



*ASX ANNOUNCEMENT – 2 October 2009*

## **DEEP DRILLING EXPANDS CALOMA RESOURCE POTENTIAL AT TOMINGLEY**

- **A deep core hole drilled into the centre of the Caloma deposit at the Tomingley Gold Project in Central NSW has extended the potential for economic gold mineralisation to at least 360 metres depth, 180 metres below the current planned pit base.**
- **Significant results include:**

HOLE NO.	INTERSECTION
PEGT 007	5.2 metres grading 16.0g/t gold from 66.8 metres
also	12 metres grading 3.09g/t gold from 153 metres
including	4 metres grading 7.47g/t gold from 160 metres
also	16 metres grading 2.33g/t gold from 248 metres
including	9 metres grading 3.21g/t gold from 253 metres

- **These intersections have significantly enhanced the potential to increase the total resource of the Caloma deposit and the likely development of an underground operation at Caloma, in addition to the currently defined deep mineralisation at Wyoming One.**
- **Following the earlier RC drilling program at Caloma the Measured Resource has been upgraded to by 12% to 2.05 million tonnes grading 2.04 g/t gold.**
- **The Definitive Feasibility Study for the Tomingley Gold Project is progressing well with a revised completion date by November.**

### **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

A\$0.515 - \$0.15

Market Cap 1 October 09

~A\$107 million

ASX Code: **ALK**

249 million shares (Sept 09)

September 2009 Cash

~ \$5 million

No debt

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## Tomingley Gold Project (TGP)

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 located 14 kilometres north of the Company's Peak Hill Gold Mine (Figure 1). Exploration drilling discovered the Wyoming One deposit in 2002 and Wyoming Three in 2003. The Caloma deposit was recognised in 2006 with resource drilling completed in 2008.

### Resource Drilling - Caloma

As part of the soon to be completed Definitive Feasibility Study open pit mine planning is proceeding (Figure 2) and a reverse circulation (RC) drilling program was completed to raise some of the Inferred Resources within the Caloma pit shell to Indicated/Measured status. The drilling program focussed on the northern 100 metre section of the resource with a few holes also testing other small sections of the deposit. Results of this drilling have previously been reported.

Mr Richard Lewis of Lewis Mineral Resource Consultants Pty Ltd (LMRC), who completed the original resource assessment for the project, has compiled the revised models for the Caloma deposit.

**Table 1: Revised Identified Mineral Resources as at 2 October 2009, above a cut off of 0.75g/t gold.**

DEPOSIT No Top Cut mgeol model	MEASURED		INDICATED		INFERRED		TOTAL		
	Tonnage (t)	Grade (g/t)	Tonnage (t)	Grade (g/t)	Tonnage (t)	Grade (g/t)	Tonnage (t)	Grade (g/t)	Gold (koz)
<b>Wyoming One</b>	2,379,000	2.52	878,000	3.07	3,227,000	2.35	6,484,000	2.51	523.2
<b>Wyoming Three</b>	670,000	2.05	44,000	2.02	123,000	1.64	837,000	1.99	53.5
<b>Caloma</b>	2,073,350	2.24	448,140	1.91	1,567,680	1.69	4,089,170	1.99	262.0
<b>Total</b>	<b>5,122,350</b>	<b>2.35</b>	<b>1,370,140</b>	<b>2.66</b>	<b>4,917,680</b>	<b>2.12</b>	<b>11,410,170</b>	<b>2.29</b>	<b>838.7</b>

DEPOSIT Top Cut 2.5x2.5x5.0m model	MEASURED		INDICATED		INFERRED		TOTAL		
	Tonnage (t)	Grade (g/t)	Tonnage (t)	Grade (g/t)	Tonnage (t)	Grade (g/t)	Tonnage (t)	Grade (g/t)	Gold (koz)
<b>Wyoming One</b>	2,227,000	2.07	882,000	2.25	3,478,000	1.62	6,587,000	1.86	393.2
<b>Wyoming Three</b>	630,000	1.87	58,000	1.73	154,000	1.25	842,000	1.75	47.3
<b>Caloma</b>	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 Notes 1 and 2, in the ASX Report dated 25 March 2009.*

The drilling converted approximately 223,000 tonnes of Indicated and Inferred Resources to Measured Resource status (14,800 ounces) with a small drop (0.06g/t gold) in overall grade.

### Geotechnical and Site Sterilisation Drilling

A program of 14 core holes was completed to test the geotechnical characteristics of the transported clays covering most of the site. A total of 15 core holes were completed to measure the geotechnical characteristics of the proposed open pit walls for all three deposits. Data generated by this drilling campaign is still being assessed.

Two vertical core holes were drilled into the Wyoming One and Caloma deposits to collect additional metallurgical data within the proposed pit shells. The Caloma hole, **PEGT 007**, was extended to 390 metres vertical depth to test for repeats of the mineralised system. The drilling confirmed the stacked multiple mineralised lenses within the current pit shell, but also demonstrated continuation of the mineralising system to a depth of at least 360 metres, 180 metres below the planned pit floor.



**These intersections have significantly enhanced the potential to increase the total resource of the deposit and ultimately develop an underground operation at Caloma, as well as the currently defined deep mineralisation at Wyoming One.**

Air core sterilisation drilling of the project site has been completed with 91 holes (for a total of 4,201 metres) on the Wyoming sector of the site and 124 holes (for a total of 6,784 metres) at Caloma. No mineralisation was detected at Wyoming but zones of alteration and veining were intersected at Caloma. Not all results for the Caloma drilling are available but the potential exists for these new zones to host significant mineralisation. A more detailed assessment will be made as these results become available.

### ***Definitive Feasibility Study (DFS)***

The DFS program is continuing, with open pit optimisation and capital and operating cost data nearing completion, but the timing of the program has been extended due to delays with contributions from external consultants. Finalisation is now not likely until sometime in November.

Compilation of the Environmental Assessment (EA) is well advanced and a Planning Focus Meeting (PFM) was held on site in the middle of August. The PFM was organised by the NSW Department of Planning and involved input from multiple Government Departments and local Government authorities and provides the requirements for the Development Consent process.

**Table 2: TGP – PEGT 007 Caloma core results greater than 0.5g/t gold @ 2 October 09**

Hole No.	East	North	RL (m)	Azimuth	Dip	Intercept (m)	Grade (g/t Au)	Interval (m)	EOH (m)	Comments
PEGT007	614799	6394107	271	000°	90°	2.0	2.56	10 – 12	390.4	Met samples
also						6.1	4.20	18 – 24.1		not included
also						5.5	1.71	27.5 – 33		1m missing
also						5.2	16.00	66.8 - 72		
also						3.1	2.62	88.1 – 91.2		
also						12.0	3.09	153 – 165		
incl						4.0	7.47	160 – 164		
also						16.0	2.33	248 – 264		
incl						9.0	3.21	253 – 262		
also						7.0	0.83	296 – 303		
also						18.0	1.42	346 – 364		
incl						5.0	2.53	359 – 364		

Gold analysis of one metre half core samples by 50g fire assay. True widths are approx 80 - 90 % of intersection.

*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 this announcement). 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 before the end of calendar 2009.

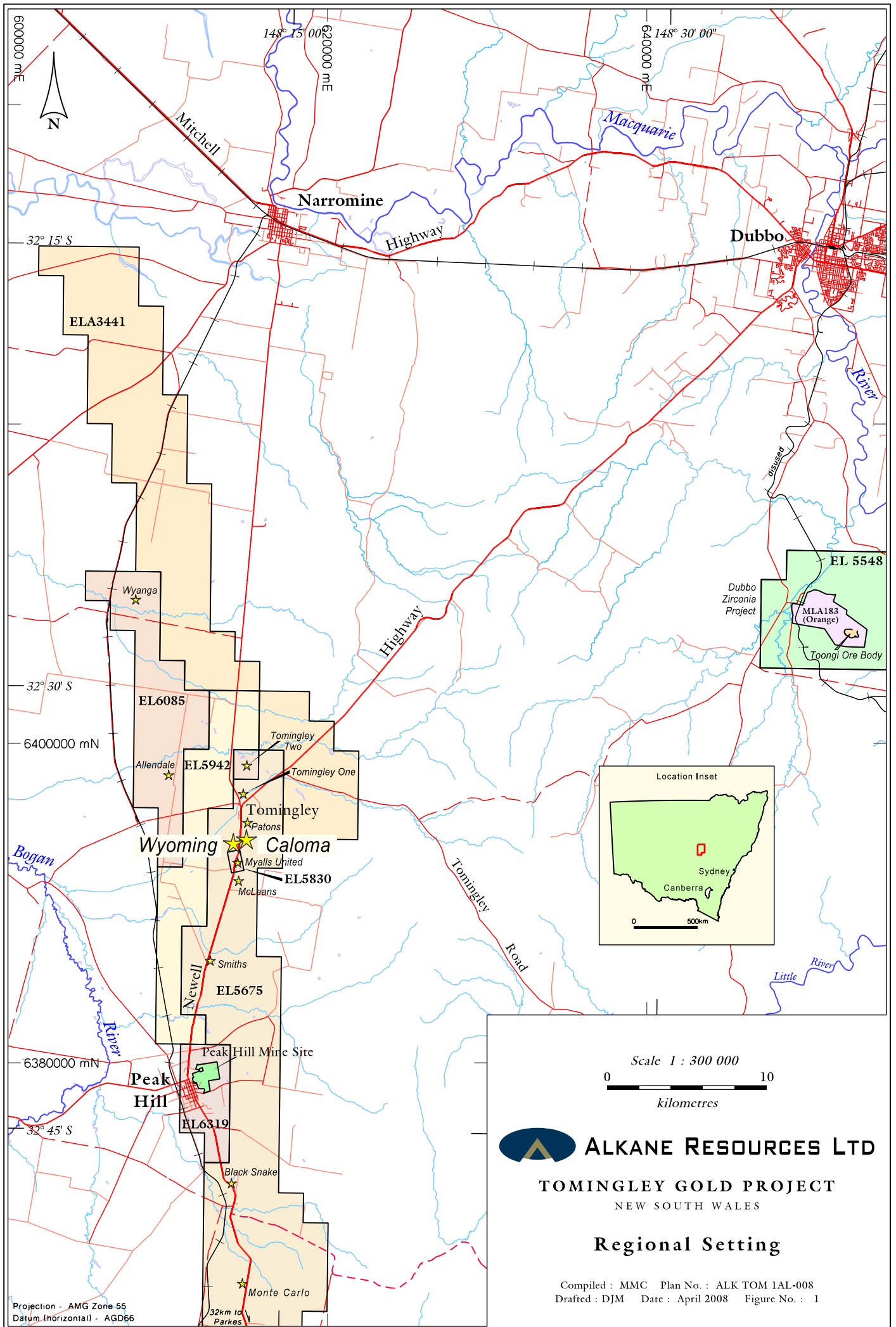
The **Dubbo Zirconia Project** is based upon a world class resource of the metals zirconium, hafnium, niobium, tantalum, yttrium and rare earth elements. The deposit also contains significant uranium. Over several years Alkane has developed a flow sheet which can recover a variety of products which have 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 mid-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.

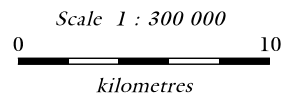
In **Western Australia** the Company holds 5 million shares (6%) of listed iron ore explorer **BC Iron Limited** and a diluting 23% residual interest in a nickel sulphide joint venture with **Xstrata Nickel (Jubilee)** near **Leinster**.





Projection - AMG Zone 55  
Datum (horizontal) - AGD66

32km to Parkes

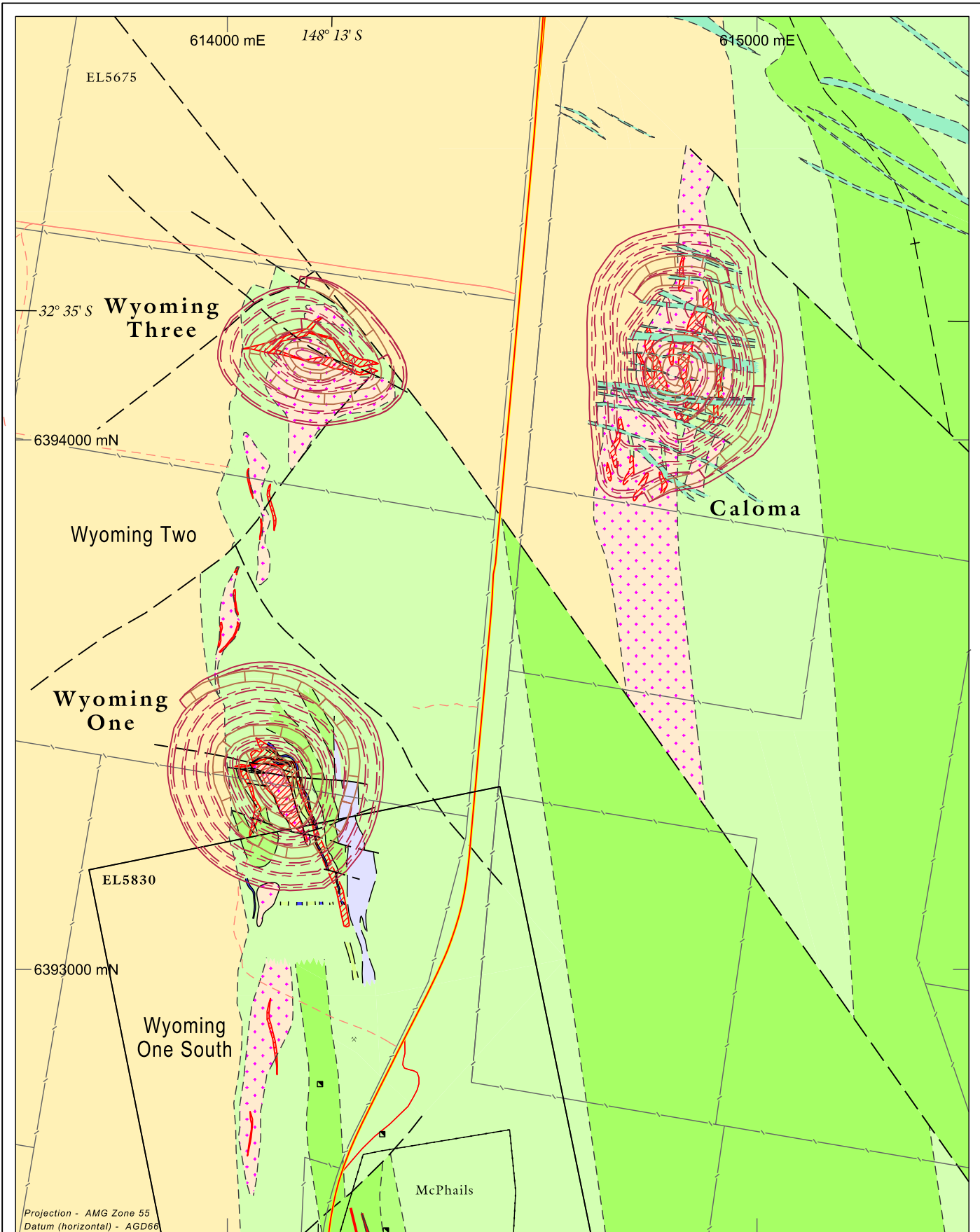


**ALKANE RESOURCES LTD**

**TOMINGLEY GOLD PROJECT**  
NEW SOUTH WALES

**Regional Setting**

Compiled : MMC Plan No. : ALK TOM 1AL-008  
Drafted : DJM Date : April 2008 Figure No. : 1



Projection - AMG Zone 55  
Datum (horizontal) - AGD66

**Geology Legend**

- Dolerite
- Massive, well foliated pelitic siltstone (Cotton Formation)
- Feldspar porphyry
- Undifferentiated volcanoclastic sediments
- Undifferentiated black graphitic shales and grey foliated siltstones
- Black graphitic shales
- Quartz and volcanoclastic sandstone pebble conglomerate
- Feldspar ± hornblende phric andesitic lava
- Strongly sheared, chlorite-talc schist

- Geological Symbols and Ornamentation**
- Mineralisation
  - Fault, inferred
  - Shear zone
  - Geological boundary, inferred
  - Quartz zone

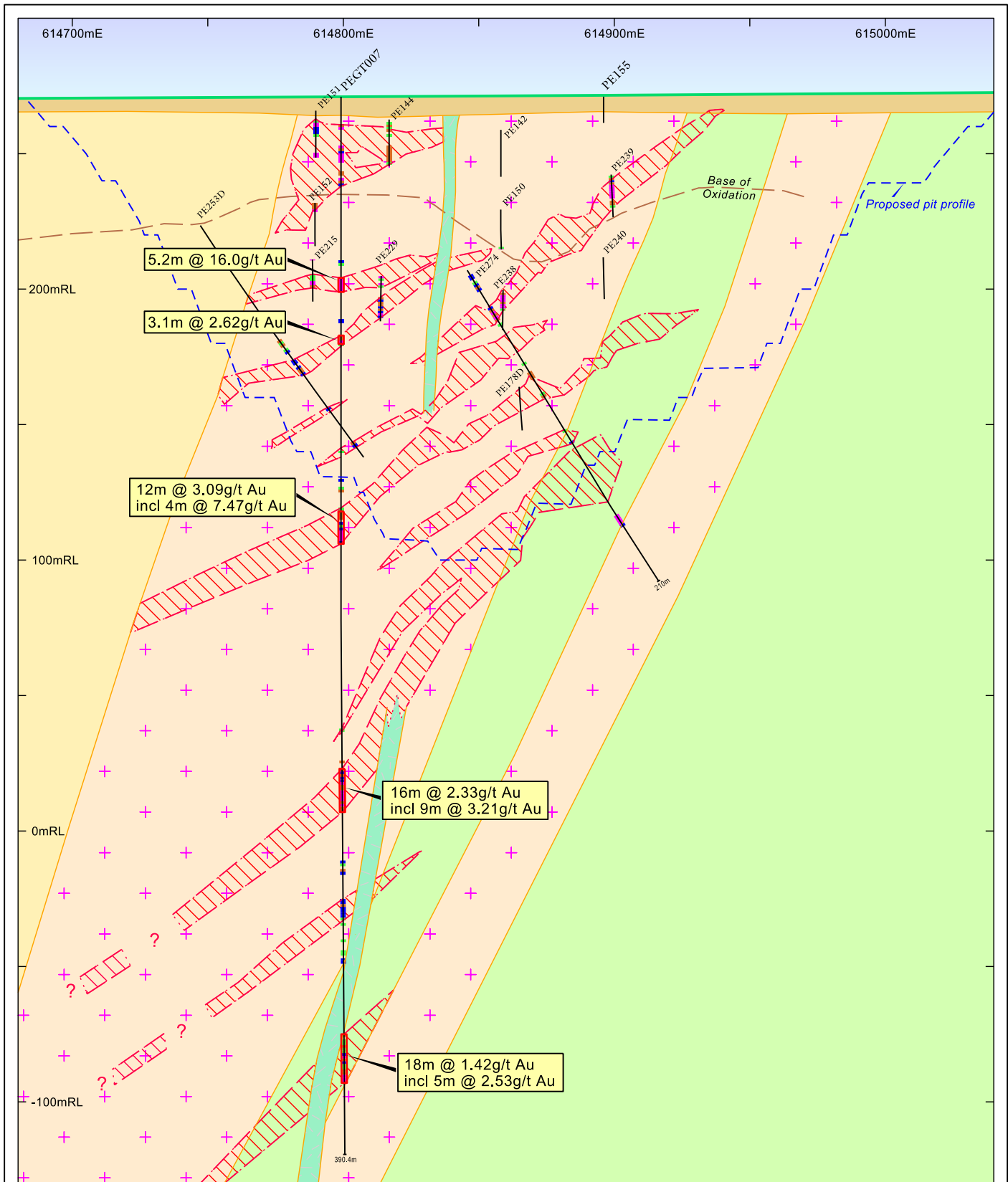








**ALKANE RESOURCES LTD**  
TOMINGLEY GOLD PROJECT  
WYOMING PROSPECT

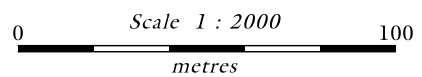
**Geology**

(Wyoming 1, Wyoming 3 and Caloma)

Figure No.: 2



-  Alluvium
-  Pelitic siltstone (Cotton Fm)
-  Dolerite
-  Feldspar porphyry
-  Undifferentiated volcanoclastic sediments + volcanics
-  >0.25g/t Gold ore outline



TOMINGLEY GOLD PROJECT  
CALOMA PROSPECT

**Cross Section**  
**6394110mN**  
(window ±5m)