



QUARTERLY REPORT TO 31 MARCH 2010

KEY HIGHLIGHTS

➤ DUBBO ZIRCONIA PROJECT

- The DZP is one of the world's most advanced developments for zirconium, niobium, yttrium and rare earth production and is based upon a world class resource. The Demonstration Pilot Plant continued to operate during the Quarter, trialling process innovations and improving product quality
- Due to a developing shortfall in the world supply of zircon, the primary feed material for the downstream zirconium industry and positive responses from potential customers, the base case for the DZP has been scaled up to 400,000 tonnes per annum throughput and product output doubled.
- Similar to the rare earths industry, China dominates the zirconium chemicals industry and supplies 90% of the world's requirements but relies on non-domestic imports of zircon. Currently there does not appear to be new resource potential that is capable of filling the shortfall. Both aspects highlight the strategic significance of the DZP.

➤ TOMINGLEY GOLD PROJECT

- The review of the feasibility study is continuing with focus on improving the TGP's economics through definition of additional open pit and underground resources.
- Aircore drilling at the new South Caloma target, about 250 metres south of the planned Caloma open pit returned several significant gold intercepts, including 11 metres at 8.36g/t gold, 15 metres grading 4.30g/t gold and 6 metres at 7.68g/t gold.

➤ MOORILDA PROJECT – McPHILLAMYS

- Newmont Australia Limited advised that they would proceed to increase their interest in the Orange District Exploration Joint Venture (ODEJV) to 75% by completing a Bankable Feasibility Study on the McPhillamys gold deposit.

Corporate Profile

Alkane Board

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

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12 month share price range

AS\$0.48- \$0.18

Market Cap 28 April 2010

~A\$88 million

ASX Code: ALK

249 million shares

31 March 2010 Cash

Cash ~ \$1.8 million

Investments ~ \$8.0 million

No debt

Media Relations

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NEW SOUTH WALES

TOMINGLEY GOLD PROJECT (TGP)

Alkane 100% subject to separate royalty agreements with Compass Resources Limited, Golden Cross Operations Pty Ltd and Climax Mining Ltd.

The TGP is located in the Central West of New South Wales, about 400 kilometres northwest of Sydney. The Project is centred on three gold deposits Wyoming One, Wyoming Two and Caloma, located 14 kilometres north of the Company's Peak Hill Gold Mine (Figure 1).

Definitive Feasibility Study (DFS)

The DFS program of compilation of capital and operating costs, and associated infrastructure costs continued but the effort during the Quarter focussed on a review of the existing open pit resources, an assessment of the underground potential of the Wyoming One deposit, exploration for addition resource potential and a preliminary test of the underground potential of the Caloma deposit. This work was designed to improve the overall project economics and provide acceptable returns.

Air Core Drilling at South Caloma

The South Caloma target is centred about 250 metres south of the planned Caloma open pit (Figure 3). Previous reconnaissance aircore drilling had located gold mineralisation within the Caloma porphyry host below 20 to 30 metres of transported and unmineralised clay.

Three AC traverses 80 metres apart have been completed with 43 holes totalling 2986 metres testing the porphyry host. Significant gold mineralisation was intersected (Table 1) over an east-west extent of 300 metres. Several holes stopped in mineralisation, being unable to penetrate the associated quartz veining.

The orientation of this mineralisation appears to be similar to the near east-west mineralised structures at the Wyoming Three deposit and the high grade '376' and '831' structures within the Wyoming One deposit.

Further drilling will be required to determine the economic potential of this mineralisation.

An additional 30 holes totalling 1971 metres were completed testing targets to the east and north of Caloma. Only minor gold results were returned except in PE 618 (6m @ 1.11g/t Au) which is located about 1.2km east of Caloma. The geological significance of this intercept is not clear at this time.

Core Drilling at Caloma

Seven core holes (PE 641D – 647D for 3,507 metres) have been completed to test for underground ore potential below the planned Caloma pit (see figure 3) with most holes intersecting alteration and mineralisation, including visible gold. An eighth hole (PE 648D of 150 metres) was drilled into South Caloma to help resolve the orientation of the mineralisation. This hole also intersected mineralisation and visible gold.

Detailed core logging and sampling is in progress and results will be reported as they become available.

Wyoming One Underground Assessment

Lewis Mineral Resource Consulting Pty Ltd (LMRC) were commissioned to review the Wyoming One resource models completed in 2009 (see ASX releases of 25 March and 2 October 2009) and compile resource models external to the current planned Wyoming One open pit at cut off grades that



would support an underground operation. The results at 2.00g/t and 3.00g/t gold cut offs are presented in the table below.

Table 2: Wyoming One underground resource models as at 31 March 2010

DEPOSIT	MEASURED		INDICATED		INFERRED		TOTAL		
Top Cut	Tonnage	Grade	Tonnage	Grade	Tonnage	Grade	Tonnage	Grade	Gold
msub model 2g/t c/o	(t)	(g/t)	(t)	(g/t)	(t)	(g/t)	(t)	(g/t)	(koz)
Wyoming One	327,600	4.29	327,350	3.94	508,420	3.89	1,163,370	3.99	150.2
Total	327,600	4.29	327,350	3.94	508,420	3.89	1,163,370	3.99	150.2

DEPOSIT	MEASURED		INDICATED		INFERRED		TOTAL		
Top Cut	Tonnage	Grade	Tonnage	Grade	Tonnage	Grade	Tonnage	Grade	Gold
msub model 3g/t c/o	(t)	(g/t)	(t)	(g/t)	(t)	(g/t)	(t)	(g/t)	(koz)
Wyoming One	208,790	5.34	197,120	4.91	282,720	5.00	688,720	5.00	121.4
Total	208,790	5.34	197,120	4.91	282,720	5.00	688,720	5.00	121.4

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 Notes 1 and 2, in the ASX Reports dated 25 March 2009.

A preliminary underground mining feasibility study has been completed by Glastonbury Mining Consultants Pty Ltd (GMC) and consulting engineers Mining One Pty Ltd. This conceptual study used only the 3g/t cut off resource model and specifically targeted the east-west '376' and '831' deposits, and the north-west trending 'Hangingwall' deposit.

The concept requires the development of a 5 x 5 metre decline from the Wyoming One open pit to a depth of 200 metres below the pit floor and sub-level long hole open stoping extraction of the ore. Approximately 80,000 ounces of gold could be recovered over a 30 month period from this operation.

A more detailed study is planned to enable the underground model to be incorporated into the development concept for the project.

Environmental Assessment and Development Consent

Finalisation of the Environmental Assessment for the project has been delayed to enable changes to the development plan to be incorporated into the EA. Similarly the Development Application has also been delayed.

DUBBO ZIRCONIA PROJECT (DZP)

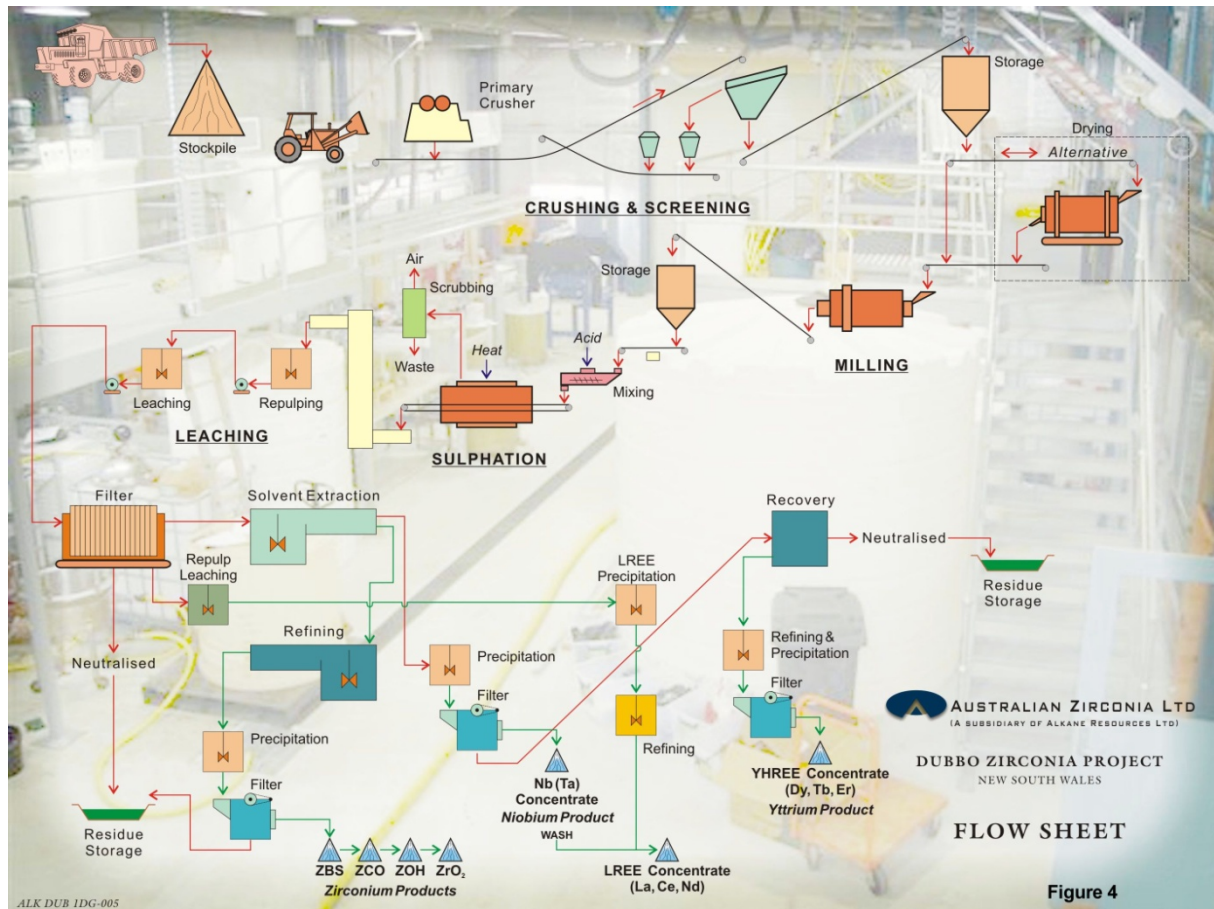
Australian Zirconia Ltd (AZL) 100

The Dubbo Zirconia Project (DZP) is located 30 kilometres south of the large regional centre of Dubbo 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 and 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 (figure 4).

A **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 1,300kg of zirconium chemicals and nearly 300kg of niobium concentrate. The DPP has continued to operate for short periods to trial engineering and process innovations, and check aspects of the flowsheet. Specifically in the March Quarter, a pulse column solvent extraction unit was trialled as an alternative



to the existing mixer-settler tanks. While the results of this test are still being assessed, initial data indicates a potential positive impact on capital and operating costs if pulse columns can be incorporated into the commercial plant.



Recent operation of the DPP has focussed on improvement of the quality of existing zirconium and niobium products, while laboratory test work has continued to prove the recovery of yttrium and rare earths from the current flow sheet using solutions generated by the DPP. This flow sheet naturally separates the light rare earths (LREE = lanthanum, cerium, neodymium, praseodymium and samarium) from the yttrium and heavy rare earths (HREE = gadolinium, terbium, dysprosium and erbium) (Figure 4).

As previously advised, LREE and YHREE samples were produced from the plant in the December Quarter and development work has advanced to enable these circuits to be incorporated into the DPP during the current quarter. The DPP could then produce LREE and YHREE products for distribution.

Market Development and Possible Production Scenario

Discussions with potential customers continued throughout the period and a number of new opportunities became apparent.

Of particular importance is the growing awareness of a significant developing shortfall in the world supply of zircon. As well as being consumed in substantial quantities as zircon in the refractories and ceramics industries, zircon is the primary feed material for the downstream zirconium industry.

TZ Minerals International Pty Ltd, the Perth based mineral sands consultants, and the DZP's feasibility study manager, have published a study **"The Global Zircon Industry – The Next Decade"** December 2009 which details the growing shortfall in supply and the impact on zircon pricing. Their projected Supply-Demand graph is shown below as figure 5.



TZMI estimate that 2012 zircon consumption will be around 1.4 million tonnes, of which 18% (250,000 tonnes) is consumed by the downstream zirconium industry. Driven by the demand in China for ceramics use in the urbanisation programs, the 2019 demand will be close to 1.7 million tonnes of zircon.

Even with Iluka Resources Limited's new zircon production coming from their South Australian deposits at Jacinth and Ambrosia, the closure of their major zircon producing Eneabba operation this year will see the potential shortfall escalate to 0.5 million tonnes (20% of world demand) by 2019. Currently there does not appear to be new resource potential that is capable of filling this shortfall.

While substitution for zircon is considered possible in some sectors, in general the substituting products are currently more expensive than zircon.

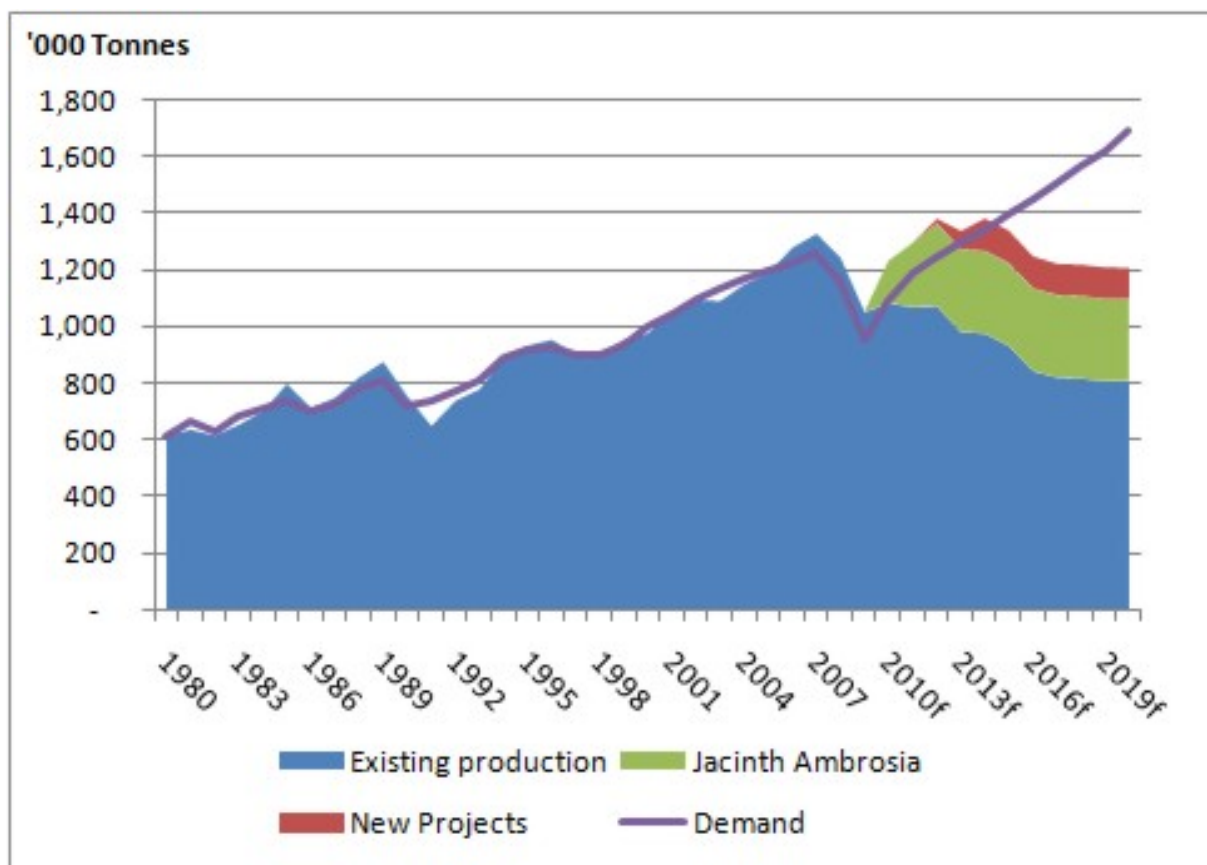


Figure 5: TZ Minerals International Pty Ltd Zircon Supply-Demand (December 2009)

As with the rare earth industry, China dominates the downstream zirconium chemicals industry and current supplies around 90% of the world's requirements, however unlike the rare earth industry China has only limited zircon resources and relies upon non-domestic imports.

Zircon price and supply will have a major impact on the cost and availability of zirconium chemicals, zirconia and zirconium metal, and this will again highlight the strategic significance of the Dubbo Zirconia Project.

As a result of this change in the Supply-Demand situation and positive responses from potential customers, the base case for the project's development has been scaled up to a 400,000 tonne per annum ore throughput.

Given the size of the resource, it would be possible to scale up the operation as shown in the "Blue Sky" output below, compared to the revised base case of 400,000tpa:



Product	400,000 tpa	1,000,000 tpa (Blue Sky)
ZBS, ZOH, ZBC, ZrO₂	15,000tpa (6ktpa ZrO₂)	37,000tpa (15ktpa ZrO₂)
Nb -Ta concentrate	2,000tpa (1.4ktpa Nb₂O₅)	5,000tpa (3.5ktpa Nb₂O₅)
LREE concentrate	1,980tpa (REOs)	4,950tpa (REOs)
YHREE concentrate	600tpa (REOs)	1,500tpa (REOs)

ZBS = zirconium basic sulphate; ZOH = zirconium hydroxide; ZBC = zirconium carbonate; ZrO₂ = zirconia ; Equivalent ~99% ZrO₂ + HfO₂ basis. Nb-Ta concentrate = ~70% Nb₂O₅; 1.0% Ta₂O₅ calcined basis. LREE = Lanthanum, cerium and neodymium. YHREE = yttrium, gadolinium, dysprosium and terbium.

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

Alkane Resources Ltd 49%, Newmont Australia Limited 51% (NYSE/NEM). Newmont can earn an additional 24% by funding all expenditures to completion of a Bankable Feasibility Study.

As advised to the ASX on 2 March, Newmont Australia Limited (NAL) elected to increase their interest in the Orange District Exploration Joint Venture (ODEJV) to 75% by completing a Bankable Feasibility Study (BFS) on the **McPhillamys Project**. NAL is a subsidiary of the US based Newmont Mining Corporation.

The ODEJV includes the **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.

NAL will sole fund all expenditures to complete the BFS and there is no time constraints to finalise this study. At Alkane's election, NAL can earn a further 5% interest by securing funding for Alkane's share of any capital costs for the development.

McPhillamys

Exploration by the joint venture in the last few years has focussed on the McPhillamys gold discovery which is located within the Moorilda Project, and centred about 35 kilometres south east of Orange (Figure 6). The Project of 175km² covers the structural boundary between the Ordovician aged andesitic volcanic and monzonitic intrusive complexes, and Silurian felsic volcanic and sedimentary sequences. At McPhillamys several AC, RC and core drilling programs have identified a large gold mineralised system within the Silurian volcanics which comprises a plus 0.5g/t gold mineralised envelope extending over a north south strike of at least 600 metres with widths up to 200 metres (Figure 7). Higher grade gold within the central sector of the deposit has associated copper mineralisation which may also have economic potential.

Mineralisation has been intersected to depths of 650 metres and remains open.

Resource Potential

NAL have run preliminary block models for resource compilation on the mineralised envelope and a conceptual exploration target of 2 to 4 million ounces of gold and 50,000 to 100,000 tonnes of copper can be assigned to McPhillamys at this stage.

Further drilling and evaluation will be required to raise the conceptual exploration target to Identified Mineral Resource status.



Metallurgy

Preliminary metallurgical testing on core samples indicated standard CIL recoveries of 86 to 91%. Further work will be programmed to expand on the CIL work and also examine the potential for gravity and flotation recovery to include the copper mineralisation.

Development Concepts

NAL have completed a series of desk top studies to review development models which includes various open pit scenarios and a possible underground block cave mining concept. These studies will be expanded as part of the BFS program.

Regional Targets

A number of regional targets have been identified by geological mapping, soil sampling, multiple geophysical techniques and reconnaissance aircore drilling where ore grade intercepts have been recorded (Figure 5). These include Sherlock (adjacent to McPhillamys), McPhillamys East, Kings Plains, Last Chance, Flanagans Gully and Clearview forming a six kilometre long McPhillamys-equivalent stratigraphic target zone.

The Confidence mine area, located three kilometres to the east of McPhillamys, also presents another two kilometre target zone.

Current Program

NAL have planned an initial A\$2.3 million program for 2010. This will include a four hole, 3,500 metre core program designed to test the depth continuity to the McPhillamys mineralisation which is scheduled to commence shortly, and regional programs of soil sampling and aircore drilling to test several targets which will commence in May.

BODANGORA (gold-copper)

Alkane Resources Ltd 100%

A pole-dipole induced polarisation (IP) survey was completed at the Comobella prospect where surface mapping has previously identified several monzonitic intrusive bodies, hydrothermal breccias and skarns with associated surface gold and copper mineralisation.

The IP survey covered an area of 2.5km by 3.5km and was completed on 100 metre spaced east-west traverses, and has identified three first priority targets and two second priority targets. Ground follow up and drilling will be scheduled when practical.

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

WESTERN AUSTRALIA

LEINSTER REGION JOINT VENTURE (nickel-gold)

Alkane Resources Ltd 22% diluting, Xstrata Nickel (Jubilee) 78%

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

Xstrata Nickel has advised that no field work was completed during the Quarter.

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.



BACKGROUND

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

The **Tomingley Gold Project** currently has an **840,000 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 is anticipated to be completed by mid 2010.

The **Dubbo Zirconia Project** is based upon a world class resource of the metals zirconium, hafnium, niobium, tantalum, yttrium and rare earth elements. The deposit also contains significant uranium. 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. Following a \$3.3 million Commercial Ready Grant from AusIndustry in 2006, the feasibility study was reactivated. The study includes the construction and operation of a Demonstration Pilot Plant, and a development commitment is anticipated late 2010.

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 potentially significant gold deposit at **McPhillamys** within the **Moorilda Project**. This discovery includes intersections of **123 metres grading 1.96g/t gold** and **77 metres at 1.65g/t gold** within a 600 metre by 200 metre mineralised zone. Follow up diamond drilling has confirmed the potential of the project to host a major gold system with an intersection in **KPD003 of 366 metres grading 1.85g/t gold**.

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

In **Western Australia** the Company hold a diluting 23% residual interest in a nickel sulphide joint venture with **Xstrata Nickel (Jubilee)** near **Leinster**. **Alkane sold its residual 5 million shares in BC Iron Limited in April which netted \$9.6 million.**

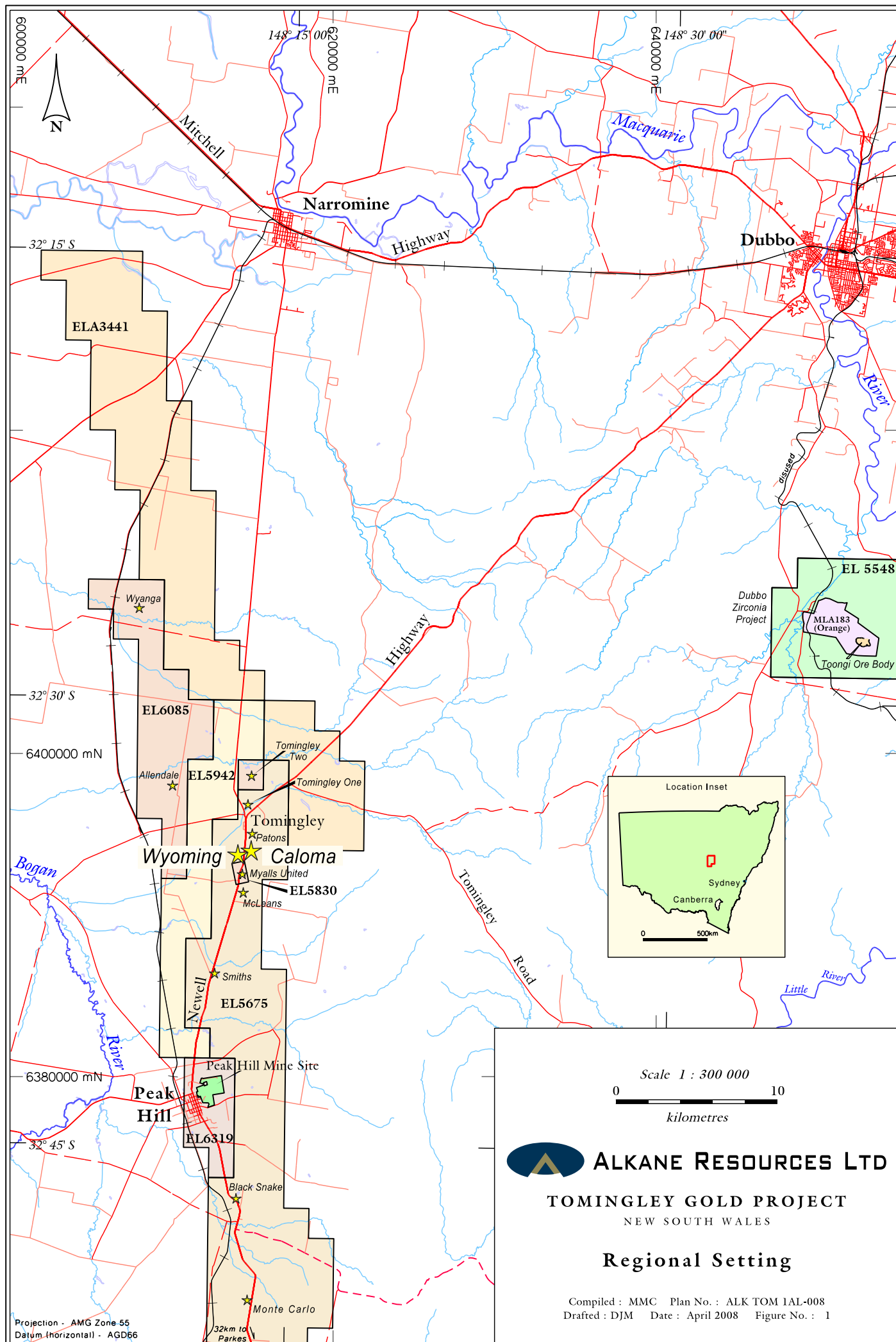


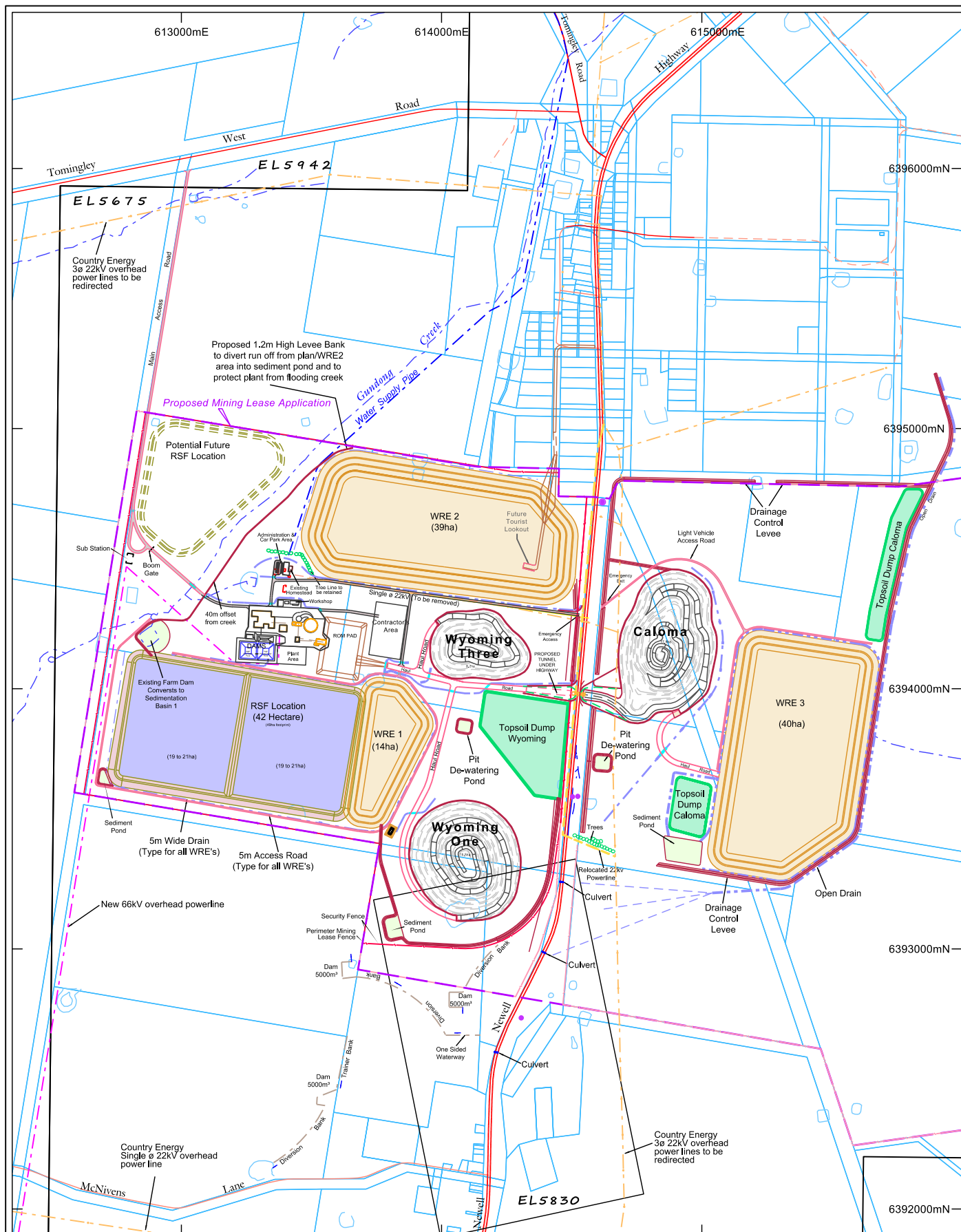


Table 1: TGP – South Caloma AC results greater than 0.5g/t gold @ 31 March 2010

Hole No	East	North	RL (m)	Azimuth	Inclin	Intcpt (m)	Grade (g/t Au)	Interval (m)	EOH (m)	Comments
PE 578	615060	6393660	271	090°	60°	3	0.71	39 – 42	45	
PE 580	614980	6393660	271	090°	60°	6	0.85	33 – 39	51	
PE 581	614940	6393660	271	090°	60°	15	1.25	45 – 60	60	stopped in min
PE 583	614860	6393660	271	090°	60°	4	4.30	48 - 52	52	stopped in min
PE 584	614820	6393660	271	090°	60°	2	1.08	42 – 44	64	
PE 585	614780	6393660	271	090°	60°	4	5.22	45 – 49	49	stopped in min
PE 586	614740	6393660	271	090°	60°	4	2.15	66 – 70	70	stopped in min
PE 587	614700	6393660	271	090°	60°	6	1.25	24 – 30	68	
and						3	1.11	48 – 51		
and						11	8.36	57 – 68		stopped in min
PE 588	614645	6393660	271	090°	60°	9	2.22	36 – 45	87	
and						6	0.63	72 – 78		
and						3	1.25	81 – 84		
PE 592	614840	6393660	271	090°	60°	3	0.72	12 – 15	65	
and						11	2.11	54 - 65		stopped in min
PE 593	614800	6393660	271	090°	60°	6	6.63	51 – 57	66	
PE 594	614760	6393660	271	090°	60°	9	1.62	57 – 66	72	
PE 595	614720	6393660	271	090°	60°	12	3.86	39 – 51	61	
PE 596	614675	6393660	271	090°	60°	42	2.25	27 – 69	85	
incl						15	4.30	39 - 54		
also						6	4.36	63 - 69		
PE602	614960	6393740	271	090°	60°	3	1.06	33 - 36	57	
PE 604	614820	6393740	271	090°	60°	3	1.70	69 – 72	72	stopped in min
PE 611	614740	6393740	271	090°	60°	3	0.60	33 – 36	75	
PE 612	614700	6393740	271	090°	60°	6	7.68	45 – 51	81	
PE 618	616180	6394380	271	090°	60°	6	1.11	69 – 75	97	“Clarks”

Gold analysis of mostly three metre composite samples by 50g fire assay. True widths unclear at this stage.





Legend

- Lot boundary
- Potential pit outline
- Contour interval 0.25m (1m index contours)

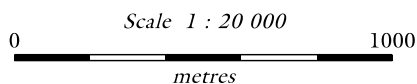


ALKANE RESOURCES LTD

TOMINGLEY GOLD PROJECT
NEW SOUTH WALES

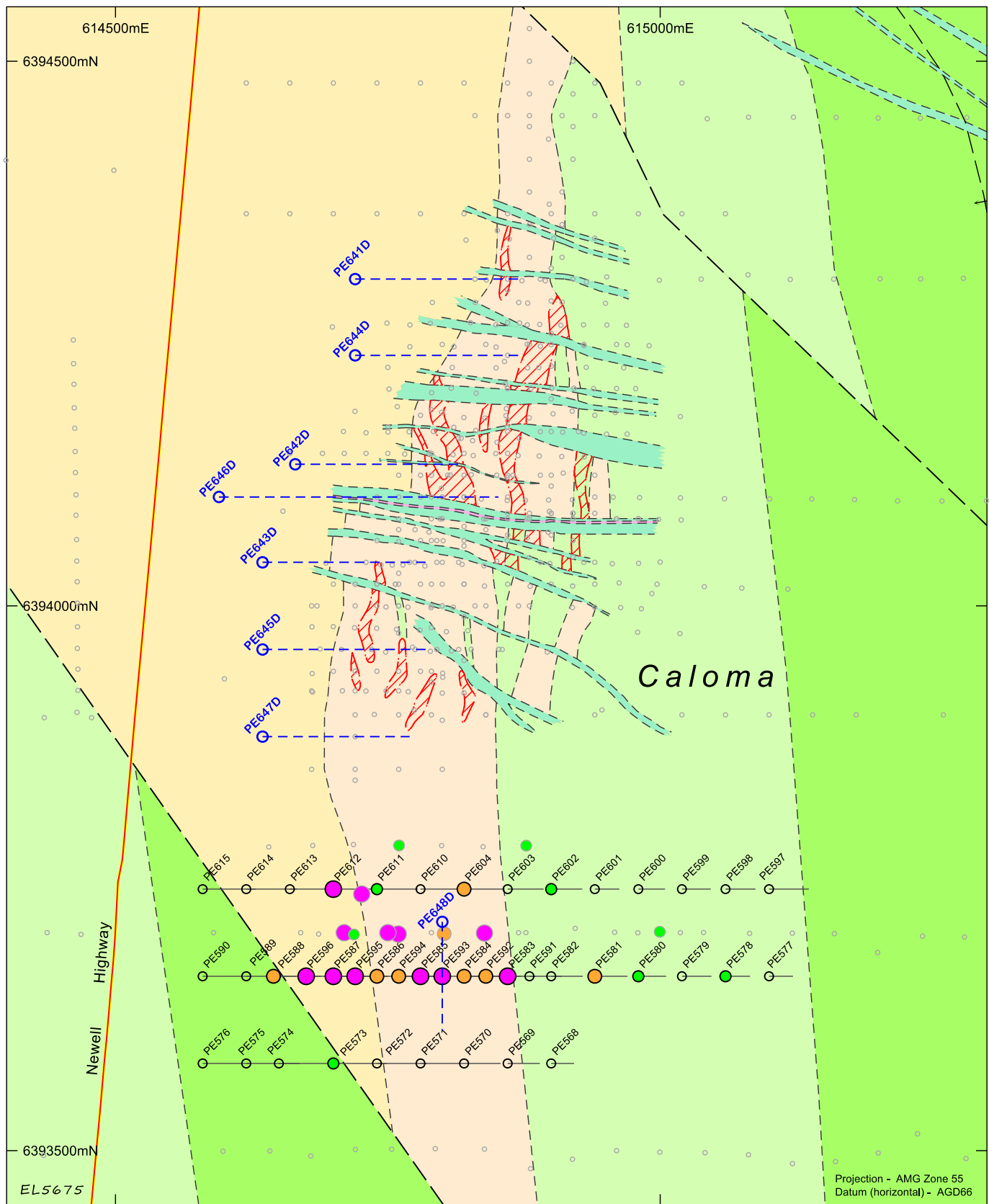
Site Layout

(Rev0)



Projection - AMG Zone 55
Datum (horizontal) - AGD66

Figure: 2



- Legend**
- PE645D
—○— Diamond Drill holes - current phase
 - PE576
—○— AC Drill holes - current phase
 - Drill hole collars
 - Drill Hole Intercept*
 - 0.5 to 1.0g/t Au
 - 1.0 to 2.5g/t Au
 - >2.5 g/t Au

Scale 1 : 5 000
0 250
metres



ALKANE RESOURCES LTD

**TOMINGLEY GOLD PROJECT
CALOMA PROSPECT**

Drill Hole Location

Jan - March 2010

