unchanged by the scale increase.

Most reagent consumption is proportional to the throughput rate of ore and is scaled accordingly from the 400,000 tpa case.

**Table 3 Financial Comparison for 20 year project**

<b>DUBBO ZIRCONIA PROJECT</b>		
<b>Financial Summary</b>		
<b>Project Capacity</b>	<b>400,000 tonnes pa</b>	<b>1,000,000 tonnes pa</b>
<b>Capex – Plant<sup>1</sup></b>	<b>\$278M</b>	<b>\$543M</b>
<b>Infrastructure + Owners</b>	<b>\$84M</b>	<b>\$165M</b>
<b>SUB TOTAL</b>	<b>\$362M</b>	<b>\$708M</b>
<b>EPCM</b>	<b>\$36M</b>	<b>\$43M</b>
<b>Contingency</b>	<b>\$72M</b>	<b>\$142M</b>
<b>TOTAL</b>	<b>\$470M</b>	<b>\$893M</b>
<b>Revenue</b>	<b>\$189M</b>	<b>\$505M</b>
<b>Operating Costs</b>	<b>\$97M</b>	<b>\$196M</b>
<b>EBITDA<sup>2</sup></b>	<b>\$92M</b>	<b>\$309M</b>
<b>IRR<sup>3</sup></b>	<b>16.8%</b>	<b>30.2%</b>
<b>NPV<sup>4</sup></b>	<b>\$181M</b>	<b>\$1,200M</b>

<sup>1</sup> Includes acid plant; <sup>2</sup> Annual average after ramp up; <sup>3</sup> 20 year life pre-tax; <sup>4</sup> 20 year after tax; US\$:A\$ Exchange rate 0.85; Numbers have been rounded

The EPCM and Contingency costs which are not fixed but were scaled according to industry standards, account for over 20% of the total estimated development capital and may not fully apply.



### **Market Developments – MOU's**

A third non-binding Memorandum of Understanding (MOU) was signed to form a joint venture to market zirconium products in Europe, North America, and other defined markets. The partner is a leading European manufacturing and trading company specialising in advanced ceramic materials and with many years' experience in the zirconium industry (ASX Announcement 15 August 2011). Combined with the previous two MOUs, this would account for 100% of the zirconium products output for the expanded 1Mtpa operation.

Subsequent to the end of the September Quarter a fourth MOU was signed with another European company, a specialist in the production of advanced materials through its chemical and metallurgical expertise, to use that company's proprietary technology to process DZP niobium concentrate at a facility in Australia (or other agreed location) to produce ferro-niobium (FeNb). The parties will undertake a marketing study of the business, identify potential customers and off-take agreements, determine production quantity and production costs and the economics generally of FeNb production.

This MOU would account for 100% of the planned niobium output for the 1Mtpa project.

Alkane is continuing efforts to finalise other MOUs which will secure markets for the heavy rare earth concentrate and the light rare earth concentrate.

### **Market Developments – Zirconium**

The zircon industry continues to experience a major supply deficit as growth in demand exceeds supply, now most likely a long term feature of the industry. Zircon prices have doubled or tripled in the past year, and increased by ~US\$500/t in Q3 and a further US\$200-300/t for Q4. Zircon prices are expected to increase further in 2012 after a brief pause at current levels. The price of zircon is a major driver affecting the price of zirconium materials, so the escalating zircon price has flowed on to the downstream zirconium industry with prices rising substantially over the last 12 months. Each US\$100/t increase in the zircon price increases zirconium dioxide production costs for Alkane's competitors by around US\$155/t. This is equal to about US\$2.4M for 15,700 tpa of zirconia (100% ZrO<sub>2</sub> basis) production for the 1 Mtpa project.

These developments are documented in Table 4 below and have been compiled by Technical Ceramic Marketing Services (TCMS) from multiple sources. While zircon prices from Australia and South Africa (the main source of supply) have continued to increase, zirconium chemical prices have softened in Q4 after having tripled during the past year. For the DFS revenue calculation, an average price for the DZP output was assumed at **US\$10.60 per kilogram (US\$10,600/t) of ZrO<sub>2</sub> equivalent**.

**Table 4: Zircon and zirconium products pricing October 2011**

PRODUCT	ZrO <sub>2</sub>	Q2 2010 US\$/T	Q1 2011 US\$/T	Q2 2011 US\$/T	Q3 2011 US\$/T
<b>Zircon (producer/trader)</b>	<b>65%</b>	<b>\$900 - \$1,150</b>	<b>\$1,500 - \$2,100</b>	<b>\$1,700 - \$2,750</b>	<b>\$2,200 - \$2,800</b>
(100% ZrO <sub>2</sub> basis)	100%	(\$1,380 - \$1,770)	(\$2,310 - \$3,230)	(\$2,620 - \$4,230)	(\$3,380 - \$4,310)
<b>ZOC (zirconium oxychloride)</b>	<b>36%</b>	<b>\$1,350 - \$1,450</b>	<b>\$2,300 - \$2,600</b>	<b>\$3,600 - \$4,000</b>	<b>\$3,500 - \$3,900</b>
(100% ZrO <sub>2</sub> basis)	100%	(\$3,750 - \$4,030)	(\$6,390 - \$7,220)	(\$10,000 - \$11,110)	(\$9,720 - \$10,830)
<b>ZBS (zirconium basic sulphate)</b>	<b>33%</b>	<b>\$1,770</b>	<b>\$3,000</b>	<b>\$6,000</b>	<b>\$4,800</b>
(100% ZrO <sub>2</sub> basis)	100%	\$5,360	\$9,090	\$18,180	\$14,550
<b>ZBC (zirconium basic carbonate)</b>	<b>40%</b>	<b>\$2,100</b>	<b>\$3,400</b>	<b>\$5,400</b>	<b>\$5,300</b>
(100% ZrO <sub>2</sub> basis)	100%	\$5,250	\$8,500	\$13,500	\$13,250
<b>Fused Zirconia</b>	<b>98.50%</b>	<b>\$2,900 - \$3,100</b>	<b>\$4,100 - \$4,400</b>	<b>\$6,000 - \$7,000</b>	<b>\$6,000 - \$7,000</b>
<b>Chemical Zirconia</b>	<b>99.50%</b>	<b>\$4,200 - \$4,400</b>	<b>\$7,200 - \$7,500</b>	<b>\$10,000 - \$12,000</b>	<b>\$10,000 - \$12,000</b>
<b>Chemical Zirconia</b>	<b>99.90%</b>	<b>\$5,300 - \$5,500</b>	<b>\$8,500 - \$10,500</b>	<b>\$12,000 - \$15,000</b>	<b>\$13,000 - \$15,000</b>

Source: TCMS



### Market Developments – Rare Earth Elements (REE)

The rare earth industry has continued to attract market and media commentary, and recently was impacted by statements of “falling REE prices”. While lanthanum and cerium, the two largest volume rare earths consumed, have dropped, overall prices have remained strong and the Q3 average overall is the highest recorded. The Chinese authorities have continued to encourage consolidation of the industry and recently the largest light rare earth producer, Baotou Steel Rare Earth, announced it would suspend production for one month to “balance supply and demand”.

Table 5 below summarises the quarterly average prices for all of the most traded rare earths as compiled by the Industrial Mineral Company of Australia (IMCOA) from data published by Metal-Pages.

**Table 5: Rare earth pricing Q2 2010 to Q3 2011**

Rare Earths Prices (US\$/kg FOB China REO)							
Source: Metal Pages© Numbers have been rounded							
Light Rare Earth	DZP Distribution	Q2 2010 Average	Q3 2010 Average	Q4 2010 Average	Q1 2011 Average	Q2 2011 Average	Q3 2011 Average
Lanthanum Oxide	19.51%	\$7.13	\$25.75	\$53.00	\$75.00	\$138.00	\$128.00
Cerium Oxide	36.70%	\$5.58	\$24.50	\$50.00	\$77.00	\$138.00	\$126.00
Praseodymium Oxide	4.05%	\$30.60	\$48.25	\$77.00	\$118.00	\$215.00	\$242.00
Neodymium Oxide	14.12%	\$31.13	\$49.50	\$80.00	\$125.00	\$253.00	\$313.00
Samarium Oxide	2.20%	\$4.50	\$22.25	\$34.00	\$69.00	\$120.00	\$128.00
Heavy Rare Earth							
Europium Oxide	0.07%	\$521.67	\$570.00	\$625.00	\$723.00	\$1867.00	\$5133.00
Gadolinium Oxide	2.15%	\$8.25	\$28.75	\$44.00	\$81.00	\$167.00	\$192.00
Terbium Oxide	0.34%	\$545.00	\$570.00	\$605.00	\$693.00	\$1767.00	\$3967.00
Dysprosium Oxide	2.05%	\$196.67	\$275.00	\$295.00	\$405.00	\$983.00	\$2433.00
Ho, Er, Tm, Yb, Lu	2.89%						
Yttrium Oxide	15.84%	\$11.42	\$26.25	\$56.00	\$93.00	\$158.00	\$172.00
<b>DZP LREE</b>	<b>76.68%</b>	<b>\$12.06</b>	<b>\$30.58</b>	<b>\$57.20</b>	<b>\$81.00</b>	<b>\$163.00</b>	<b>\$167.00</b>
<b>DZP YHREE</b>	<b>23.32%</b>	<b>\$42.23</b>	<b>\$62.34</b>	<b>\$78.70</b>	<b>\$119.00</b>	<b>\$240.00</b>	<b>\$421.00</b>
<b>DZP LREE Concentrate</b>		<b>\$8.44</b>	<b>\$21.41</b>	<b>\$40.00</b>	<b>\$61.00</b>	<b>\$114.00</b>	<b>\$117.00</b>
<b>DZP YHREE Concentrate</b>		<b>\$29.59</b>	<b>\$43.64</b>	<b>\$55.00</b>	<b>\$83.00</b>	<b>\$168.00</b>	<b>\$295.00</b>

Compiled by IMCOA

These prices are for individual separated rare earth oxides at 99% purity, and the actual value for DZP concentrates will depend on market acceptance of the concentrate, but for this table 70% of the value has been assumed. The prices quoted above are averaged for the full quarter.

The Company has used the Q4 2010 averages (red box above) for preliminary project financial modelling but on the advice from IMCOA, applied conservative long term forward estimates of **US\$30/kg (US\$30,000/t) for the DZP light rare earth concentrate and US\$68/kg (US\$68,000/t) for the heavy rare earth concentrate** for the DFS.

These revenues are considered to be long term and sustainable for the rare earth output for the DZP but do not take into account the current strategy of entering into a joint venture with an existing rare earth separation facility to produce a suite of individual rare earth products.



### Market Developments – Niobium

Niobium is used to form alloys which are very resistant to high temperature and highly corrosive conditions, and it also has particular electrical conductivity properties which make it suitable for use as a capacitor material in electronic circuits and as a superconductor.

The global steel industry is the main driver for niobium consumption and about 80% of all niobium produced is used in the manufacture of high strength low alloy steels (HSLA). The niobium is added as ferro-niobium (FeNb) which typically contains ~65-70% niobium. About 75% of HSLA steel is used for structural work (bridge steel, high pressure pipelines) followed by automotive use where the steel can provide weight savings of 10% in a standard vehicle.

The large Brazilian company, CBMM, dominates the industry with production around 90% of world demand and hence its pricing structure sets a benchmark for niobium products. In the last 10 years FeNb grew from US\$30/kg to \$40/kg per niobium unit but for much of 2011 has ranged between US\$40 and US\$45/kg.

A product value of **US\$38/kg (US\$38,000/t)** was used for the **niobium concentrate** and **US\$45/kg (US\$45,000/t)** used for **FeNb** in the DFS.

**Table 6 DZP Anticipated Production and Revenue Summary @ 1Mtpa**

Anticipated Production and Revenues			
Product	1,000,000 tonnes per annum		
	Output	Revenue	% of total
ZBS, ZOH, ZOC, ZrO <sub>2</sub>	15,700tpa	A\$196M	39%
Nb -Ta conc / FeNb	3,005tpa	A\$111M	22%
LREE concentrate	3,050tpa	A\$108M	21%
YHREE concentrate	1,120tpa	A\$90M	18%
<b>TOTALS</b>	<b>22,875tpa</b>	<b>A\$505Mpa</b>	

Tonnage based upon recoveries developed from mass balances of the demonstration pilot plant, and revenues based upon flat long term pricing and an exchange rate of A\$:US\$ of 0.85. Numbers are rounded. Product prices predicted Q2 2011 averages or as determined by specific industry consultants

### ORANGE DISTRICT EXPLORATION JOINT VENTURE - ODEJV (gold-copper)

Alkane Resources Ltd 49%, Newmont Australia Limited 51%

The **ODEJV** includes Alkane's **Molong** and **Moorilda** tenements located near the city of Orange in the Central West of New South Wales, adjacent to Newcrest Mining Ltd's Cadia Valley Operations.

Newmont Australia Limited (NAL) earned a 51% interest in the ODEJV in August 2009. In March 2010 NAL elected to proceed to 75% by completing a Bankable Feasibility Study (BFS) on the **McPhillamys Project**. NAL is a subsidiary of the US based Newmont Mining Corporation (NYSE:NEM).

### Moorilda - McPhillamys

NAL has advised it has continued to review development options for the McPhillamys deposit.



## ***Molong***

NAL completed two diamond drill holes testing porphyry gold-copper style targets at the Charlies prospect which resulted from data reviews completed over the previous twelve months.

NEWELD 21 tested a buried magnetic anomaly that was coincident with alteration vectors, IP chargeability and IP resistivity anomalies. The modelled intrusive, alteration and pyrite mineralisation was intersected at the anticipated depth. However, the hole appeared to intersect the pyrite rich portion of the intrusive system and the majority of the alteration represented inner propylitic zoning, with minor magnetite destructive argillic alteration. The hole was completed at 441.8m.

NEWELD20 tested two adjacent geophysical targets, an annular magnetic low and an adjacent deep magnetic target. The drilling indicates that the magnetic low represents an unaltered, volcanic succession with abundant carbonate veining. The magnetic high portion of this hole intersected magnetite altered sediments and Ordovician volcanics, with minor dykes of intrusive rocks. The hole was completed at 487.8m.

The results of the drilling will be reviewed upon receipt of the analytical data from the core.

## **WELLINGTON (copper-gold)**

*Alkane 100%*

Limited soil sampling of selected targets was completed during the Quarter and is continuing.

**CUDAL (gold-copper), CALULA (gold-base metals), DIAMOND CREEK (gold-base metals) and BODANGORA (gold-copper)** were inactive.

## **WESTERN AUSTRALIA**

### **LEINSTER REGION JOINT VENTURE (nickel-gold)**

*Alkane Resources Ltd 21% diluting, Xstrata Nickel (Jubilee) 79%*

*The three prospects - **Leinster Downs, Miranda and McDonough Lookout** - are subject to a farm-in agreement with Xstrata Nickel (Jubilee).*

Xstrata Nickel has reported that fixed loop electromagnetic surveys are in progress on the McDonough Lookout and Miranda properties and to date 45 line kilometres and 39 kilometres respectively have been completed. Several conductors have been identified at Redwing within McDonough and at Taurus at Miranda. Earlier drilling in the Taurus area had intersected broad low grade nickel sulphide mineralisation and some narrow high grade mineralisation.

### ***Competent Person***

*Unless otherwise advised above, the information in this report that relates to exploration results, mineral resources and ore reserves is based on information compiled by Mr D I Chalmers, FAusIMM, FAIG, (director of the Company) who has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2004 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Ian Chalmers consents to the inclusion in this report of the matters based on his information in the form and context in which it appears*

### ***Disclaimer***

*This report contains certain forward looking statements and forecasts, including possible or assumed reserves and resources, production levels and rates, costs, prices, future performance or potential growth of Alkane Resources Ltd, industry growth or other trend projections. Such statements are not a guarantee of future performance and involve unknown risks and uncertainties, as well as other factors which are beyond the control of Alkane Resources Ltd. Actual results and developments may differ materially from those expressed or implied by these forward looking statements depending on a variety of factors. Nothing in this report should be construed as either an offer to sell or a solicitation of an offer to buy or sell securities.*



## BACKGROUND

**Alkane** is a multi commodity explorer and miner with its operations focused in the **Central West of New South Wales**, about 400 kilometres northwest of Sydney. Alkane has built a substantial resource base over several years, including experience in developing the Peak Hill Gold Mine, and is proceeding towards several developments.

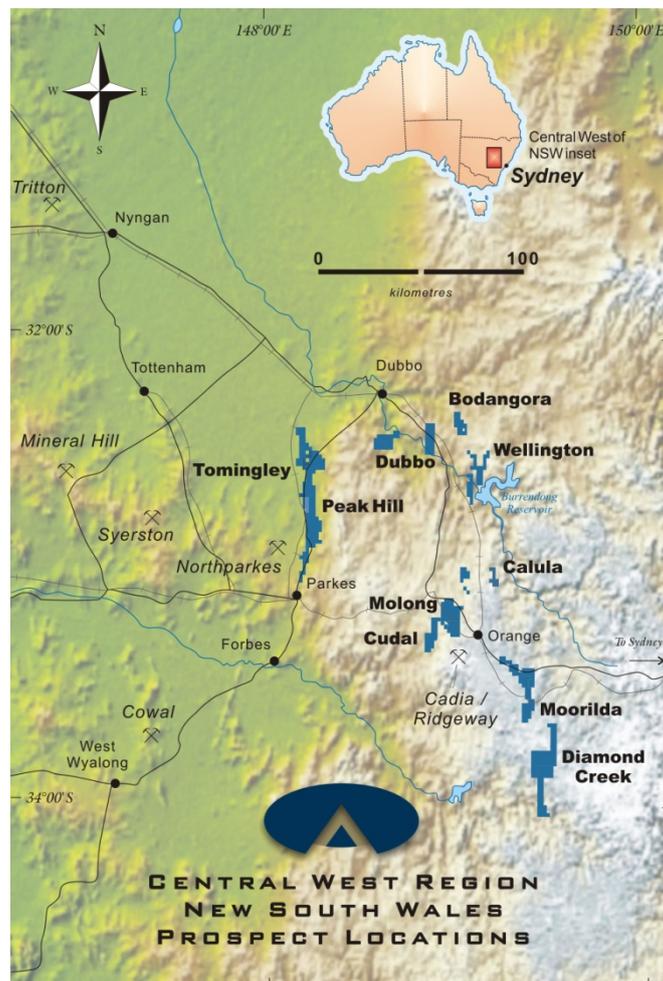
The **Dubbo Zirconia Project** is based upon a world class resource of the metals zirconium, hafnium, niobium, tantalum, yttrium and rare earth elements. Over several years Alkane has developed a flow sheet which can recover a variety of products which have expanding applications in electronics, ceramics, catalysts, special alloys and glasses, fuel cells, special batteries and permanent magnets, nuclear power and as environmental drying agents. A very positive definitive feasibility study, which included the construction and operation of a Demonstration Pilot Plant, was completed in September 2011 (ASX announcement 19 Sept 2011) indicating commercial production could be achieved in 2014.

The **Tomingley Gold Project** currently has a **660,000 ounce gold resource** within the **Wyoming and Caloma deposits** (full details are in the 2008 Annual Report and the ASX announcements of 2 October and 16 December 2009). A feasibility study for the development of the project with potential 50,000 to 60,000 ounce per annum production was completed in late 2010 and development financing options are well advanced.

Near **Orange**, the Company has a joint venture (**ODEJV**) with Newmont, one of the world's largest gold miners, which resulted in the discovery in 2006 of a significant gold deposit at **McPhillamys** within the **Moorilda Project**. An initial resource of Indicated plus Inferred resources containing **2.96 million ounces of gold and 60,000 tonnes of copper** has been defined (full details ASX announcement of 5 July 2010). Newmont is proceeding to complete a Bankable Feasibility Study for the development of the deposit.

Elsewhere within the region, at Galwadgere within the Wellington Project, Alkane has defined a 2 million tonne 1.00% copper Indicated Resource (details 2005 Annual Report) which is being reviewed for its development potential. Several other advanced exploration projects with encouraging drill intercepts and early exploration targets have been identified at other locations.

In **Western Australia** the Company holds a diluting 21% residual interest in a nickel sulphide joint venture with **Xstrata Nickel (Jubilee)** near **Leinster**.





# Mineral Resource and Ore Reserve Statement October 2011

## Dubbo Zirconia Project – Mineral Resources

Toongi Deposit	Tonnage (Mt)	ZrO <sub>2</sub> (%)	HfO <sub>2</sub> (%)	Nb <sub>2</sub> O <sub>5</sub> (%)	Ta <sub>2</sub> O <sub>5</sub> (%)	Y <sub>2</sub> O <sub>3</sub> (%)	REO (%)	U <sub>3</sub> O <sub>8</sub> (%)
Measured	35.70	1.96	0.04	0.46	0.03	0.14	0.75	0.014
Inferred	37.50	1.96	0.04	0.46	0.03	0.14	0.75	0.014
<b>TOTAL</b>	<b>73.20</b>	<b>1.96</b>	<b>0.04</b>	<b>0.46</b>	<b>0.03</b>	<b>0.14</b>	<b>0.75</b>	<b>0.014</b>

These Mineral Resources are based upon information compiled by Mr Terry Ransted MAusIMM (Principal, Multi Metal Consultants Pty Ltd) who is a competent person as defined in the 2004 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Terry Ransted consents to the inclusion in the report of the matters based on his information in the form and context in which it appears. The full details of methodology were given in the 2004 Annual Report.

## Dubbo Zirconia Project – Ore Reserves

Toongi Deposit	Tonnage (Mt)	ZrO <sub>2</sub> (%)	HfO <sub>2</sub> (%)	Nb <sub>2</sub> O <sub>5</sub> (%)	Ta <sub>2</sub> O <sub>5</sub> (%)	Y <sub>2</sub> O <sub>3</sub> (%)	REO (%)
Proved	8.07	1.91	0.04	0.46	0.03	0.14	0.75

These Ore Reserves are based upon information compiled by Mr Terry Ransted MAusIMM (Alkane Chief Geologist) who is a competent person as defined in the 2004 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. The reserves were calculated at a nominal 1.0% ZrO<sub>2</sub> cut off using costs derived from vendor quotes and revenue documented within this report. Terry Ransted consents to the inclusion in the report of the matters based on his information in the form and context in which it appears. ASX 19 Aug 2011

## Tomingley Gold Project – Mineral Resources

DEPOSIT	MEASURED		INDICATED		INFERRED		TOTAL		Gold (koz)
	Tonnage (t)	Grade (g/t)	Tonnage (t)	Grade (g/t)	Tonnage (t)	Grade (g/t)	Tonnage (t)	Grade (g/t)	
2.5x2.5x5.0m model									
Wyoming One	2,227,000	2.07	882,000	2.25	3,478,000	1.62	6,587,000	1.86	393.2
Wyoming Three	630,000	1.87	58,000	1.73	154,000	1.25	842,000	1.75	47.3
Caloma	2,047,750	2.04	440,050	1.71	1,371,620	1.36	3,859,420	1.76	218.5
<b>Total</b>	<b>4,904,750</b>	<b>2.03</b>	<b>1,380,050</b>	<b>2.06</b>	<b>5,003,620</b>	<b>1.54</b>	<b>11,288,420</b>	<b>1.82</b>	<b>658.9</b>

These Mineral Resources are based upon information compiled by Mr Richard Lewis MAusIMM (Lewis Mineral Resource Consultants Pty Ltd) who is a competent person as defined in the 2004 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Richard Lewis consents to the inclusion in the report of the matters based on his information in the form and context in which it appears. The full details of methodology are given in the ASX Report dated 25 March 2009 and 2 October 2009.

## Tomingley Gold Project – Ore Reserves

DEPOSIT	PROVED		PROBABLE		TOTAL		Ounces (minable)
	Tonnage (t)	Grade (g/t)	Tonnage (t)	Grade (g/t)	Tonnage (t)	Grade (g/t)	
Wyoming One	1,700,000	1.6	200,000	1.3	1,900,000	1.6	94,500
Wyoming Three	500,000	1.6	0	0.0	500,000	1.6	28,100
Caloma	1,100,000	2.3	100,000	1.7	1,200,000	2.2	86,500
<b>Total</b>	<b>3,300,000</b>	<b>1.8</b>	<b>300,000</b>	<b>1.5</b>	<b>3,600,000</b>	<b>1.8</b>	<b>209,100</b>

These Ore Reserves are based upon information compiled under the guidance of Mr Dean Basile MAusIMM (Mining One Pty Ltd) who is a competent person as defined in the 2004 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. The Reserves and Resources are estimated at an effective AS\$1,540 per ounce gold price. Dean Basile consents to the inclusion in the report of the matters based on the information in the form and context in which it appears.

## Peak Hill Gold Mine – Mineral Resources

DEPOSIT	MEASURED		INDICATED		INFERRED		TOTAL		k oz
	Tonnage (t)	Grade (g/t)							
0.5g/t gold cut off									
Proprietary			9,440,000	1.35	1,830,000	0.98	11,270,000	1.29	467.4
3.0g/t gold cut off									
Proprietary					810,000	4.40	810,000	4.40	114.6

These Mineral Resources are based upon information compiled by Mr Terry Ransted MAusIMM (Principal, Multi Metal Consultants Pty Ltd) who is a competent person as defined in the 2004 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Terry Ransted consents to the inclusion in the report of the matters based on his information in the form and context in which it appears. The full details of methodology were given in the 2004 Annual Report

## Wellington – Galwadgere – Mineral Resources

DEPOSIT	MEASURED			INDICATED		
	Tonnage (t)	Grade (% Cu)	Grade (g/t)	Tonnage (t)	Grade (% Cu)	Grade (g/t)
0.5% Cu cut off						
Galwadgere	-	-	-	2,090,000	0.99	0.3

These Mineral Resources are based upon information compiled by Mr Terry Ransted MAusIMM (Principal, Multi Metal Consultants Pty Ltd) who is a competent person as defined in the 2004 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Terry Ransted consents to the inclusion in the report of the matters based on his information in the form and context in which it appears. The full details of methodology were given in the 2005 Annual Report

## Moorilda – McPhillamys (ODEJV) – Mineral Resources

DEPOSIT	INDICATED			INFERRED			TOTAL			k oz gold	tonnes copper
	Tonnage (t)	Grade (g/t)	Grade % Cu	Tonnage (t)	Grade (g/t)	Grade % Cu	Tonnage (t)	Grade (g/t)	Grade % Cu		
0.3g/t Au cut-off											
Inner Ore Zone	51,650,000	1.10	0.07	23,504,000	1.19	0.07	75,154,000	1.13	0.07	2,723.6	55,091
Outer Ore Envelope	9,624,000	0.44	0.04	7,167,000	0.43	0.03	16,791,000	0.43	0.03	234.7	5,729
<b>Total</b>	<b>61,274,000</b>	<b>0.99</b>	<b>0.07</b>	<b>30,671,000</b>	<b>1.01</b>	<b>0.06</b>	<b>91,945,000</b>	<b>1.00</b>	<b>0.07</b>	<b>2,958.3</b>	<b>60,820</b>

These Mineral Resources are based upon information compiled by Mr Richard Lewis MAusIMM (Lewis Mineral Resource Consulting Pty Ltd) who is a competent person as defined in the 2004 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Richard Lewis consents to the inclusion in the report of the matters based on his information in the form and context in which it appears. The full details of methodology were given in the ASX Announcement 5 July 2010. Totals may not tally due to rounding.