

PROJECT DEVELOPMENTS

NEW SOUTH WALES

PEAK HILL GOLD MINE

Alkane Exploration Ltd 100%

Mining, crushing and stacking operations for the oxide ore were completed in the December Quarter of 2002, but leaching of the existing heaps and gold production will continue through 2004.

During the June Quarter, 1615 ounces of gold were recovered which was in excess of budget. Cash costs were A\$261 per ounce while revenue averaged A\$545 per ounce.

Decommissioning of the site continues and final rehabilitation of areas away from the heap leach stacks such as the open cuts, haul roads ROM pad and waste rock emplacement is nearing completion.

DUBBO ZIRCONIA PROJECT

Australian Zirconia Ltd (AZL) 100%

Discussions with the major zirconia producer continued and a formal agreement is anticipated shortly. This agreement should enable a development joint venture to be implemented for this large strategically significant resource.

TOMINGLEY GOLD PROJECT (TGP)

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

Drilling at the Wyoming Prospect within the Tomingley Gold Project near the Company's Peak Hill gold operation in the central west of New South Wales continued throughout the Quarter. A total of 75 RC holes (12,167 metres) and 3 diamond core holes (490 metres precollar and 1039.6 metres of NQ/HQ core) were completed. A total of 97 RC and core holes totalling 17,925 metres have been drilled at Wyoming so far this year.

The resource definition programme was completed at **Wyoming One** and while only the preliminary three metre RC composite samples, and one metre half core results have been received, a number of holes recorded substantial gold intercepts (see Table 1). Drilling during the Quarter targeted both the porphyry hosted mineralisation and the high grade '376' structure, hence holes were orientated east-west (270°) and south-north (360°). The drilling is largely on sections 25 metres apart and 20 metres down dip and was designed to provide the detail necessary to compile a resource to Measured status.

The programme has enabled a reassessment of the geological controls to the mineralisation and several key parameters have emerged. The porphyry intrusive appears to be a near vertical, pinnacle shaped body with its long axis aligned north-north-west and dimensions of 40 metres by 100 metres near surface (200mRL), broadening to 80 metres by 225 metres at depth (000mRL). The northern extent of the porphyry is truncated by a vertical, east-west structure ('376') which is strongly mineralised where in contact with the porphyry.

The carapace (top) of the porphyry is strongly altered and veined, and is mineralised throughout. The contact of the porphyry with the host volcanoclastic rocks is also altered, veined and mineralised, particularly on the eastern contact. At depth the mineralisation appears to be controlled by specific structures, but the drilling is not extensive enough to accurately determine the orientation of these at present. An apparently stratigraphically controlled zone (the "hangingwall") is located 20-30 metres east of the porphyry contact and while patchily mineralised, this zone has been traced over a strike length of 300 metres.

A deep diamond core hole (WY 560) was drilled from the south to penetrate the long axis of the porphyry to assist with the structural interpretation and intersect the '376' structure at depth. The hole deviated significantly to the east and missed the primary target zone at depth but some veining and alteration were observed. Assay results for this hole are awaited. Another shallower core hole has been programmed to retest the porphyry and primary targets.

At **Wyoming Three** a similar 25 metre by 20 metre resource definition drilling programme was completed. The geology and controls on gold mineralisation appear to be different to those at Wyoming One. Wyoming Three is currently interpreted to be a structurally controlled west-north-west trending sheeted quartz vein system. The mineralisation is largely within the host volcanoclastic rocks and although porphyry bodies are present they are not extensively altered or mineralised.

Overall the mineralised system is near vertical and has plus 1g/t gold intercepts over a strike length of 300 metres with variable widths, but grades and widths can be substantial in linking structures (see Table 2). After an initial reassessment of the mineralisation it was apparent that data was absent from several sections and a programme of a further 15 RC holes was commenced. Two diamond core holes are also scheduled to be completed. Results from this drilling will be reported as soon as they are available.

Generally the Wyoming Three system has not been tested below 100 metres vertical depth and deeper drilling will be considered when the data from the resource programme has been compiled.

Once all the one metre resplit check analyses have been received, a resource assessment will be completed for **Wyoming One** and **Wyoming Three**. A conceptual mine development and prefeasibility study will also be compiled with the aim of determining an optimum development scenario. This programme is scheduled to be completed by the end of the September Quarter.

Six aircore holes (607 metres) were also completed at **Tomingley One** to continue the testing of this target located 3 kilometres north of Wyoming. Two holes intersected zones grading better than 1.00g/t gold (see Table 3) within the previously identified structural corridor. Further drilling will be scheduled to evaluate this target and several others within this area.

WYALONG (copper-gold)

LFB Resources NL 100%

The Wyalong project is subject to a joint venture with Newcrest Operations Limited (NOL), whereby NOL have the option to earn a 75% interest in the tenement through sole funding of the first \$3.5m exploration expenditure over a five year period. NOL are the operators of the joint venture.

Newcrest have advised that assays from the 14 hole wide-spaced aircore geochemical drilling program completed during March, 2003 were received. The best results were 8 metres from 74 metres at 0.30g/t gold and 2 metres from 136 metres at 0.11g/t gold in ACJM055, and 2 metres at 0.13g/t gold in ACJM062. The shallower intercept in ACJM055 is almost certainly in the cover sequence.

MOORILDA (copper-gold)

LFB Resources NL 100%

As advised to the ASX on 23 June, a five hole RC drilling programme was completed at the Moorilda project which is located 5km east of Blayney, and about 30km southeast of Orange in the Central West of New South Wales. Moorilda is held by LFB Resources NL, a wholly owned subsidiary of Alkane Exploration Ltd.

Moorilda straddles the structural contact between the Ordovician aged Molong Volcanic Belt in the west and the Siluro-Devonian sediments and volcanics of the Hill End Trough to the east. Numerous historical gold workings are scattered along 60km of the structure of which about 30km is held by LFB Resources. An intrusive monzonite complex (Moorilda Complex) is covered in the south. The giant Cadia-Ridgeway gold-copper monzonite associated orebodies of Newcrest Mining are located 30km to the west while the major historic producer at Lucknow (~500,000 ounces of gold) is 5km to the northwest.

Recent exploration of the area has been sporadic with limited, shallow drill testing of some historic prospects during the 1980's and regional surface sampling in the 1990's. Data compilation and review identified several prospects which had potential for gold resources and three areas - two historic producers (**Bright Star** and **Last Chance**) and a previously untested magnetic anomaly - were selected for reconnaissance drill testing during this programme. The holes were designed to test and confirm the geological controls and down dip extent of the gold mineralisation at the **Bright Star** and **Last Chance** mines, and to identify the source of the magnetic anomaly.

Results are reported in Table 4.

Many other prospects remain partially or not tested including the Confidence Mine and the McPhillamy's Prospect where regoleach soil sampling has identified a broad gold-tellurium anomaly covering some 2-3km strike and up to 1km in width. The anomaly is coincident with the Godolphin Fault where it is cut by north-east trending structures.

A more extensive evaluation programme for the project is being considered.

WELLINGTON, KADUNGLE and ORANGE-MOLONG were inactive.

WESTERN AUSTRALIA

LEINSTER REGION JOINT VENTURE (nickel-gold)

Alkane Exploration Ltd 49%

*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 they are planning a substantial exploration programme for the joint venture tenements in the coming twelve months.

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

DI Chalmers
Technical Director
ALKANE EXPLORATION LTD

INTERNET HOME PAGE : www.alkane.com.au
 E-MAIL : mail@alkane.com.au

Unless otherwise stated this report is based on information compiled by Mr D I 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.

TABLE 1: Wyoming One 3 metre composite drill results

Hole No	East	North	Azimuth	Intercept (m)	Grade (g/t Au)	Interval (m)	EOH (m)	Target Zone
WY 468D	614140	6393400	270°	6.4	2.37	75.6 - 82	177.7	Wyoming 1
and				15	1.29	89 - 104		
and				3	1.60	160 - 163		
WY 471	614135	6393325	270°	54	3.80	45 - 99	213	Wyoming 1
including				6	12.26	93 - 99		
and				12	1.42	153 - 165		
and				6	1.97	198 - 204		
WY 472	614225	6393325	270°	6	2.95	147 - 153	303	Wyoming 1
WY 473	614080	6393275	270°	27	2.94	42 - 69	99	Wyoming 1
WY 476	614210	6393275	270°	3	1.75	102 - 105	207	Wyoming 1
and				63	1.64	138 - 201		
including				6	4.46	147 - 153		
WY 477	614248	6393300	270°	6	1.53	165 - 171	321	Wyoming 1
and				6	1.60	245 - 251		
WY 478	614145	6393350	270°	120	3.85	48 - 168	201	Wyoming 1
including				9	10.19	66 - 75		
and				12	21.20	156 - 168		
WY 479	614180	6393353	270°	6	2.50	123 - 129	261	Wyoming 1
and				21	2.68	201 - 222		
WY 484D	614205	6393298	270°	5	2.67	103 - 108	226	Wyoming 1
and				65	1.94	141 - 206		
including				9	5.27	197 - 206		
WY 485D	614260	6393250	270°	3	1.78	173 - 176	301	Wyoming 1
and				1.20	7.23	202 - 203.2		
and				2	1.78	218 - 220		
WY 496	614208	6393353	270°	6	3.29	132 - 138	297	Wyoming 1
and				15	3.14	282 - 297		
including				3	13.90	282 - 285		
WY 497	614225	6393353	270°	99	4.30	258 - 357	363	Wyoming 1
including				9	10.00	270 - 279		
and				6	18.20	321 - 327		
WY 499	614165	6393250	270°	3	3.43	96 - 99	123	Wyoming 1
WY 501	614260	6393198	270°	9	1.70	189 - 198	249	Wyoming 1
WY 502	614320	6393198	270°	21	1.80	240 - 261	261	Wyoming 1
WY 504	614100	6393340	360°	30	1.82	45 - 75	153	Wyoming 1
and				9	3.43	96 - 105		
WY 505	614075	6393330	360°	72	3.76	48 - 120	171	Wyoming 1
including				15	11.92	105 - 120		
WY 515	614225	6393400	270°	15	3.26	186 - 201	231	Wyoming 1
WY 540	614025	6393330	360°	33	1.36	69 - 102	150	Wyoming 1
and				6	3.14	81 - 87		
WY 541	614050	6393353	360°	3	2.26	63 - 66	75	Wyoming 1
WY 542	614050	6393320	360°	36	2.75	105 - 141	162	Wyoming 1
including				9	4.88	129 - 138		
WY 543	614050	6393300	360°	21	8.63	156 - 177	186	Wyoming 1
including				6	24.30	162 - 168		
WY 544	614075	6393350	360°	54	3.00	57 - 111	120	Wyoming 1
including				30	5.02	57 - 87		
WY 545	614075	6393310	360°	87	2.15	57 - 144	162	Wyoming 1
including				6	4.25	90 - 96		
and				6	9.53	135 - 141		
WY 546	614075	6393290	360°	93	2.07	87 - 180	198	Wyoming 1
including				21	3.74	102 - 123		
including				12	6.22	168 - 180		
WY 547	614100	6393330	360°	42	1.36	48 - 90	168	Wyoming 1
and				42	2.13	108 - 150		
including				12	3.79	138 - 150		
WY 548	614100	6393310	360°	96	1.73	42 - 138	168	Wyoming 1
including				12	5.13	42 - 54		
WY 549	614100	6393265	360°	156	0.99	84 - 240	258	Wyoming 1
including				39	1.27	84 - 123		
including				36	1.58	204 - 240		

All holes drilled at a nominal inclination of -60°

Gold analysis by 50g fire assay from 1 metre half core (D) or 30g fire assay of 3 metre composites of RC samples

TABLE 2: Wyoming Three 3 metre composite drill results

Hole No	East	North	Azimuth	Intercept metres	Grade g/t Au	Interval metres	EOH metres	Target Zone
WY 508	614275	6394167	180°	3	1.55	57 - 60	105	Wyoming 3
and				9	1.74	69 - 78		
WY 510	614250	6394162	180°	18	1.81	21 - 39	93	Wyoming 3
and				6	3.56	66 - 72		
including				3	6.22	66 - 69		
WY 511	614250	6394180	180°	9	2.70	111 - 120	129	Wyoming 3
and				3	1.11	123 - 126		
WY 512	614250	6394200	180°	9	1.63	144 - 153	165	Wyoming 3
WY 513	614225	6394150	180°	12	2.76	18 - 30	93	Wyoming 3
WY 517	614200	6394178	180°	21	5.40	30 - 51	93	Wyoming 3
including				9	7.62	33 - 42		
and				21	1.29	60 - 81		
WY 518	613975	6394150	090°	9	4.50	126 - 135	192	Wyoming 3
and				3	3.50	147 - 150		
WY 519	613975	6394175	090°	15	1.94	150 - 165	210	Wyoming 3
WY 520	614150	6394172	180°	3	3.54	48 - 51	87	Wyoming 3
WY 521	614200	6394200	180°	12	2.26	30 - 42	129	Wyoming 3
including				6	3.75	36 - 42		
and				9	7.14	84 - 93		
and				21	1.10	99 - 120		
WY 522	614200	6394220	180°	18	1.01	57 - 75	153	Wyoming 3
and				3	1.86	123 - 126		
WY 523	614200	6394162	180°	15	2.30	27 - 42	87	Wyoming 3
WY 524	614175	6394190	180°	3	2.43	15 - 18	111	Wyoming 3
and				21	3.57	69 - 90		
including				9	5.18	72 - 81		
and				3	1.34	99 - 102		
WY 525	614175	6394222	180°	3	1.51	57 - 60	153	Wyoming 3
and				6	1.83	129 - 135		
WY 527	614175	6394260	180°	6	1.54	63 - 69	105	Wyoming 3
WY 528	614150	6394240	180°	3	2.18	57 - 60	111	Wyoming 3
and				3	1.15	72 - 75		
and				3	1.67	81 - 84		
WY 530	614175	6394280	180°	6	1.46	93 - 99	111	Wyoming 3
WY 533	614125	6394260	180°	12	1.82	159 - 171	195	Wyoming 3
WY 534	614100	6394182	180°	9	12.80	42 - 51	96	Wyoming 3
WY 535	614100	6394205	180°	18	1.12	36 - 54	126	Wyoming 3
and				9	4.29	75 - 84		
WY 537	614100	6394302	180°	6	1.12	51 - 57	75	Wyoming 3
WY 555	614050	6394250	180°	6	3.25	60 - 66	156	Wyoming 3
WY 557	613950	6394150	090°	3	1.52	183 - 186	219	Wyoming 3
and				9	1.45	195 - 204		

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

Gold analysis by 30g fire assay of 3 metre composites.

TABLE 3: Tomingley One 3 metre composite drill results

Hole No	East	North	Azimuth	Intercept metres	Grade g/t Au	Interval metres	EOH metres	Target Zone
TO 062	614620	6397100	090°	12	1.21	42 - 54	117	Tomingley 1
TO 066	614600	6397250	090°	3	2.22	99 - 102	119	Tomingley 1

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

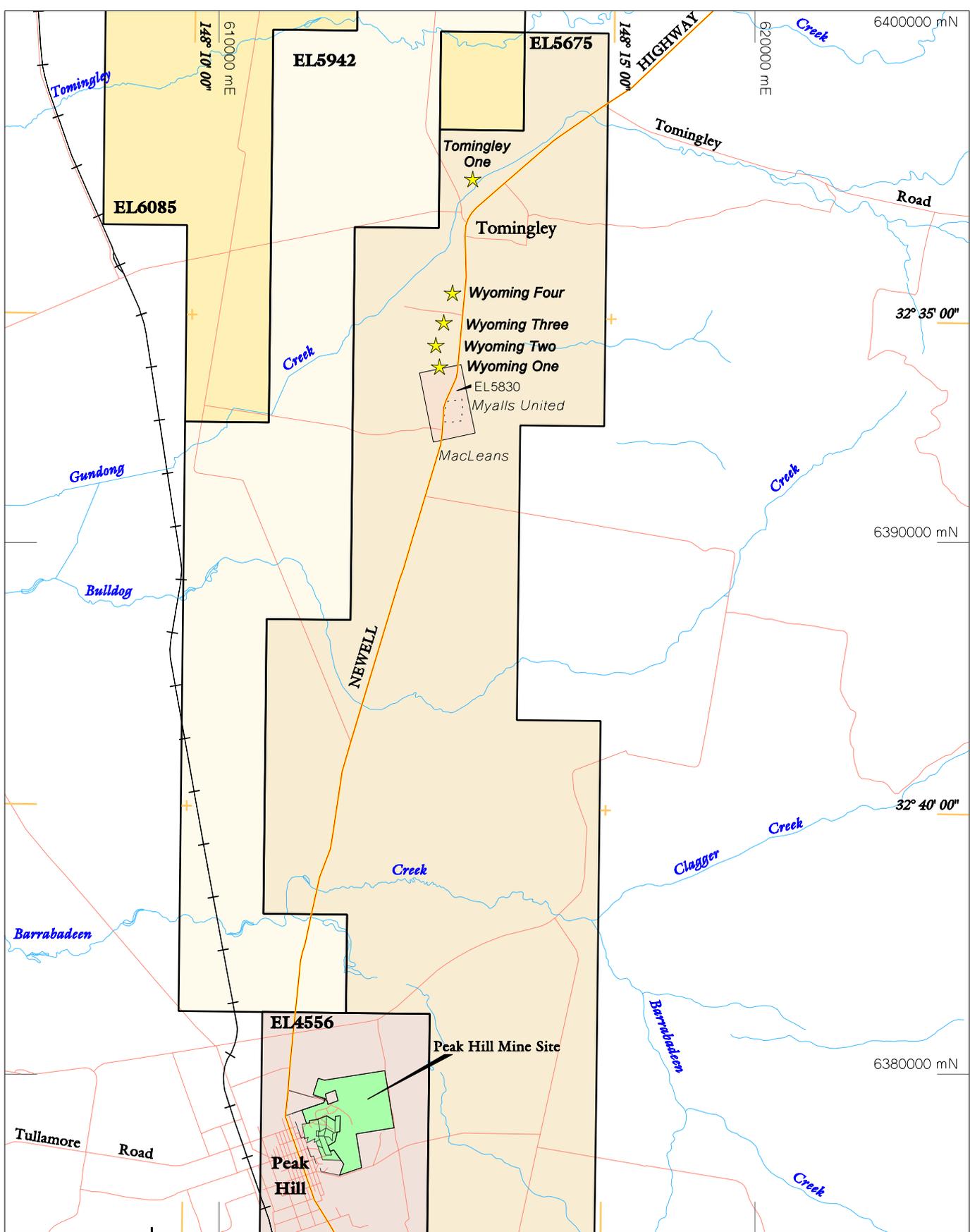
Gold analysis by 30g fire assay of 3 metre composites.

TABLE 4: Moorilda 1 metre resplit drill results

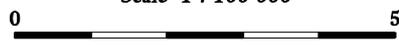
Hole No	East	North	Azimuth	Intercept (m)	Grade (g/t Au)	Interval (m)	EOH (m)	Target Zone
KP 001	719045	6283680	270°	21	1.62	108 - 129	138	Bright Star
including				9	2.19	118 - 127		
KP 003	716470	6289850	245°	12	1.83	99 - 111	200	Last Chance
KP 005	716509	6289860	245°	3	1.56	96 - 99	200	Last Chance
and				11	1.26	158 - 169		
including				3	3.29	166 - 169		

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

Gold analysis by 50g fire assay of 1 metre samples.



Scale 1 : 100 000



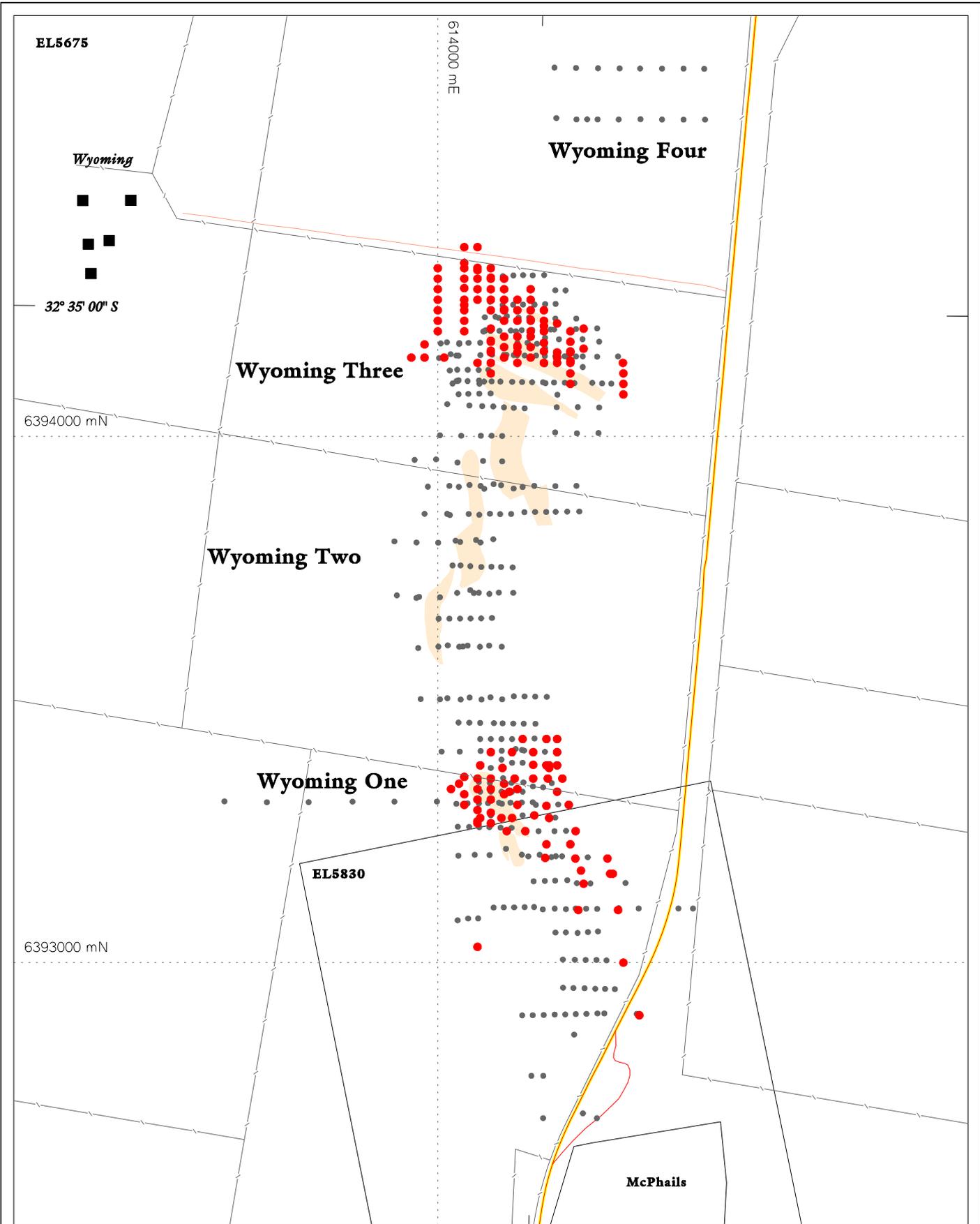
kilometres

Projection - AMG Zone 55
Datum (horizontal) - AGD66

 **ALKANE EXPLORATION LTD**

TOMINGLEY GOLD PROJECT
NEW SOUTH WALES

Location Plan



LEGEND

- Alkane drillholes end 2002
- Alkane drillholes phase 10 (April - June 2003)
- Feldspar porphyry

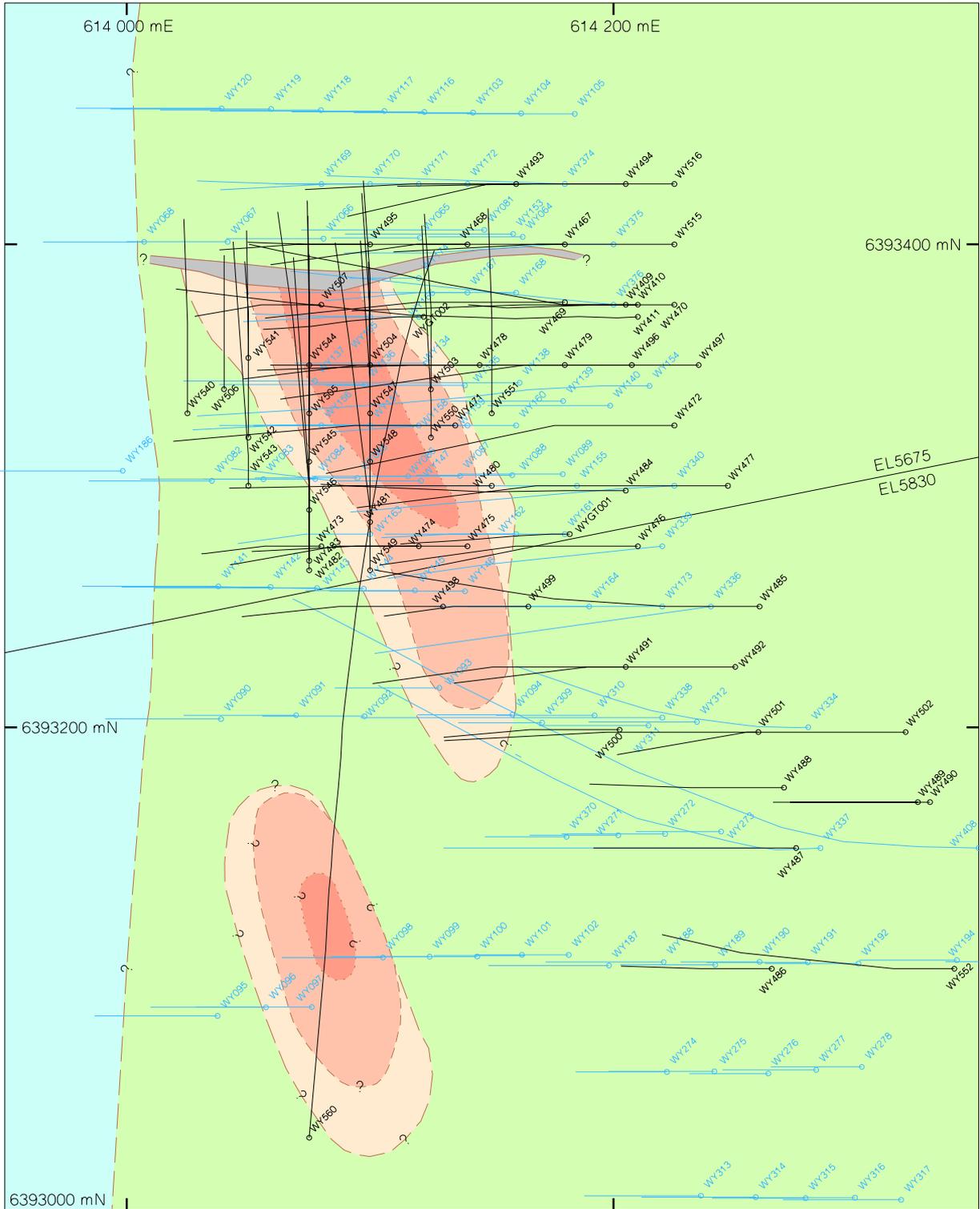
ALKANE EXPLORATION LTD

**TOMINGLEY GOLD PROJECT
WYOMING PROSPECT**

Drillhole Summary Plan

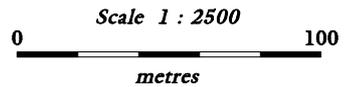
Projection - AMG Zone 55
Datum (horizontal) - AGD66
PLAN No. - ALK TOM 1HL-004





Legend

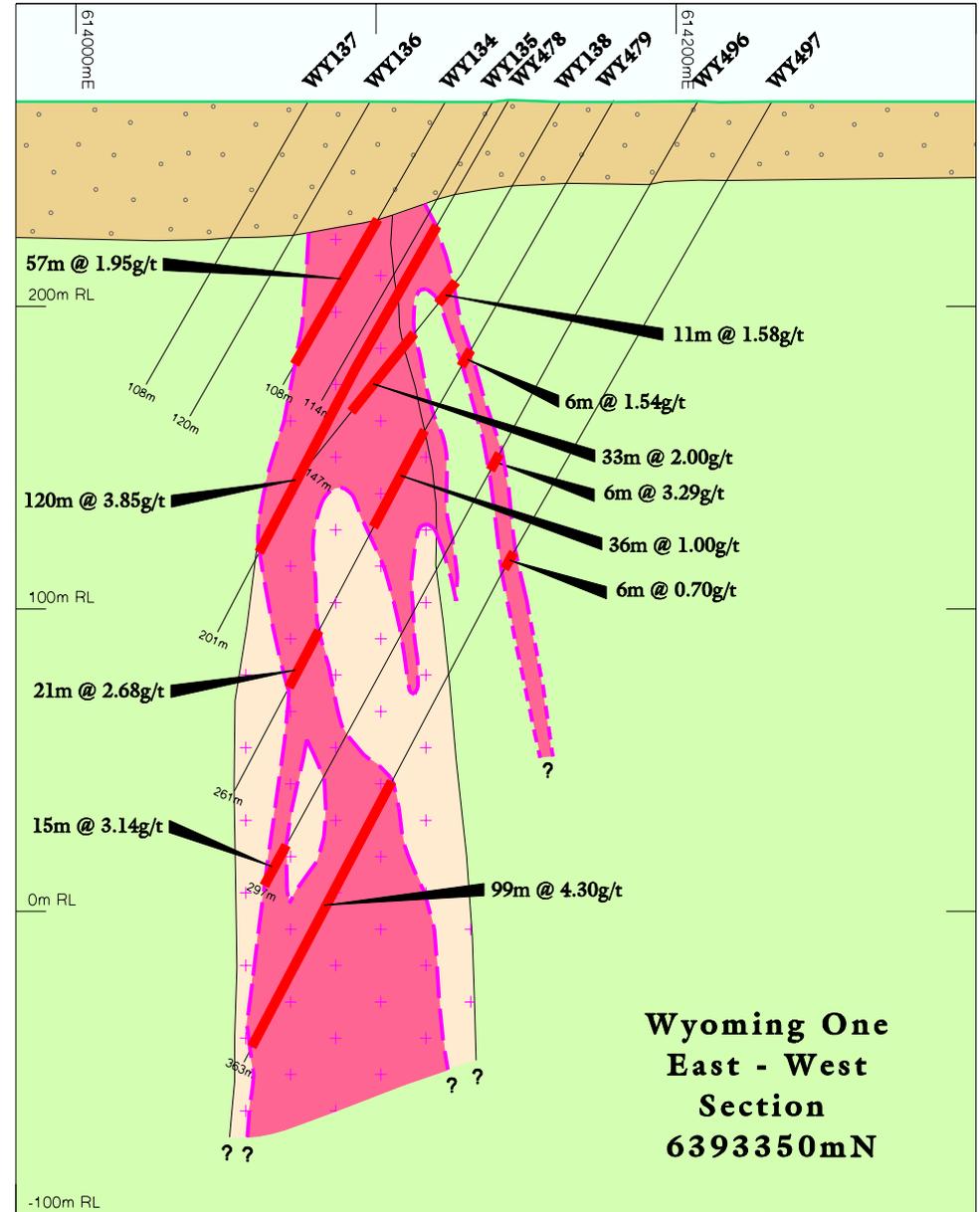
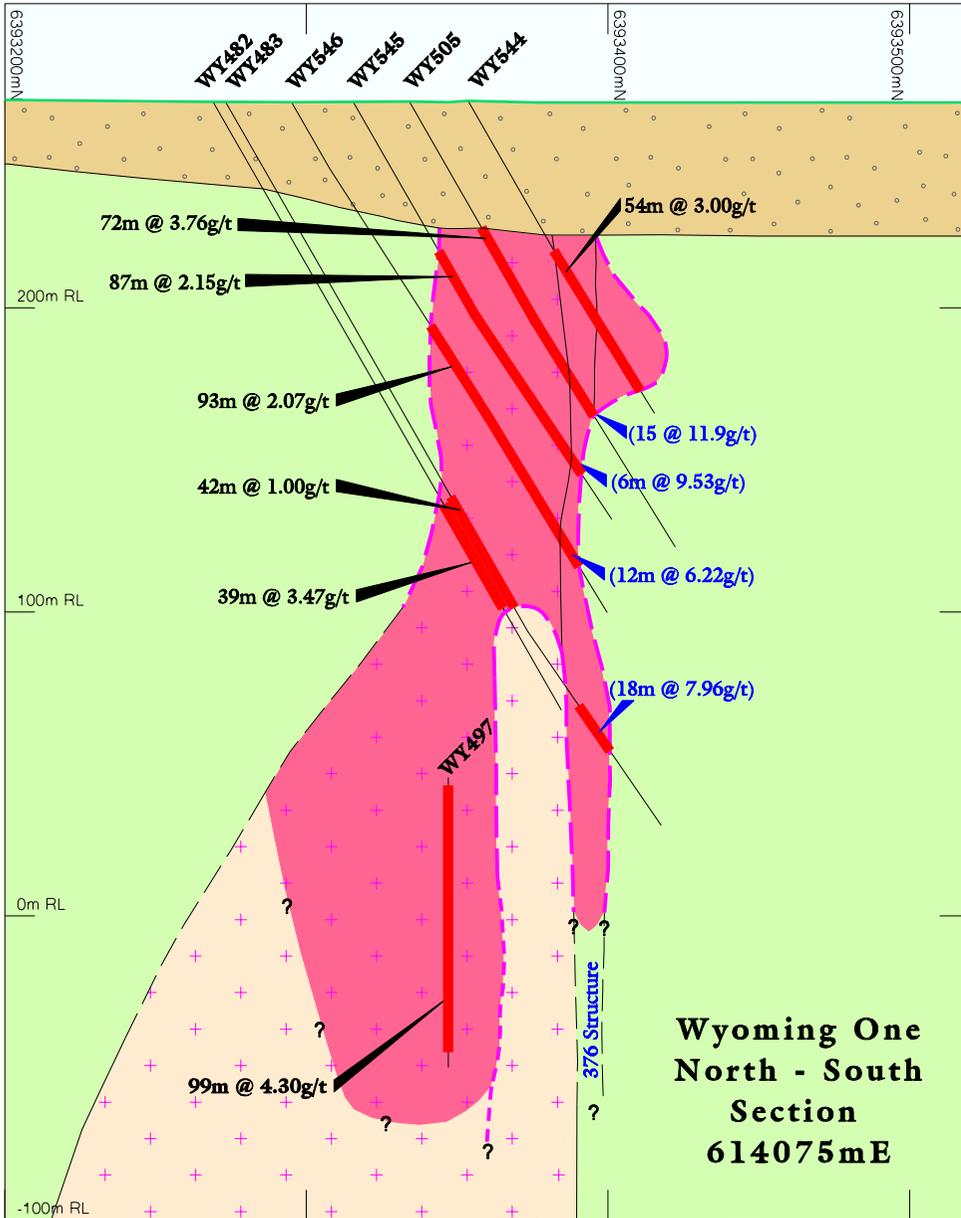
-  376 Structure
-  Pelitic sediments
-  Volcaniclastic sediments
-  Feldspar porphyry 200m RL (-70m)
-  Feldspar porphyry 100m RL (-170m)
-  Feldspar porphyry 0m RL (-270m)
-  Alkane drillhole till end 2002
-  Alkane drillhole 2003



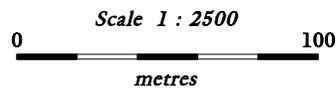
 **ALKANE EXPLORATION LTD**

**TOMINGLEY GOLD PROJECT
WYOMING PROSPECT**

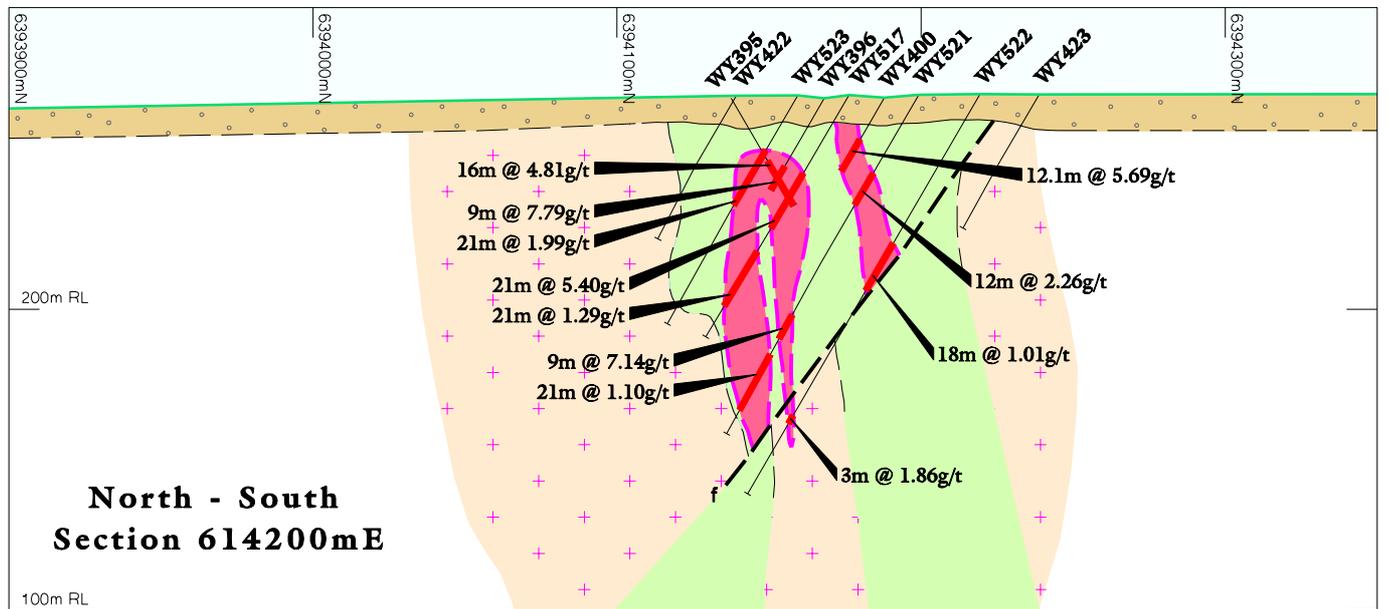
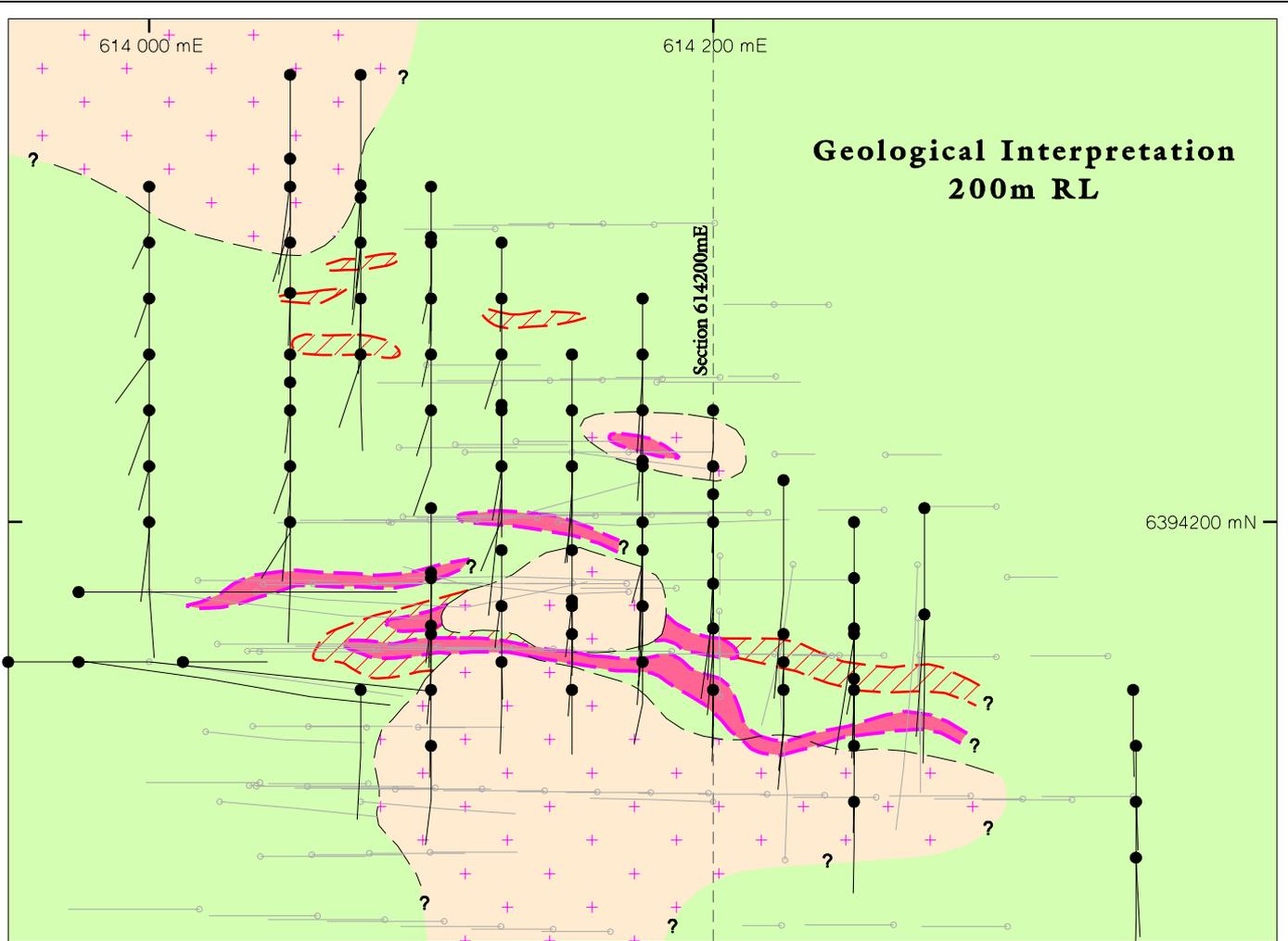
**Wyoming One
Simplified
Geological Interpretation**



- Alluvium
- Volcaniclastic sediments
- Feldspar porphyry
- Mineralisation



Geological Interpretation 200m RL



North - South Section 614200mE

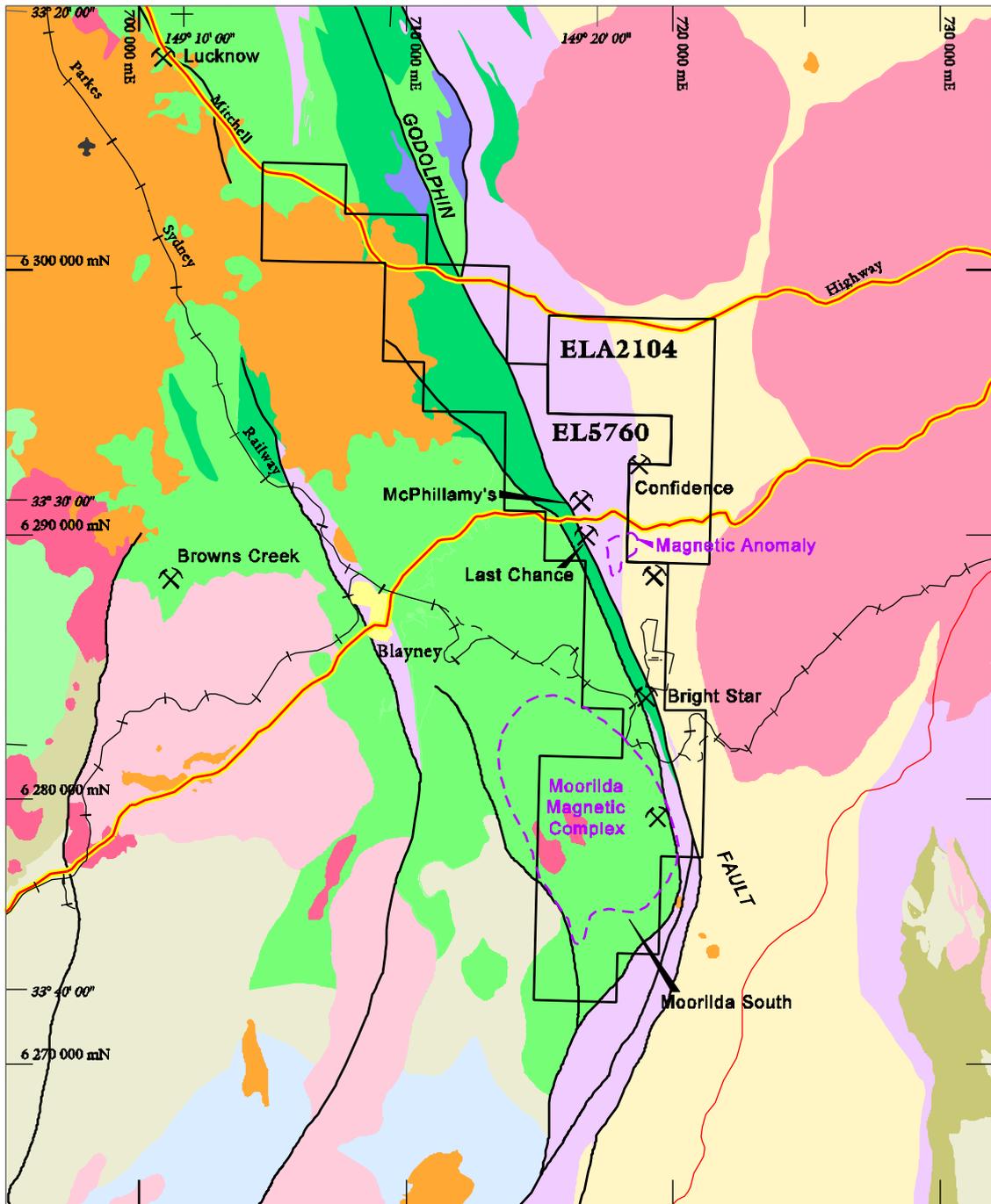
Legend

-  Mineralized zone - quartz vein lode > 1g/t Au
-  Quartz vein lode < 1g/t Au
-  Volcaniclastic sediments
-  Feldspar porphyritic volcanics and volcanoclastics
-  Fault
-  Alkane drillhole end 2002
-  Alkane drillhole 2003

Scale 1 : 2500
0 100
metres

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

Wyoming Three



- | | | |
|-----------------------------|--|--|
| Tertiary | Basalt | |
| Carboniferous | Granite Intrusives | |
| Devonian | Sediments & volcanics | |
| Silurian | Intrusives | |
| | Sediments & volcanics | |
| Ordovician | Intrusions - monzonite, monzodiorite & syenite | |
| | Intrusions - ultramafic | |
| | CARBONNE GROUP | |
| | Blayney Volcanics- mafic volcanics & sediments | |
| | Farrest Reef Volcanics - volcanics & sediments | |
| | Oakdale Formation - volcanics & sediments | |
| | Rocklea Volcanics - mafic volcanics | |
| | Weemulla Formation - volcanics & sediments | |
| | Byng Volcanics - mafic volcanics & sediments | |
| | Kenilworth Group - sediments | |
| Adaminaby Group - sediments | | |

Scale 1 : 250 000

0 10
kilometres

Projection - MGA Zone 55
Datum (horizontal) - GDA94

LFB Resources NL
(A subsidiary of Alknox Exploration Ltd)

MOORILDA PROSPECT
ORANGE
NEW SOUTH WALES
EL5760
Geology Plan