

1 February 2012



## Further encouragement for a new porphyry copper-gold complex at Bodangora

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- **Reconnaissance core drilling has confirmed potential of the Glen Hollow Prospect at Bodangora:**

COMDD002	7.8m grading 1.04% Cu and 0.23g/t Au from 368.2m
incl	0.6m grading 10.5% Cu and 2.45g/t Au from 370.2m
COMDD002	60.1m grading 0.1% Cu and 0.15g/t Au from 81.4m
incl	15.9m grading 0.16% Cu and 0.33g/t Au from 81.4m

- **Several key geological features associated with porphyry copper-gold systems have been confirmed:**

**Visible, multi-phase, multi-styled copper - gold mineralisation;**

**Large multi-phase intrusive complex with shonshonitic affinities;**

**Extensive potassic alteration of the intrusive complex;**

**Similarities are evident to other porphyry copper-gold systems in the Molong Volcanic Belt such as Newcrest's Cadia-Ridgeway deposits**

- **Very limited area of large intrusive complex assessed to date**

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The Bodangora Project is located 15 kilometres north-east of Wellington in the Central West Region of New South Wales, and about 25 kilometres north of Alkane's Wellington (Galwagdere) project. The tenement includes part of the northern end of the Ordovician aged Molong Volcanic Belt (MVB) before it is covered by younger sediments of the Great Australian Basin.

Geology within the tenement area is dominated by a sequence of Ordovician aged basaltic-andesitic volcanic and volcanoclastic rocks with scattered monzonitic intrusives. This sequence is overlain by Silurian-Devonian sediments and volcanics while the Nindethana Fault, a major crustal suture, separates the Bodangora area from the Siluro-Devonian Hill End Trough sediments and Carboniferous Wuuluman Granite to the east.

Detailed mapping of the Comobella area shows several magmatic and petrographical similarities to areas of porphyry copper-gold systems elsewhere in the Molong Volcanic Belt, such as Newcrest Mining's large deposits at Cadia-Ridgeway. The Comobella area broadly comprises a basal package of primitive high-K calc-alkaline basaltic andesites, passing up into latites and monzonites with more evolved high-K calc-alkaline to shoshonitic magmatic affinities (Comobella Intrusive Complex). The two packages are broadly separated by a zone of discontinuous limestone lenses, representing a major hiatus in magmatism prior to the later intrusive and associated porphyry-skarn activity. A number of areas of hydrothermal breccia/skarn with anomalous gold and copper mineralisation have been identified associated with the later monzonites.

Subsequent soil geochemistry and IP surveys identified a number of prospective areas which were evaluated by broadly spaced RC drilling in early 2011. The most significant results were returned from the Glen Hollow prospect (ASX Release 19 April 2011):

<b>COMRC009</b>	<b>46m grading 0.9g/t Au and 0.25% Cu from 60m</b>
<b>incl</b>	<b>18m grading 1.7g/t Au and 0.45% Cu from 85m</b>

(Results from riffle split 1m RC samples with analyses of Au by 50g fire assay and Cu by ICP-MS)

Two diamond drill holes were completed in December 2011 to provide vital geological information as follow-up of the COMRC009 intercept. The first core hole (COMDD001) was drilled beneath COMRC009 however it failed to adequately test the mineralisation due to drilling sub-parallel to stratigraphy. The drill hole did however indicate that the mineralisation intersected in COMRC009 was located very close to the monzonite intrusive contact and that some zones of mineralisation showed a spatial relationship with narrow, late stage, syenite dykes.

COMDD002 was drilled to crosscut the stratigraphy identified in COMDD001. The drill hole intersected breccia-fill mineralisation at the contact of the monzonite intrusive (similar position to that in COMRC009) before passing into a sequence of variably potassically altered, multiple generations of monzonite-monzodiorite-syenite intrusive. The hole was terminated at 522.8m being the depth limit for the rig.

Drilling has identified four styles of mineralisation:

1. disseminated/breccia-fill chalcopyrite+native copper at the contact of the main monzonite body

	<b>60.1m grading 0.10% Cu and 0.15g/t Au from 81.4m COMDD002</b>
<b>incl</b>	<b>15.9m grading 0.16% Cu and 0.33g/t Au from 81.4m</b>



2. disseminated chalcopyrite+bornite+native copper blebs within potassic-altered monzonite  
**17.5m grading 0.24% Cu from 495.8m COMDD002**  
incl **1.0m grading 1.8% Cu and 0.45g/t Au from 509.3m**
3. stringer/disseminated native copper within and close to fault zones  
**7.8m grading 1.04% Cu and 0.23g/t Au from 368.2m COMDD002**  
incl **0.6m grading 10.5% Cu, 2.45g/t Au and 40.2g/t Ag from 370.2m**
4. narrow disseminated chalcopyrite+bornite bearing late stage syenite dykes controlled by the early intrusive architecture  
**2.15m grading 0.17% Cu from 285.85m COMDD001**

Exploration to date, and in particular drilling, has tested a very small portion of what is seen as a very prospective intrusive complex covering 12km<sup>2</sup>. The recent core drilling has confirmed a number of key geological features associated with porphyry copper systems, particularly those of central NSW:

- Visible, multi-phase, multi-styled copper +/- gold mineralisation;**
- Large multi-phase intrusive complex with shonshonitic affinities;**
- Extensive potassic alteration of the intrusive complex;**
- Late stage mineralised syenite dykes.**

The extensive geochemical database for the samples will be analysed in detail to identify any alteration vectors present. A program of RC drilling has been budgeted to commence later in the quarter with these holes sited to assist in further clarifying the key geological aspects of the system. It is also proposed to undertake an extensive series of petrological studies and sulphide mineral analyses to assess geochemical vectors for porphyry mineralisation.



**Native copper stringer mineralisation in COMDD002, Glen Hollow prospect at Bodangora**



**Table 1: Significant core drill results from the Glen Hollow prospect at Bodangora  
27 January 2012**

Hole No	East	North	RL (m)	Azim	Inclin	Intercept (m)	Grade Cu %	Grade Au g/t	Interval (m)	EOH (m)
COMDD001	687365	6417480	418	088°	-60°	2.15	0.17		285.85 – 288.0	452.0
COMDD002	687477	6417412	422	349°	-60°	6.7	0.12		52.0 – 48.7	522.8
and						60.1	0.10	0.15	81.4 – 141.5	
incl						15.9	0.16	0.33	81.4 – 97.3	
and						7.8	1.04	0.23	368.2 – 375.0	
incl						0.6	10.5	2.45	370.2 – 370.8	
and						6.0	0.20		475.0 – 481.0	
and						17.5	0.24		495.8 – 512.3	
incl						1.0	1.80	0.45	509.3 – 510.3	

Gold analysis by 50g fire assay and base metals by aqua regia digest/ ICPMS on half HQ3 core over generally 1 metre lengths. Native copper checks by multiple analysis of coarse and fine fractions.

### **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*

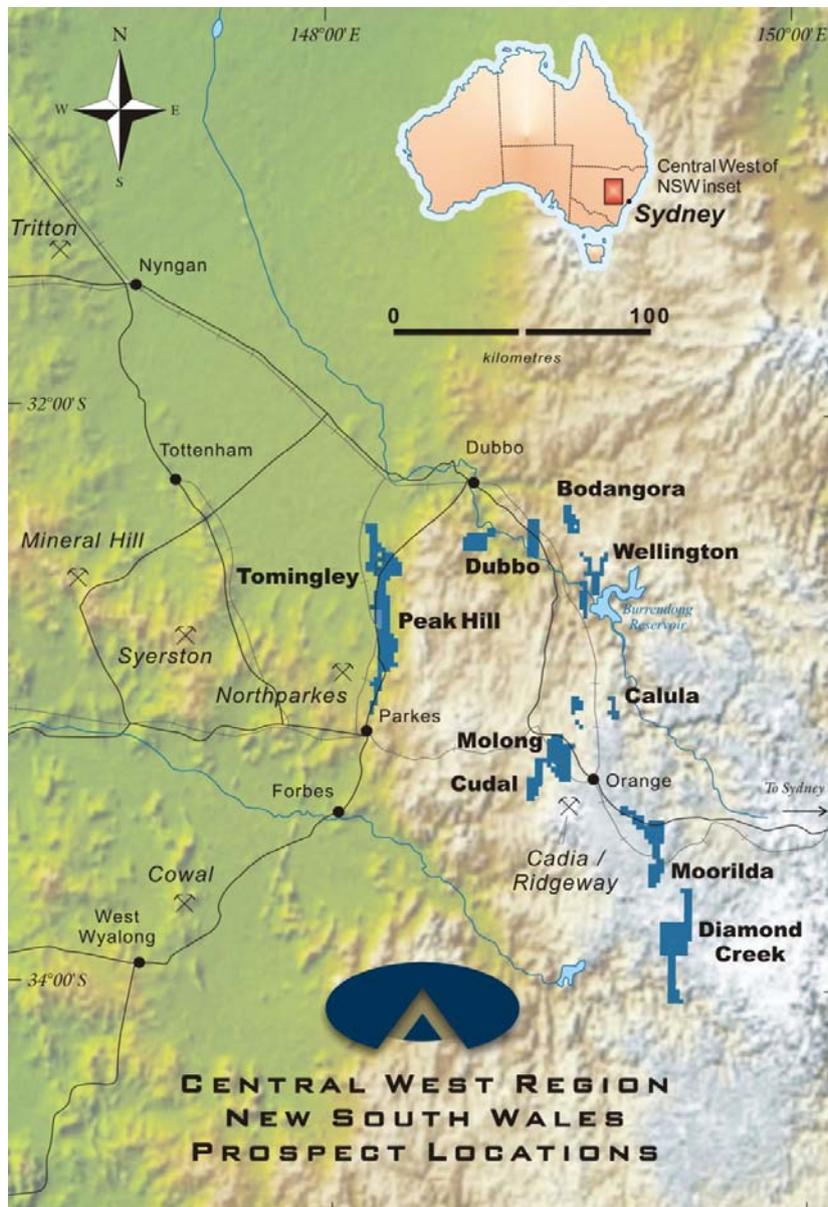
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*This report contains certain forward looking statements and forecasts, including possible or assumed reserves and resources, production levels and rates, costs, prices, future performance or potential growth of Alkane Resources Ltd, industry growth 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.*



**ABOUT ALKANE - [www.alkane.com.au](http://www.alkane.com.au) - ASX: ALK and OTCQX: ANLKY**

Alkane's strategy is to be focused on a single geographic area, the central west of New South Wales in Australia, allowing it to apply its geological, exploration and mining expertise across multiple commodities to achieve a spread of risk and return. Currently Alkane has two projects heading towards production in 2013/2015 - the Tomingley Gold Project (TGP) and the nearby Dubbo Zirconia Project (DZP). Tomingley is a 660,000 ounce gold resource currently awaiting development approval. Cash flow from Tomingley will provide the funding to maintain the project development pipeline and to contribute to development of the DZP. The DZP has a completed definitive feasibility study giving it a net present value of \$1.2 billion. This project will make Alkane a significant world producer of zirconium products and heavy rare earths. Both projects are wholly owned by Alkane while at Orange, Alkane is in a joint venture with Newmont Australia over an area containing a 3 million ounce gold resource at McPhillamys, with Newmont having elected to proceed towards a bankable feasibility study. Alkane's most advanced gold copper exploration projects in the region are at the 100% Alkane owned Wellington and Bodangora properties.





## Mineral Resource and Ore Reserve Statement December 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 (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. 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
Probable	27.86	1.93	0.04	0.46	0.03	0.14	0.74
<b>Total</b>	<b>35.93</b>	<b>1.93</b>	<b>0.04</b>	<b>0.46</b>	<b>0.03</b>	<b>0.14</b>	<b>0.74</b>

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 1.5% combined ZrO<sub>2</sub>+Nb<sub>2</sub>O<sub>5</sub>+Y<sub>2</sub>O<sub>3</sub>+REO cut off using costs and revenues defined in the notes in ASX Announcement of 16 November 2011. 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.

### 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)	
Top Cut 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 A\$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

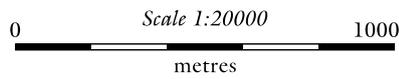
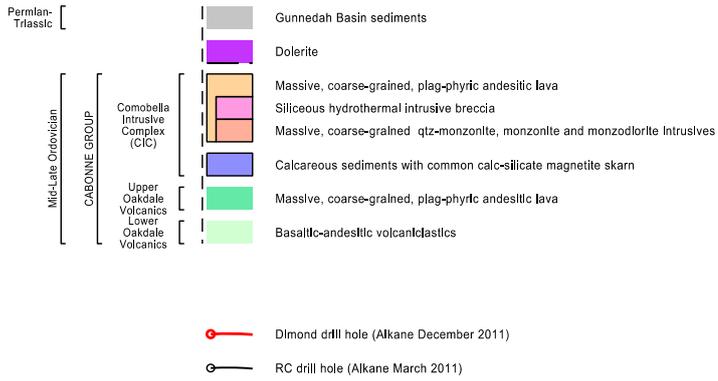
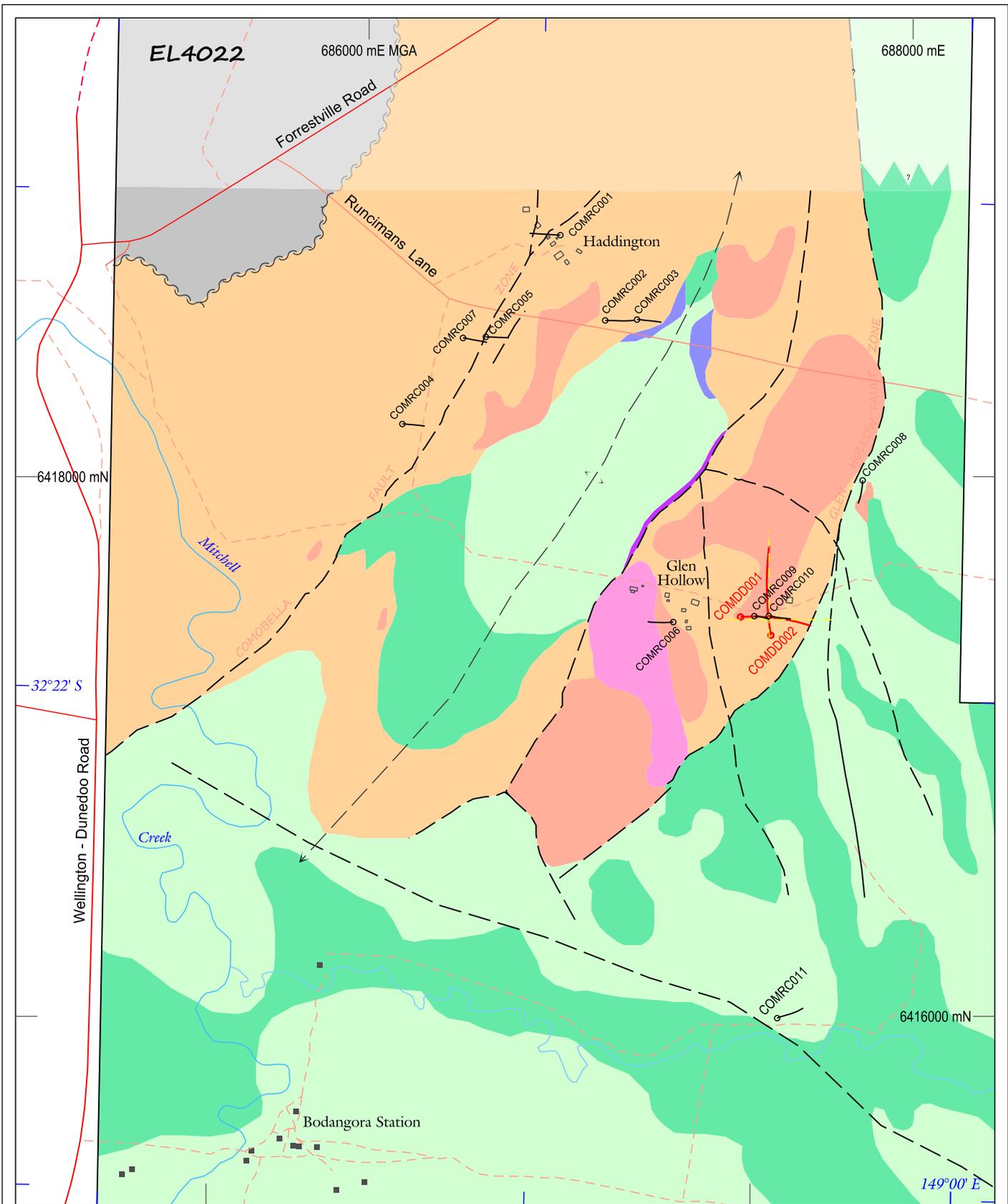
DEPOSIT	MEASURED		INDICATED		Tonnage (t)	Grade (% Cu)	Grade (g/t)
	Tonnage (t)	Grade (% Cu)	Grade (g/t)	Grade (% Cu)			
0.5% Cu cut off							
Galwadgere	-	-	-	-	2,090,000	0.99	0.3

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		
McPhillamys 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.



**ALKANE RESOURCES LTD**  
 BODANGORA PROJECT  
 Comobella Prospect  
**Geology with  
 Drill Hole Locations**

Figure: 1

