



## QUARTERLY REPORT TO 30 SEPTEMBER 2005

### KEY SUMMARY

#### ➤ TOMINGLEY GOLD PROJECT

- **Deep drilling in the Hangingwall and Porphyry Zones at Wyoming One continued to confirm the potential of the deposit:**

WY 825D including	13.00 metres grading 3.61g/t gold from 317 metres 6.00 metres grading 5.69g/t gold from 317 metres
WY 826D including	7.00 metres grading 9.41g/t gold from 417 metres 2.00 metres grading 29.95g/t gold from 472 metres
WY 831D including and	66.00 metres grading 13.80g/t gold from 268 metres 11.00 metres grading 54.69g/t gold from 281 metres 1.20 metres grading 382.50g/t gold from 287 metres
also including	33.00 metres grading 7.44g/t gold from 301 metres 14.00 metres grading 15.48g/t gold from 302 metres

#### ➤ EXPLORATION

- **Newmont Australia Limited farm-in to Alkane's Orange Gold-Copper Project comprising several tenements covering 551 km<sup>2</sup>**

**Newmont can earn an initial 51% interest by expenditure of \$5 million within 5 years, with minimum expenditure in year one of \$600,000**

**Newmont may earn an additional 24% by electing to sole fund exploration to completion of a Bankable Feasibility Study**

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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.*

Total resources for the **Wyoming** gold deposits stand at **7.13Mt grading 2.70g/t gold (606,400 ounces)**. Drilling during the Quarter was focussed on testing the **Hangingwall Zone (HWZ)** mineralisation at depth and on checking high grade zones within the **Porphyry** to assist with the optimisation of the development model.

#### **Wyoming Resource Development Drilling**

The twelve hole diamond core drilling program (5,513m including two abandoned RC pre-collars) testing higher grade zones within the **Wyoming One** deposit was completed early October and results for those core sections sampled to date are summarised in Table 1.

The primary target for the drilling was the interpreted north plunging higher grade shoot within the north north-west trending stratigraphically controlled **HWZ**. One hole, **WY 831D**, was also drilled to test an east-west trending high grade zone within the adjacent feldspar porphyry, thought to be associated with the '497' structure. Hole deviation continued to cause some problems, resulting in the abandoning of holes WY 830 and WY 834 after completion of their pre-collars. A plan of the drilling is attached as Figure 1.

The **HWZ** drilling has resulted in a revised model for the orientation of the higher grade mineralisation. The mineralisation intersected in WY 822D, WY 824D and WY 825D, and the deeper WY 811D, is now interpreted to form two shoots plunging moderately to the south within the carbonaceous mudstone host (figures 2 and 3), sub parallel to the plunge of the nearby feldspar porphyry. Holes WY 823D, WY 826D and WY 827D intersected the host mudstone but only minor alteration and mineralisation was recorded. However all three holes intersected significant mineralisation at the porphyry – volcaniclastic contact located about 30m to the west and has indicated potential for another **Contact** shoot 150-200m below the previously defined mineralisation at this position.

Two holes, WY 832D and WY 835D, tested the southern extensions within the **HWZ** but failed to intersect any substantial mineralisation and appear to have missed the plunging shoot. However the holes did intersect altered feldspar porphyry thought to be the northern extension of the Wyoming South body and although only minor gold grades were reported, supports the view that this remains a future target. WY 832D also intersected weakly altered porphyry down plunge from the previous drilling within the main Wyoming One porphyry.

WY 828D, WY 829D and WY 833D targeted the **HWZ** to the north where shallow RC/Aircore had previously recorded gold mineralisation. WY 828D did not intersect the host stratigraphy, and while WY 829D demonstrated that the target was dipping away from the hole, it did intersect a previously unidentified altered porphyry with weak gold mineralisation to the east of any known porphyry bodies. This porphyry will also be a future target. WY 833D drilled through the upper section of the main Wyoming One porphyry and the '376' structure, into the HWZ with low gold grades. It is probable that the hole drilled under the south plunge of the shoot.

Hole WY 831D was specifically drilled to test a high grade structure within the **Porphyry** which had previously been intersected by a few holes, including WY 821D (18.4m @ 5.74g/t Au, including 7.2m @ 11.06g/t Au), and interpreted to be part of the east-west '**497**' structure. To minimise deviation the hole was collared north of the porphyry and inclined steeply at -78° to the south. The hole intersected mineralisation in the **Northern** and '**376**' zones before coring a substantial altered and mineralised zone from **268m to 334m (66m) grading 13.80g/t gold** (figure 4).

Detailed core logging and comparison with other nearby holes is suggesting that this mineralisation may not be associated with '**497**' and it may represent a separate zone located between the '376' and '497' structures. Additional holes are being considered to enable this mineralisation to be fully understood and included in the

underground mine plan.

The collaboration structural study of the Wyoming deposits with the **pmd\*CRC (CSIRO)** group has advanced to stage 2. The current work is designed to collect structural information from drill core and factor this data into the computer models and assist with the understanding of the mineralised system, and provide future targeting. It is hoped that this will be completed by the end of the year.

### ***McLeans Drilling***

Two core holes were also drilled at McLeans, located approximately 1 kilometre to the south of Wyoming, to check the stratigraphy and structures that host the nearby historic Myall's United mine. MCD 001 was terminated by an historic underground working but the hole intersected several metres of veining and alteration prior to the mine opening. MCD 002 was drilled under MCD 001 and intersected volcanic and intrusive stratigraphy similar to Wyoming, however the mineralised zone appears to have been stoped out by younger mafic dykes at this location.

### ***Pre-feasibility Study***

Pre-feasibility work continued and focussed on the underground mining plan, incorporating a decline development from the Wyoming One open pit to the base of the currently defined HWZ. Further underground mine planning will await the compilation of all the data from the current drill program and additional core holes into the deeper porphyry mineralised zones.

Geological modelling of the Wyoming area is continuing and the data will be combined with the structural study to advance the overall understanding of the mineralised system.

### **DUBBO ZIRCONIA PROJECT (DZP)**

*Australian Zirconia Ltd (AZL) 100%*

As advised last quarter, Alkane appointed D J Carmichael Pty Limited (DJC) to provide corporate advice to facilitate the separation of Alkane's wholly owned subsidiary AZL via a simultaneous admission to the London AIM and the ASX markets, combined with a contemporaneous capital raising. The new structure of AZL and level of capital to be raised are still to be finalised.

The developing world supply deficit and increasing price for zircon are impacting on the value of downstream products and Alkane remains convinced of the strategic importance of the DZP as a long term supplier of zirconium and niobium-tantalum products into the developing electronics, advanced ceramics and specialty alloy industries.

### **PEAK HILL GOLD MINE**

*Alkane Exploration Ltd 100%*

Final rehabilitation of the heap leach pad progressed during the quarter. Shaping and top soiling has been completed. Seeding will be commenced soon and construction of the remaining erosion and sediment control structures is scheduled to be completed by the end of the year.

122 ounces of gold were produced during the quarter. Drain down solution carrying low levels of gold continues to be processed and the recovered gold will be poured in a final clean up later in the year.

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

*Alkane Exploration Ltd 100%, subject to Newmont Australia Limited earning an initial 51%*

As advised to the ASX on 17 August, Alkane reached agreement with Newmont Australia Limited (Newmont) to farmin to Alkane's **Orange Project** which includes the **Molong** (EL's 6025 and 6091), **Moorilda** (EL's 5760 and 6111) and **Cudal** (EL's 4155 and 5851) tenements located near the city of Orange in the Central West of New South Wales (figure 1), adjacent to Newcrest Mining Ltd's Cadia Valley Operations (~30Moz total resources). The basic terms are:

- **Newmont can earn an initial 51% interest by expenditure of \$5 million within 5 years, with minimum expenditure in year one of \$600,000**
- **Newmont may earn an additional 24% by electing to sole fund exploration to completion of a Bankable Feasibility Study**
- **Alkane will be the initial operator for the Project**

The **Cudal** tenements are subject to a 60% buy-back option held by Rio Tinto Exploration Pty Limited (Rio), and will not initially form part of the Farmin. Alkane and Newmont have been negotiating with Rio to restructure that buy-back option which is triggered by the discovery of a mineral resource of 5 million ounces of gold or equivalent value.

An initial reconnaissance drilling program has commenced at **Molong** where targets include monzonite intrusive associated porphyry gold-copper mineralisation of the Cadia-Ridgeway type and sediment replacement gold deposits of the Carlin type.

The program comprises 4 to 5 reconnaissance core/RC holes (~1500m) to test stratigraphic, alteration and geophysical targets in the Charlies and Galloway areas. Previous drilling in these areas has intersected extensively altered monzonite intrusives within altered sediments and volcanic rocks, with narrow high grade gold intercepts up to 9.91 g/t gold and 0.56% copper.

Depending upon access and weather conditions, results of the drilling should be available later in November.

#### **WELLINGTON (copper-gold)**

*Alkane Exploration Ltd 100%*

As advised in the June Quarter Report, following compilation of the initial resource estimate at **Galwagere** of **2.09 million tonnes grading 0.99% Cu and 0.3g/t Au (Indicated Resource 0.5% Cu cut off)**, an internal scoping study was completed to determine if the deposit could be developed as an open pit mine with flotation recovery to produce a copper-gold concentrate.

The study indicated a potential positive outcome and discussions with copper concentrate off take partners have been initiated.

**BODANGORA (gold-copper)** was inactive.

#### **WESTERN AUSTRALIA**

##### **LEINSTER REGION JOINT VENTURE (nickel-gold)**

*Alkane Exploration Ltd 49%, Jubilee Mines NL 51%*

*The three prospects - **Leinster Downs, Miranda and McDonough Lookout** - 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 2006. 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. The complaints against the Miranda tenement have been resolved and no further action is anticipated

**Mt KEITH (gold)** was inactive.

**NULLAGINE DIAMOND PROJECT (diamonds, iron, gold)**

*Alkane Exploration Ltd 60%, Randolph Resources Syndicate 40%*

Discussions continued with groups interested in advancing the potential 150 to 220 million tonne channel iron deposits within the Nullagine tenements. A delay in lodging relevant paperwork has postponed grant of the Exploration Licences and they will now not be finalised until early in the new year

**DI Chalmers**

**Technical Director**

**ALKANE EXPLORATION LTD**

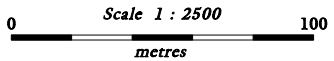
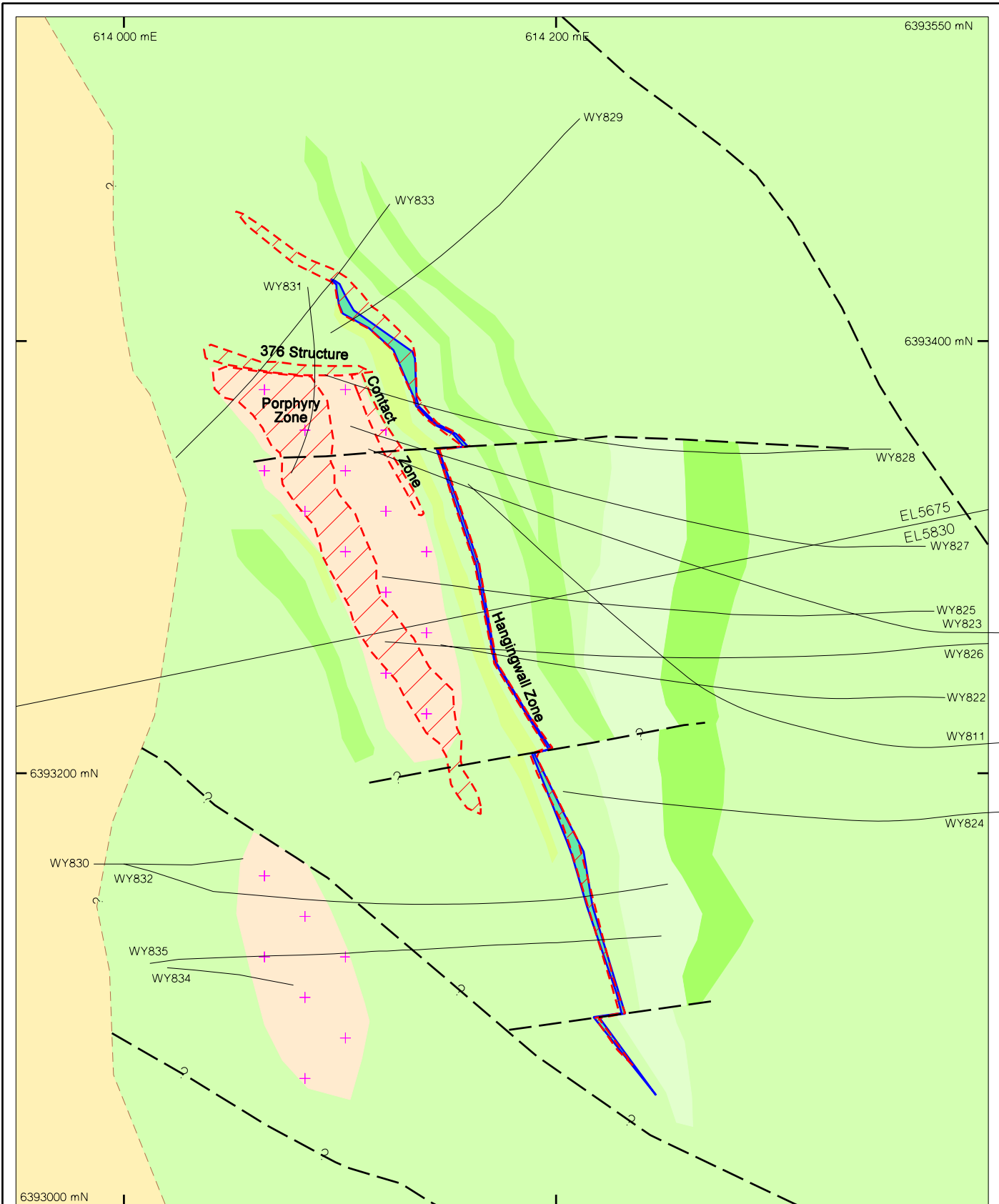
*Mr D I Chalmers, FAusIMM, FAIG, (director of the Company) has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as Competent Person as defined in the 2004 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Ian Chalmers consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.*

Table 1 - Wyoming core results.

## Summary of all holes completed to date

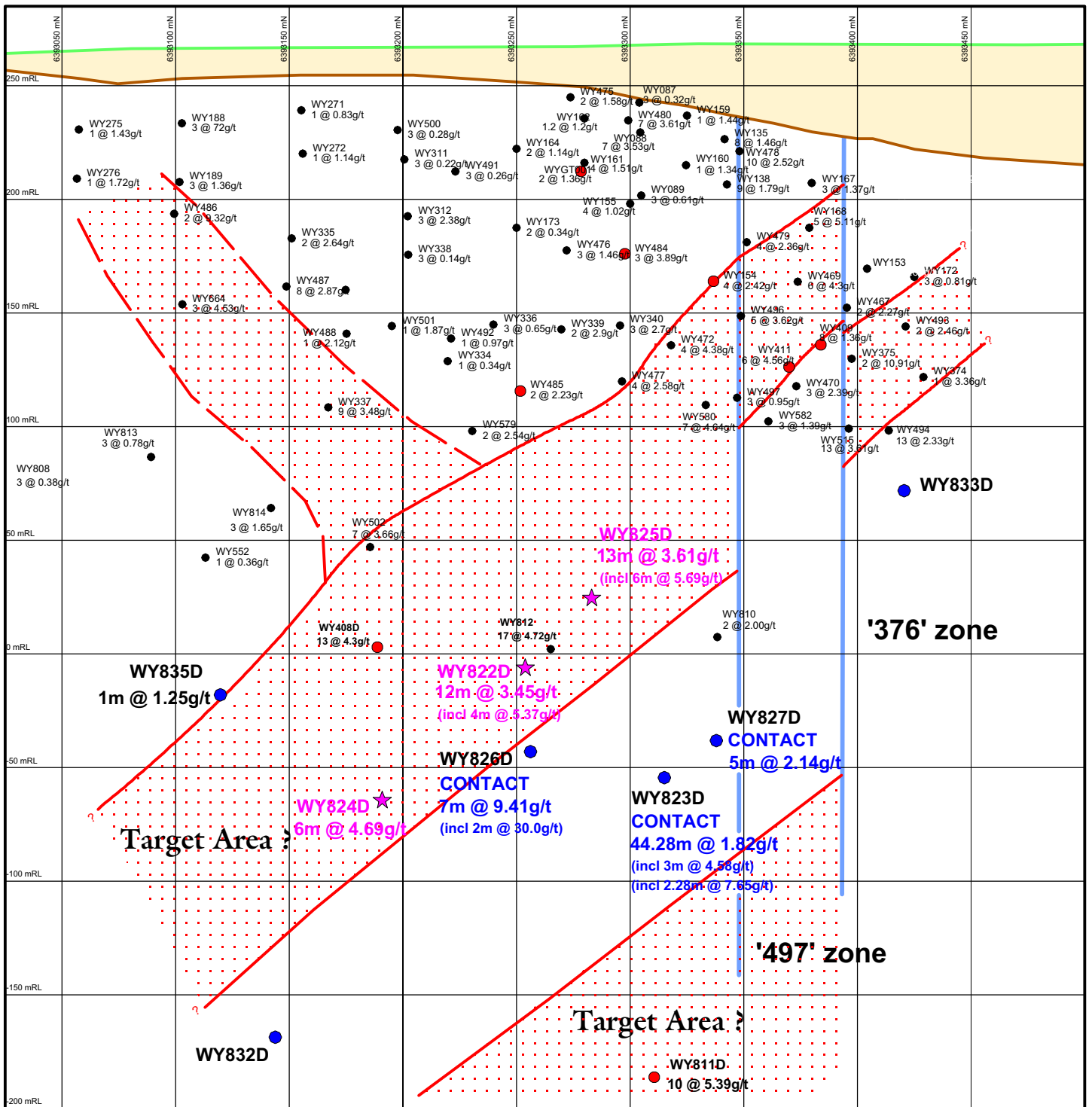
Hole No	East	North	Azimuth	Intercept (m)	Grade (g/t Au)	Interval (m)	EOH (m)	Target Zone
WY 822D	614380	6393235	270°	321 – 347	1.95	26	394.9	HWZ
incl				329 – 341	3.45	12		
incl				337 – 341	5.37	4		
WY 823D	614424	6393280	270°	487–531.28	1.82	44.28	537.6	HWZ
incl				487 – 490	4.58	3.00		
and				529– 531.28	7.65	2.28		
WY 824D	614410	6393182	270°	368 – 387	1.73	19	414.3	HWZ
incl				375 - 387	2.59	12		
incl				381 - 387	4.65	6		
WY 825D	614372	6393274	270°	317 - 330	3.61	13	381.6	HWZ
including				317 - 323	5.69	6		
WY 826D	614399	6393261	270°	471 – 478	9.41	7	495.6	Contact
including				472 - 474	29.95	2		
WY 827D	614369	6393304	270°	435 – 440	2.14	5	477.4	Contact
WY 828D	614350	6393350	270°	No significant	mineralisa	tion	499.7	HWZ
WY 829D	614207	6393503	225°	No significant	mineralisa	tion	348.7	HWZ
WY 830D	613987	6393158	090°	Deviation	problems		156	Abandoned
WY 831D	614085	6393425	180°	57 - 96	1.21	39	433.3	Northern
				164 - 170	2.18	6		Northern
				183 - 188	7.65	5		376
including				268 – 334	13.80	66		497 (?)
				268 - 292	27.69	24		497 (?)
				281 - 292	54.69	11		497 (?)
				287 – 288.2	382.5	1.20		497 (?)
and				301 - 334	7.44	33		497 (?)
				302 - 326	15.48	14		497 (?)
WY 832D	613997	6393157	105°	No significant	mineralisa	tion	529.2	Hangingwall
WY 833D	614023	6393342	045°	151 - 159	2.23	8	306.6	376 / HWZ
including				154 - 156	5.81	2		
WY 834D	614015	6393107	095°	Deviation	problems		144	Abandoned
WY 835D	614015	6393107	082°	352 - 353	1.25	1	394.6	HWZ
MCD 001	614410	6392249	270°	124 – 129.35	2.02	5.35	132.6	McLeans
MCD 002	614421	6392249	270°	Yet to be	sampled		249.7	McLeans

Holes drilled at a nominal inclination of -60° to -65°, except WY 831D which was -78°. Gold analysis by 50g fire assay of half core samples or 3m RC composites. True widths are approximately 80% of intersection, except WY 831D which are not clear at this time but are thought to be approx 30%.



- Massive, well foliated pelitic siltstone (Cotton Formation)
- + Feldspar porphyry
- Undifferentiated volcanoclastic sediments
- Carbonaceous mudstone
- Fault, shear
- Mineralized zone





**ALKANE EXPLORATION LTD**  
**TOMINGLEY GOLD PROJECT**  
**WYOMING PROSPECT**  
**Wyoming One**  
**Simplified**  
**Geological Interpretation**



**GEOLOGICAL LEGEND**

 Alluvials

**DRILL HOLE LEGEND**

- WY824D 6 @ 4.69g/t  Recently completed drill hole showing intercept & grade
- WY835D 1 @ 1.25g/t  Recently completed drill hole with no significant HWZ intersection
- WY170 12 @ 4.21g/t  Historic RC/AC drill hole showing intercept & grade
- WY411D 6 @ 4.56g/t  Historic Diamond drill hole showing intercept & grade



**ALKANE EXPLORATION LTD**  
 ABN 35 000 689 216

**TOMINGLEY GOLD PROJECT**  
 NEW SOUTH WALES

**Wyoming One Prospect**  
**Hangingwall Zone**  
**Long Section**

**OCTOBER 2005**

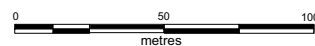
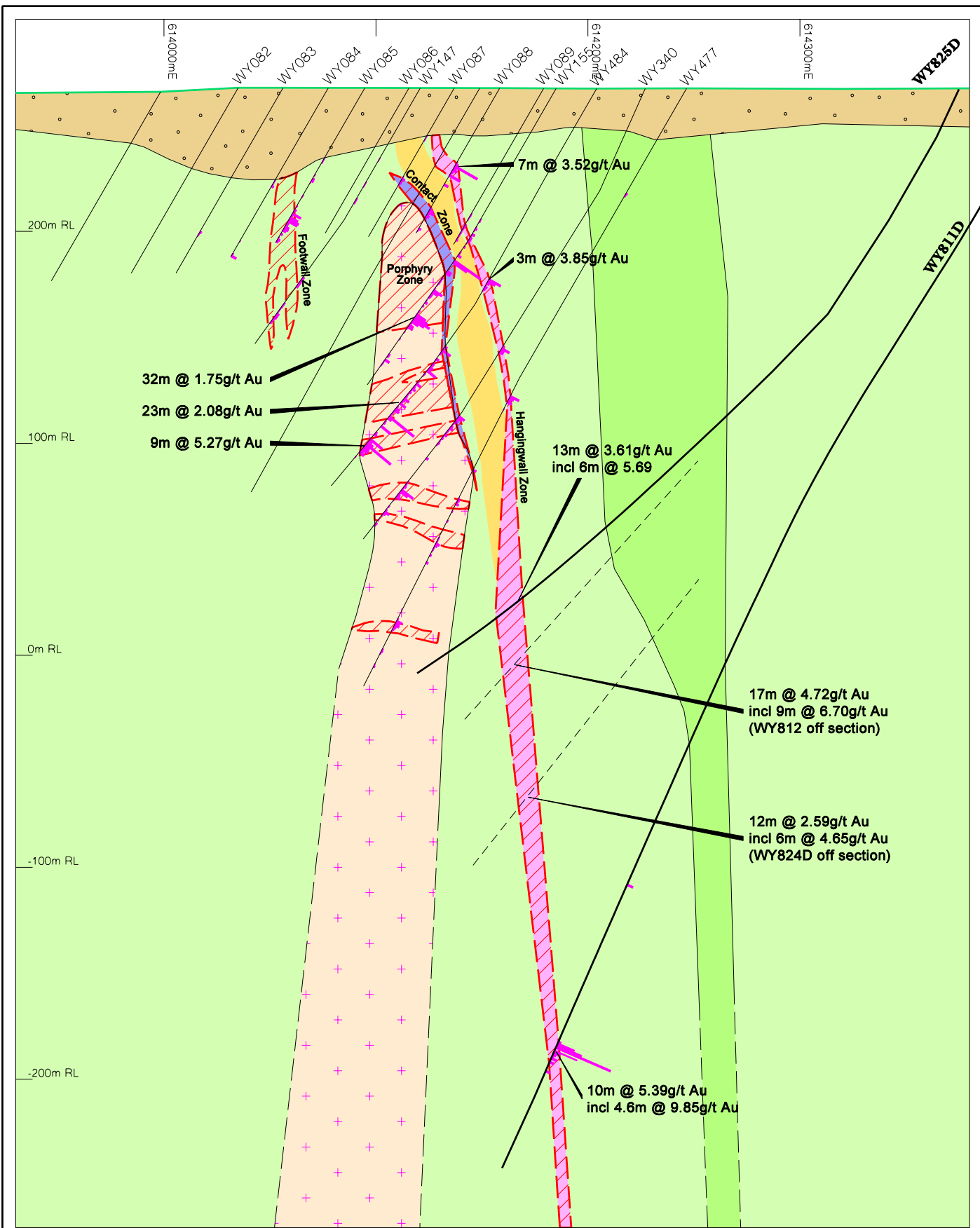


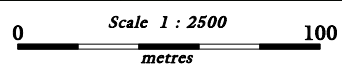
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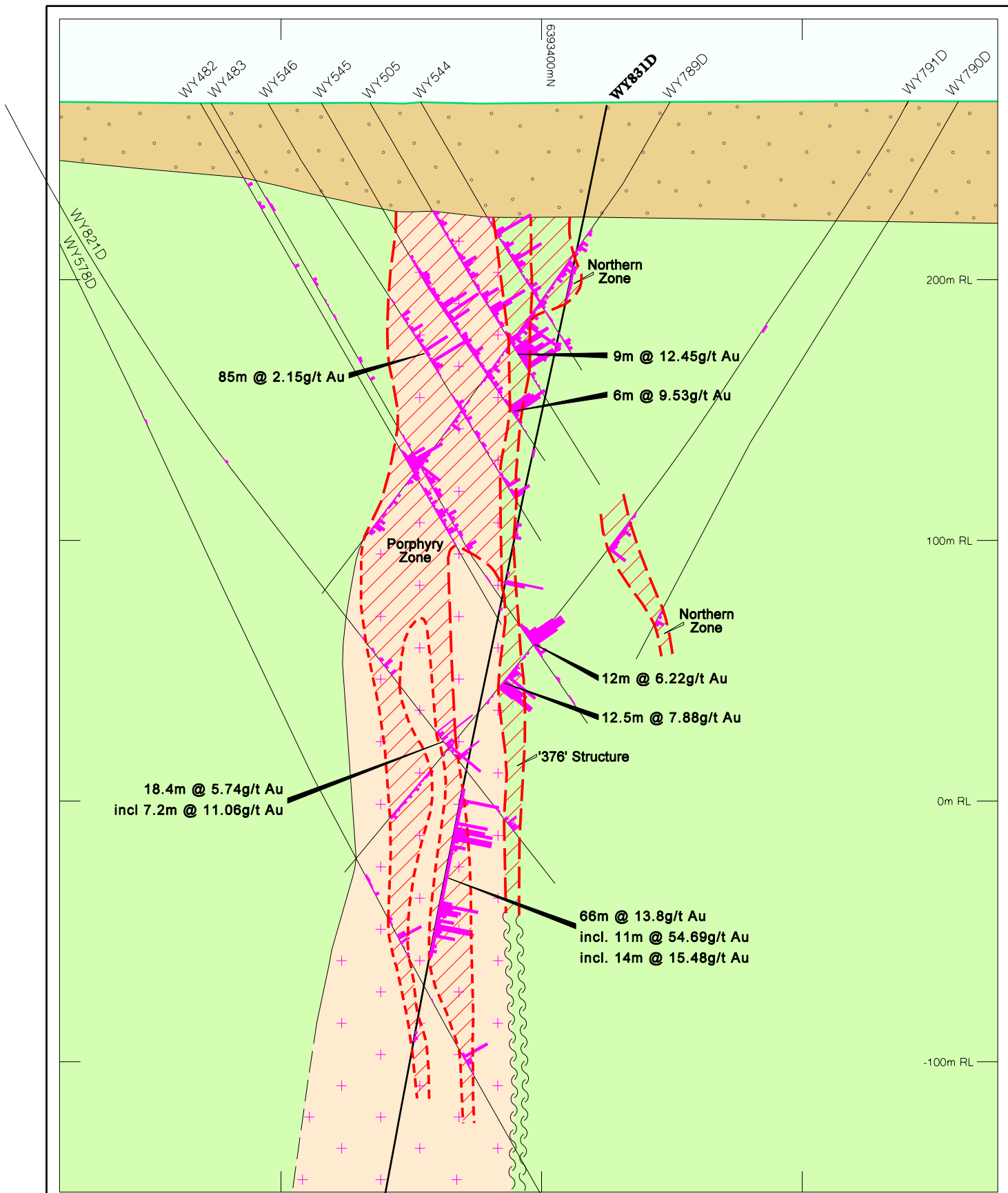







- Alluvium
- Massive, well foliated peilitic siltstone (Cotton Formation)
- Crowded feldspar +/- pyroxene phyric volcanics and high-level intrusives
- Andesitic volcanoclastic sandstones, siltstones and minor conglomerates
- Andesitic, polymictic, volcanoclastic conglomerate
- Strongly sheared, chlorite-talc schist



0.25g/t Gold ore outline



**ALKANE EXPLORATION LTD**  
**TOMINGLEY GOLD PROJECT**  
**WYOMING PROSPECT**  
**Wyoming One**  
**East - West Section 6393300mN**



-  Alluvium
-  Crowded feldspar +/- pyroxene phiric volcanics and high-level intrusives
-  Andesitic volcanoclastic sandstones, siltstones and minor conglomerates
-  Andesitic, polymictic, volcanoclastic conglomerate
-  Strongly sheared, chlorite-talc schist (Ultramafic?)

-  0.25g/t Gold ore outline
-  Histogram, 1 to 30g/t Au (1mm = 5g/t Au, cut at 30g/t Au)

Scale 1 : 2000  
0 100  
metres

**ALKANE EXPLORATION LTD**  
**TOMINGLEY GOLD PROJECT**  
**WYOMING PROSPECT**  
**Wyoming One**  
**North - South Section 614075mE**