



QUARTERLY REPORT TO 31 MARCH 2004

KEY SUMMARY

➤ TOMINGLEY GOLD PROJECT

- Prefeasibility study progressing for optimum development of the 498,000 ounce Wyoming One and Three gold ore bodies
- Drilling recommenced with major aircore program on the Tomingley structure and RC drilling for resource potential at McLeans
- Diamond core drilling at Wyoming One confirms high grades within "376" structure

WY 789D	71 metres grading 2.60g/t gold from 58 metres
including	9 metres grading 12.45g/t gold from 100 metres
WY 791D	14 metres grading 2.08g/t gold from 194 metres
and	12.5 metres grading 7.88g/t gold from 265 metres
and	1.6 metres grading 8.06g/t gold from 306 metres
- Significant RC results from McLeans include

MCP 037	1 metre grading 24.45g/t gold from 37 metres
MCP 038	18 metres grading 1.38g/t gold from 81 metres
including	3 metres grading 5.02g/t gold from 84 metres
- Important new intersections in aircore at Tomingley Two

TO 123	3 metres grading 4.93g/t gold from 111 metres
TO 162	20 metres grading 0.76g/t gold from 123 metres
including	5 metres grading 1.38g/t gold from 138 metres

➤ DUBBO ZIRCONIA PROJECT

- Planning for flow sheet modifications and optimisations is continuing to facilitate the construction and operation of the Demonstration Pilot Plant

➤ EXPLORATION

- Detailed aeromagnetic surveys scheduled for Bodangora, Moorilda, Cudal and the southern sector of the TGP

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NEW SOUTH WALES

TOMINGLEY GOLD PROJECT (TGP)

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

Following compilation of the resource statement for **Wyoming One** and **Wyoming Three** late last quarter (**Total 6.38 million tonnes grading 2.43g/t gold** at 0.75g/t gold cut off), scoping studies commenced with the goal of determining an optimum development scenario for these deposits. The study has now advanced to pre-feasibility with the receipt of budget pricing for the mining operations and it is anticipated that this study should be completed before the end of June.

A full feasibility should commence early in the September Quarter and is scheduled to be finalised before the end of the year.

Drilling recommenced early in the Quarter with a multiple aim of new target generation with reconnaissance aircore drilling, RC drilling for target definition and diamond core drilling at Wyoming One to aid with structural interpretation. A large aircore program is targeting the five kilometre long **Tomingley structural corridor** which extends from east of Wyoming through the historic Tomingley workings north to Tomingley One and Tomingley Two (see attached figure 1). The aircore drilling has generally been widespaced on a 200 metre by 40 metre grid and was designed to locate geochemical anomalies similar to those associated with the Wyoming deposits. To the end of the Quarter, 16,210 metres had been completed in 177 holes.

Numerous zones of alteration and veining have been identified along the structural corridor and results available have defined several very anomalous targets within the corridor. Of immediate interest is **Tomingley Two**, which is located about 4 kilometres to the north of Wyoming, where the target zone appears to be over 1 kilometre in length and up to 50 metres wide. Several ore grade intercepts have been recorded within this zone and RC drill testing will be scheduled as soon as practical.

Aircore drilling also tested the new porphyry hosted zone at **Wyoming One South** which was located late last year, and the **palaeochannel** identified from the detailed aeromagnetic survey. Near ore grade gold values were intersected at Wyoming One South and this zone is currently subject to RC drilling follow up. One north-south traverse of vertical holes tested the palaeochannel about 500 metres west of the Wyoming mineralisation. The drilling has confirmed that there is a distinctive valley cut into the host Ordovician volcanic sequence below the overlying transported clays. Weak mineralisation was located at the interface of the volcanics and higher within the clays, and will be subject to further review.

RC drilling is in progress at **McLeans** and **Wyoming One South**. At the Quarter's end 9 holes (1102 metres) had been completed at McLeans testing the northern sector of this kilometre long target which extends south from the historic Myall's United mine. Several holes intersected open stopes but zones of veining and alteration have been observed with encouraging intercepts. Alteration and veining have also been observed at Wyoming One South but no results are available.

Diamond core drilling commenced in early March with three holes planned to drill into the **Wyoming One** deposit from the north, sub parallel to the main feldspar porphyry host, to intersect the high grade "376" structure and provide structural geological information from within the porphyry. This should assist with planning for subsequent core drilling to follow the mineralised system to depth.

WY 789D was completed to 231.4 metres depth and **WY 791D** to 372.5 metres depth. WY 790 was abandoned at the completion of the pre-collar due to excessive deviation. Both WY 789D and WY 791D are within the existing Wyoming One resource envelope and are providing valuable structural data on the controls of the mineralisation, with the holes coring the "Northern Zone", the "376 Zone" and within the porphyry body. The porphyry drilling was specifically designed to test for other structures hosting high grade mineralisation similar to the "376 Zone". Results have confirmed the substantial and high grade nature of the "376" structure, with other narrower high grade zones evident within the broader porphyry mineralisation.

Commencement of the third and deeper core hole was delayed until the arrival on site of a larger RC drill rig which will minimise deviation within the pre-collar. Although this drill is on site, the third core hole has been further delayed awaiting the return of the diamond core rig.

Summary of drill results for the Quarter

Hole No	East	North	Azimuth	Intercept (m)	Grade (g/t Au)	Interval (m)	EOH (m)	Target Zone
WY 688	614039	6392598	270°	2	0.98#	20 - 22	52	Wyoming One South
TO 084	614641	6396599	90°	3	1.27	36 - 39	89	Tomingley 1
TO 092	614598	6396901	90°	3	0.99	75 - 78	118	Tomingley 1
TO 117	614640	6397602	90°	3	1.33	78 - 81	130	Tomingley 1
TO 123	614712	6397800	90°	3	4.93#	111 - 114	137	Tomingley 2
TO 144	614840	6398200	90°	3	0.96	66 - 69	107	Tomingley 2
TO 162	614880	6398800	90°	20	0.76	123- 143	143	Tomingley 2
incl				5	1.38	138 - 143		
MCP037	614320	6392250	270°	1	24.45#	37 - 38	102	McLeans
MCP038	614360	6392250	270°	18	1.38#	81 - 99	174	McLeans
incl				3	5.02	84 - 87		McLeans
MCP039	614340	6392150	270°	3	1.68	0 - 3	102	McLeans
MCP040	614380	6392150	270°	3	1.73	105 - 108	144	McLeans
MCP043	614360	6392050	270°	3	1.16	39 - 42	76	McLeans
MCP043A	614366	6392050	270°	3	1.07	45 - 48	102	McLeans
WY 789D	614076	6393449	180°	71	2.60	58 - 129	231.4	Wyoming 1
incl				9	12.45*	100 - 109		
and				8	1.26*	142 - 150		
and				12	1.74*	166 - 178		
and				10	1.64*	192 - 202		
WY 791D	614102	6393541	180°	14	2.08*	194 - 208	372.5	Wyoming 1
and				12.5	7.88*	265 - 277.5		
and				1.6	8.06*	306 - 307.6		
and				25	0.78*	319 - 344		

All holes drilled at a nominal inclination of -60°.

Gold analysis by 30g fire assay of 3 metre composites. #50g fire assay of 1m resplits; * 50g fire assay of half HQ core

DUBBO ZIRCONIA PROJECT

Australian Zirconia Ltd (AZL) 100%, subject to Astron Limited earning 50%

Review of potential process flow sheet optimisations and modifications continued, leading to design and construction of the Demonstration Pilot Plant (DPP). It is anticipated that this work will result in further laboratory scale test work in the next three months prior to finalisation of the design of the DPP mid year. Construction should commence in the second half of the year.

PEAK HILL GOLD MINE

Alkane Exploration Ltd 100%

Only 311 ounces of gold were produced for the March Quarter. This was well below budget caused by mechanical failure in the gold room, which has now been fixed. However, budget gold was recovered to carbon during the Quarter and this gold will be poured over the coming months.

Decommissioning of the heaps is continuing and gold will continue to be produced from these operations over the next six months or more, generating a small cash surplus.

BODANGORA (gold-copper)

Alkane Exploration Ltd 100%, subject to royalty agreement with Rio Tinto Exploration Pty Limited

A detailed aeromagnetic survey is scheduled to commence shortly to assist with a geological and structural interpretation. Data compilation for the project is in progress and it is anticipated that this will be combined with the aeromagnetic interpretation to generate drill targets. An initial reconnaissance drill program is planned for the current Quarter.

WELLINGTON (copper-gold)

LFB Resources NL 100%

An ongoing review of the data for the Galwadgere volcanogenic massive sulphide deposit continues to highlight the gold potential of this system. A reconnaissance drill program to confirm the gold potential is also scheduled for the current Quarter.

ORANGE-MOLONG (copper-gold)

LFB Resources NL 100%

An auger soil geochemical survey is in progress to test structural targets identified on aeromagnetic images covering the area immediately to the south of the Charlies area. Previous drilling has intersected narrow high grade gold-copper intercepts associated with altered monzonite intrusives in the Charlies and Mt Keenan areas.

MOORILDA (copper-gold)

LFB Resources NL 100%

As with Bodangora a detailed aeromagnetic survey is scheduled to commence shortly to assist with a geological and structural interpretation. Previous drilling of several targets within the Moorilda area has returned several ore grade intercepts and further drilling of this project has been rescheduled for later 2004.

CUDAL (gold-copper)

Alkane Exploration Ltd 100%, subject to royalty agreement with Rio Tinto Exploration Pty Limited

A detailed aeromagnetic survey is also scheduled for Cudal and target definition will follow a more rigorous data compilation and assessment.

WESTERN AUSTRALIA**LEINSTER REGION JOINT VENTURE (nickel-gold)**

Alkane Exploration Ltd 49%, Jubilee Mines NL 51%

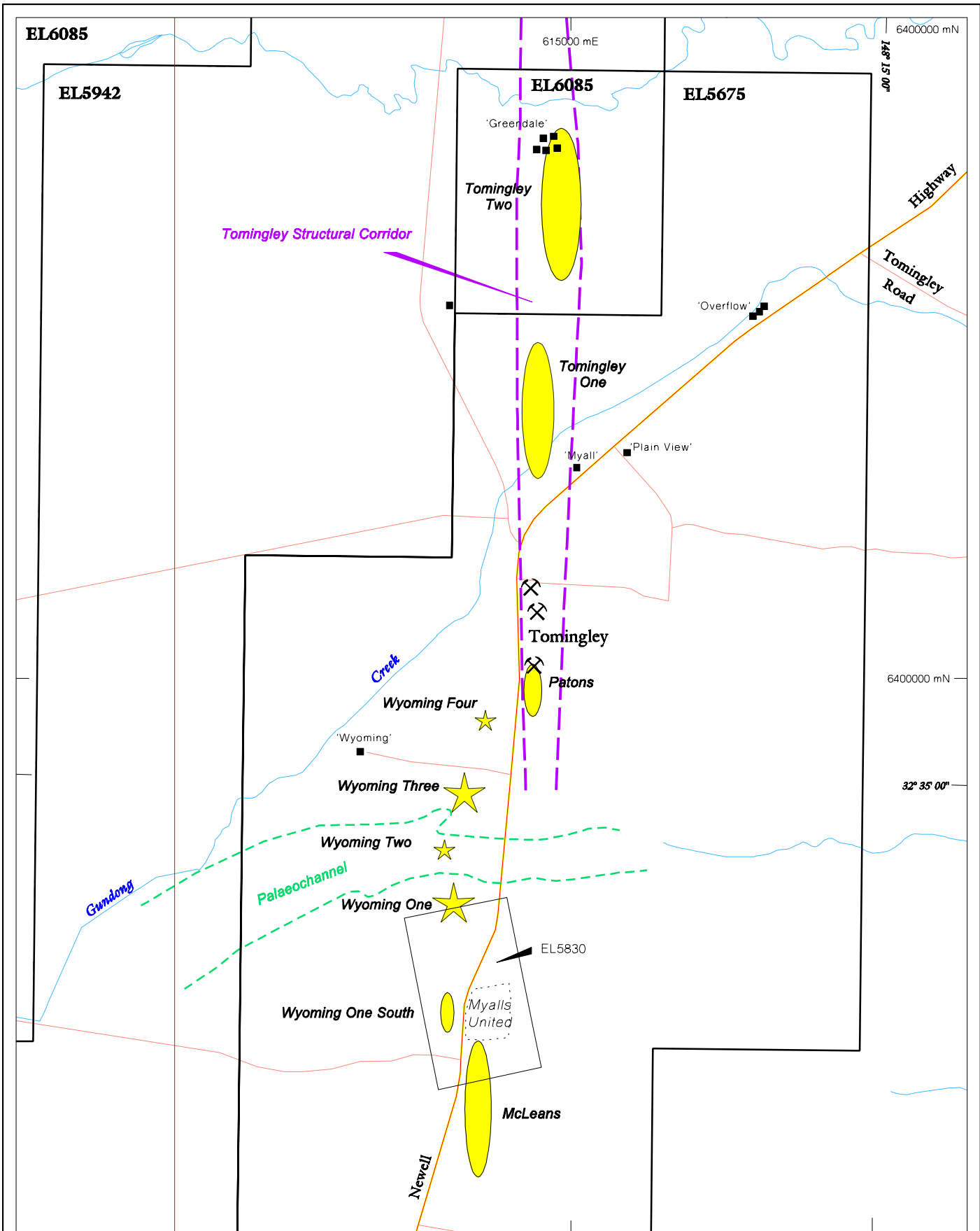
The four prospects - Leinster Downs, Miranda, McDonough Lookout and Mt Keith - are subject to a farm-in agreement with Jubilee Mines NL where Jubilee can earn a 75% interest in the properties by spending \$4.5M before March 2005. In March 2002 Jubilee reported expenditures to earn a 51% interest and have elected to continue to earn a further 24%.

Jubilee have advised that no field work was carried out during the quarter but drilling is planned for the second half of the year.

NULLAGINE DIAMOND PROJECT (Western Australia) and WAITANGI (New Zealand) were inactive

DI Chalmers**Technical Director****ALKANE EXPLORATION LTD**

Unless otherwise stated this report is based on information compiled by Mr DI Chalmers, FAusIMM, FAIG, a director of the Company, who is a competent person as defined in the Australasian Code for Reporting of Identified Mineral Resources and Ore Reserves, September 1999, and accurately reflects the information compiled by the competent person.



Scale 1 : 40 000
 0 1.5
 kilometres

Projection - AMG Zone 55
 Datum (horizontal) - AGD66

ALKANE EXPLORATION LTD

TOMINGLEY GOLD PROJECT
 NEW SOUTH WALES

Prospect Locations

COMPILED : MMC PLAN No. : ALK TOM 1AL-003
 DRAFTED : M-O-G Date : April 2004 FIGURE No. : 1