



## REPORT ON ACTIVITIES FOR THE QUARTER ENDED 30<sup>th</sup> JUNE 2003

### SUMMARY

#### Jillawarra Project - Copper-Gold

- Six hole, 1,752 metre reverse circulation drilling programme testing 'blind' targets has confirmed large, hydrothermal iron-oxide related mineral systems at Manganese Range and Woodlands.
- At Manganese Range, three holes intersected more than 100 metres of highly altered rocks containing well defined zones of iron oxides interspersed with low levels of copper, gold and silver.
- Intersected zone interpreted as the low-grade halo surrounding a possible feeder into a funnel shaped iron-oxide polymetallic system that extends east - west for some 4 kilometres.
- System appears to be favourably tilted on its side implying that the target zone may be relatively close to surface.
- At the Woodlands' 46-40 prospect, two holes appear to have intersected the magnetite and barite rich upper zone of a mushroom shaped iron-oxide system.
- At least 50 metres of low grade lead, barium and copper mineralisation commencing at a depth of approximately 175 metres was intersected.
- All intersected mineralisation shows a well defined classic zonation that will assist in locating any high-grade copper-gold mineralisation associated with the feeder zones.

#### Windimurra - Platinum

- 23 hole, 1,542 metre reverse circulation reconnaissance drilling programme and 13.3 line kilometre maglag soil sampling campaign completed at Corner Well and Muleryon Hill platinum prospect areas (*results first reported to ASX on 13<sup>th</sup> June 2003*).
- Soil sampling traverses and drilling planned to investigate horizons of anomalous platinum, palladium and gold.

#### Narndee – Platinum (Falconbridge-Implats Joint Venture)

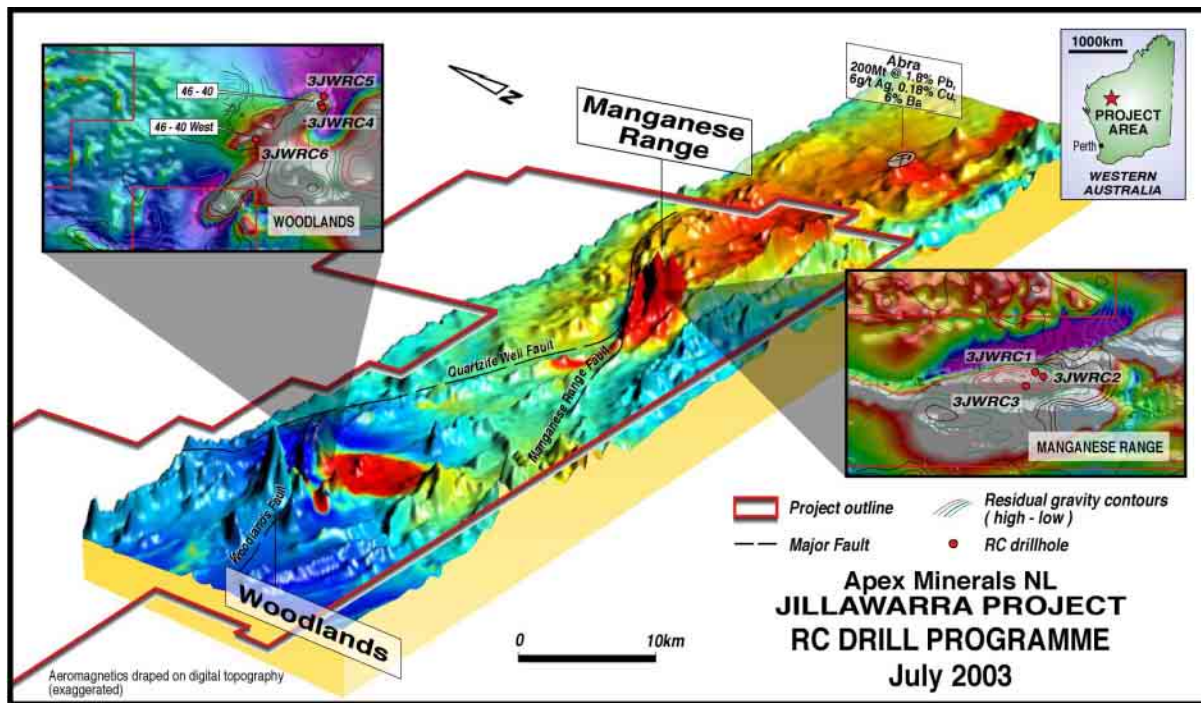
- 19 hole, 4,650 metre RC drilling programme scheduled to commence mid-August.

#### Corporate

- Cash reserves of \$2,123,000 at 30<sup>th</sup> June 2003.
- Falconbridge-Implats JV spent \$122,000 during Quarter (\$783,000 to date) at Narndee.
- 38,208,755 fully paid shares on issue of which 22,350,421 are quoted.

Apex Minerals NL

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## Jillawarra

**80% interest. Apex sole funding.**

Apex's objective is to discover a multi-million tonne iron-oxide copper-gold (IOCG) Olympic Dam - Ernest Henry style mineral deposit at the 1,470 square kilometre Jillawarra project, 150 kilometres north-west of Meekatharra.

IOCG deposits are a broad class of minerals deposits that often contain an abundance of iron oxides such as magnetite and a scarcity of iron sulphides. They also tend to exhibit a zoning of base and precious metals.

At Jillawarra, this mineralisation is unlikely to have any direct surface expression. No workings have been found in the project area. Targeting therefore relies heavily on interpretive geological and geophysical methods combined with surface mapping reinforced by highly sensitive geochemical sampling techniques.

The Jillawarra region's pedigree was considerably enhanced in 1982 when systematic drilling of magnetic anomalies resulted in the discovery of sub-economic mineralisation at Abra (200 million tonnes grading 1.8% lead, 6 g/t silver, 6 % barium and 0.18% copper), 9 kilometres east of the Jillawarra project. Mineralisation was intersected at several other localities but no other major accumulations were discovered. Abra is now recognised as a probable IOCG deposit.

Abra appears to be a mushroom shaped mineralised body consisting at its top of a broad disc shape, stratabound mineralised zone that is rich in iron (magnetite) and barium (barite) underlain by a lead dominant zone and then a zone of copper stringers. These funnel down into a 'feeder' pipe containing copper and copper-gold mineralised stringers enclosed in an iron-rich and sulphide bearing alteration halo.

In order to define and screen its targets, Apex has undertaken a major ground gravity survey, reprocessed existing aeromagnetic data, undertaken two campaigns of geochemical sampling and reviewed an extensive historical exploration database.

Drill targets have been prioritised using gravity rather than just magnetic anomalism as the targeted copper-gold mineralisation may not necessarily have a strong magnetic signature. A greater emphasis is also being directed towards the shallower gravity anomalies, structures that could have served as conduits for mineralisation into the Jillawarra basin and co-incident, multi-element geochemical anomalies delineated by recent soil sampling.

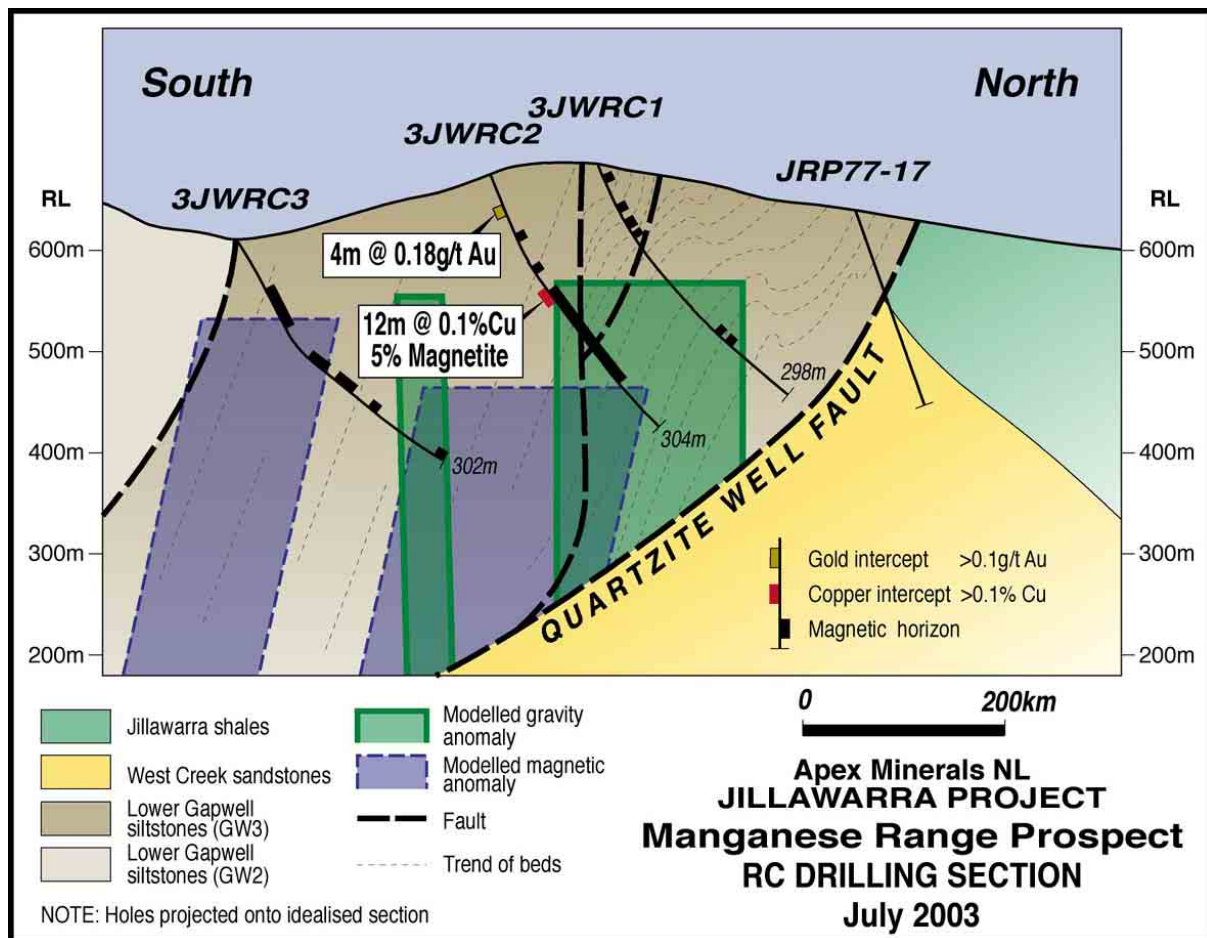
### Drilling confirms two large iron-oxide related mineral systems

Apex has recently received assay results from a 6 hole, 1,752 metre reverse circulation (RC) drilling programme that tested down to 200 metres depth three targets for 'blind' copper-gold mineralisation (Figure 1, Table1, Table 2).

At **Manganese Range** three angled holes (3JWRC001 – 003) drilled into a previously untested area have intersected more than 100 metres of highly altered rocks containing distinct zones of iron oxides interspersed with low levels of copper, gold and silver (Figure 2).

In 3JWRC002, a 50 metre zone of finely disseminated pyrite (2 – 5%) with high levels of magnetite (10 - 20%) was intersected. Low levels of copper (0.1%) and silver (1-2g/t) were obtained over an interval of 12 metres from a depth of 132 metres and a maximum gold value of 0.18g/t over 4 metres was obtained from 60 metres depth.

Apex's preliminary view is that these holes have intersected various parts of the low grade, iron-rich and sulphide bearing halo that surrounds the lower part of the inferred funnel-shaped feeder zone.



The three holes were targeted on a 2.0 x 0.5 kilometre, east-west trending gravity anomaly coincident with a strong linear aeromagnetic anomaly immediately south of the Quartzite Well fault, a major east-west controlling feature of the Jillawarra basin. The southern part of the target was coincident with a 33 ppb gold surface geochemical anomaly as well as elevated copper values of 28-56 ppm.

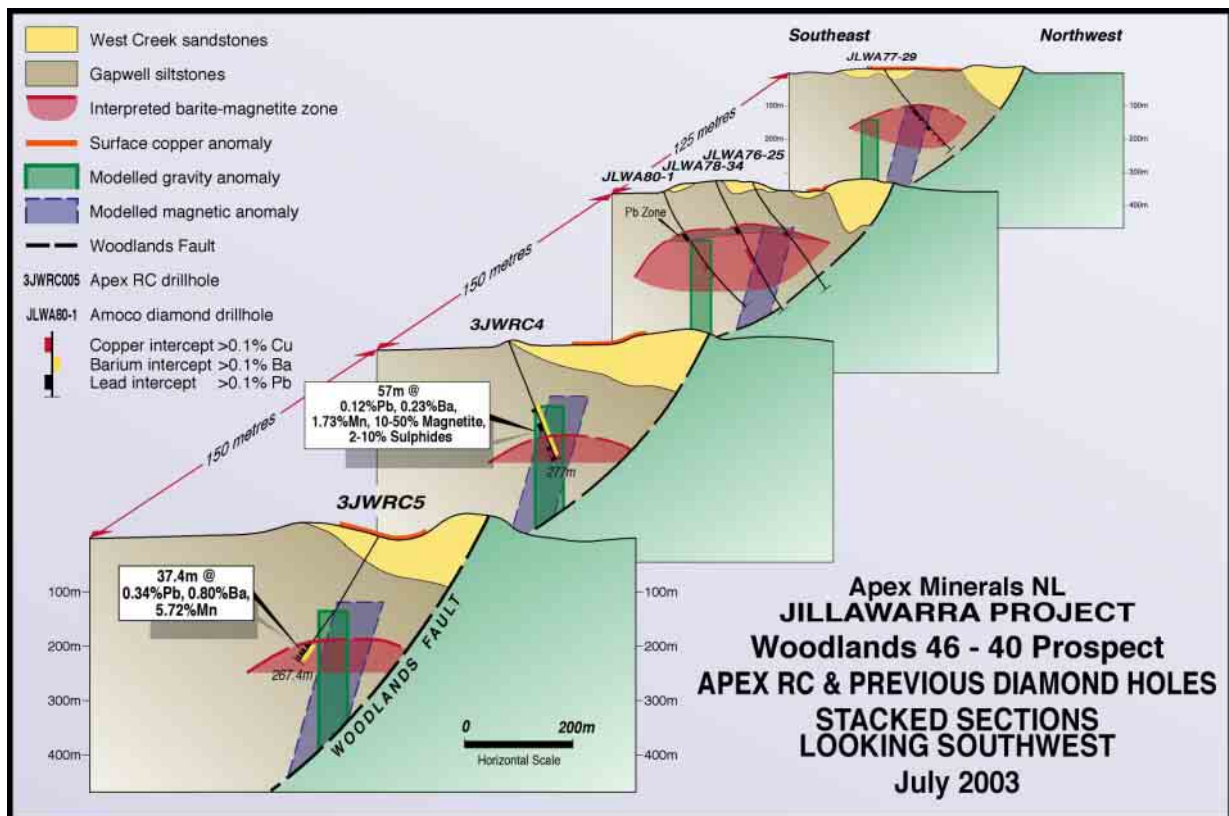
The drill holes deviated significantly in dip and direction but Apex's believes that they have adequately explained the source of the gravity and magnetic anomalies.

The total system developed at Manganese Range now appears to extend east-west for at least 4 kilometres with a width of up to 2 kilometres and appears to be several times larger than the system developed at Abra. More importantly, this system may be tilted on its side implying that if the higher-grade feeder zone being targeted is present, it may lie relatively closer to surface.

At the **46-40 prospect** in the Woodlands Corridor area, holes 3JWRC004 and 3JWRC005 intersected at least 50 metres of low grade lead, barium and copper mineralisation commencing at a vertical depth of approximately 175 metres. The holes were prematurely terminated at 277 metres and 267 metres respectively due to heavy inflows of water.

Hole 3JWRC004 targeted a gravity anomaly near to and coincident with a strong magnetic anomaly, 200 metres east of historical intersections of low level lead, barium and copper mineralisation (Figure 3).

The new hole intersected 57 metres grading 0.12% lead, 0.23% barium and 1.73% manganese from 220 metres including 5 metres grading 0.25% copper from 264 metres depth and 1 metre grading 0.53 g/t gold from 250 metres depth. The mineralisation is hosted in a completely altered siltstone.





Hole 3JWRC005 was directed at a gravity anomaly adjacent to a surface geochemical copper anomaly, 300 metres east of previously identified mineralisation. It intersected 37.4 metres grading 0.34% lead, 0.80% barium and 5.72% manganese from 230 metres. This included 3 metres grading 1.44% lead from 246 metres depth in a barite rich magnetite altered siltstone that contained a distinct red iron-oxide zone, also observed at Abra. This hole also ended in mineralisation.

Apex's preliminary interpretation is that these two holes have intersected the broad upper zone of an iron oxide system.

The targeted copper-gold feeder zone is therefore implied to be either below the current depth of Apex's drilling or further along strike.

The implied 'upper zone' at 46-40 has been extended to some 800 metres strike by these intersections, remains open and has a similar thickness to the equivalent horizon at the Abra deposit.

Hole 3JWRC006 at 46-40 West, was positioned to test coincident, narrow subtle gravity and magnetic anomalies. It did not intersect any mineralisation but has provided some useful stratigraphic information to guide future work.

### **Comment**

Apex's first drilling programme to test 'blind' targets at Jillawarra is the culmination of a re-evaluation of the region's geology and potential to host IOCG mineralisation.

The six holes completed tested only half of a number of targets that Apex has identified and screened within its 1,470 square kilometre project.

As well as having reinforced the integrity of Apex's exploration strategy for 'blind' IOCG mineralisation at Jillawarra, these results have also:

- confirmed that Manganese Range and 46-40 are two very large, highly altered and potentially mineralised iron-oxide systems,
- indicated that these systems are distinctly zoned which will assist greatly in determining the location of the targeted feeder pipes,
- suggested that the higher grade copper-gold feeder zones being targeted may if present, especially in the case of Manganese Range, be more favourably orientated and relatively closer to surface than at Abra.

It now remains for Apex to fully assess this drilling in the context of its other data with a view to gaining a better understanding of the character, geometry and zonation of these two systems.

This will enable it to determine where any high-grade copper-gold mineralisation associated with feeder zones may be located and to plan a suitable follow-up programme of testing.

**Table 1 – Drill Hole Summary**

Hole No.	Prospect	m-Easting (AGD84)	m-Northing (AGD84)	Initial Dip (°)	Magn Azimuth (°)	End of Hole (m)
3JWRC001	Manganese Range	638097	7273735	-60	330	298
3JWRC002	Manganese Range	638263	7273631	-65	330	304
3JWRC003	Manganese Range	637894	7273384	-60	342	302
3JWRC004	46-40	611568	7275760	-70	330	277
3JWRC005	46-40	611602	7276039	-60	150	267.4
3JWRC006	46-40 West	609863	7274866	-55	330	304

**Table 2 - Best Intersections**

Hole (3JWRC)	Depth (m)	Interval (m)	Copper (%)	Lead (%)	Barium (%)	Manganese (%)	Gold (g/t)	Comment
002	60 – 64	4.0	-	-	-	-	0.18	1-2% magnetite
002	132 - 144	12.0	0.10	-	-	-	-	5% magnetite, 0.5% sulphides
004	220 - 277	57.0	-	0.12	0.23	1.73	-	10-50% magnetite, 2-10% sulphides
Incl:	250 – 251	1.0	-	-	0.16	2.10	0.53	5% magnetite, trace sulphides
Incl:	264 – 269	5.0	0.25	0.10	0.26	2.42	0.10	50% magnetite, 1-2% chalcopyrite and pyrite
005	230 – 267.4	37.4	-	0.34	0.80	5.72	-	2-5% magnetite, 1-2% pyrite and galena with local haemetite
Incl:	246 - 249	3.0	-	1.44	0.11	7.30	-	10% magnetite, 1-2% pyrite and galena

All samples were collected and assayed at 1 metre intervals except where they were unmineralised, in which case these were composited into 4 metre representative samples. Assaying was undertaken by Genalysis Laboratories Pty Ltd using ICP/OES after 3 acid digestion except for gold which was by 50 gram fire assay. The barium assays should be considered as a guide for the presence of barite only.

## Windimurra Superproject

**80% interest. Apex sole funding Windimurra Layered Complex exploration.**  
**Falconbridge – Implats JV funding Narndee Layered Complex exploration.**

The Windimurra Superproject encompasses the Windimurra and Narndee layered intrusions. These are being explored for platinum group elements (PGE), nickel-copper and gold mineralisation.

The intrusions are geologically similar to South Africa's Bushveld Complex from where a majority of the world's platinum is mined from reefs averaging less than 1.5 metres width. The challenge is to locate these narrow reefs within the 5,200 square kilometre regional project where 80% of the prospective geology is obscured by shallow to moderate depth soil and lake sediment cover. Exploration is also being designed to discover other possible non-reef, broader styles of PGE and nickel mineralisation.

New soil sampling and drilling strategies coupled with highly sensitive assaying techniques for PGE and indicator elements is enabling a cost-effective approach to be made to target definition.

### Drilling and soil sampling confirm prospectivity for platinum and nickel mineralisation

On 13<sup>th</sup> June 2003 Apex announced to ASX the results of a reconnaissance 23 hole, 1,542 metre reverse circulation (RC) drilling and 13.3 line kilometre maglag soil sampling programme.

The full release can be obtained from ASX ([www.asx.com.au](http://www.asx.com.au)) or from the Apex website ([www.apexminerals.com](http://www.apexminerals.com))

Two prospects interpreted to represent the basal levels of the largely soil covered 2,400 square kilometre layered Windimurra intrusive complex were investigated.

At the **Corner Well** prospect, multiple locally persistent horizons of anomalous platinum, palladium and gold were intersected within a 500 metre wide regionally anomalous zone.

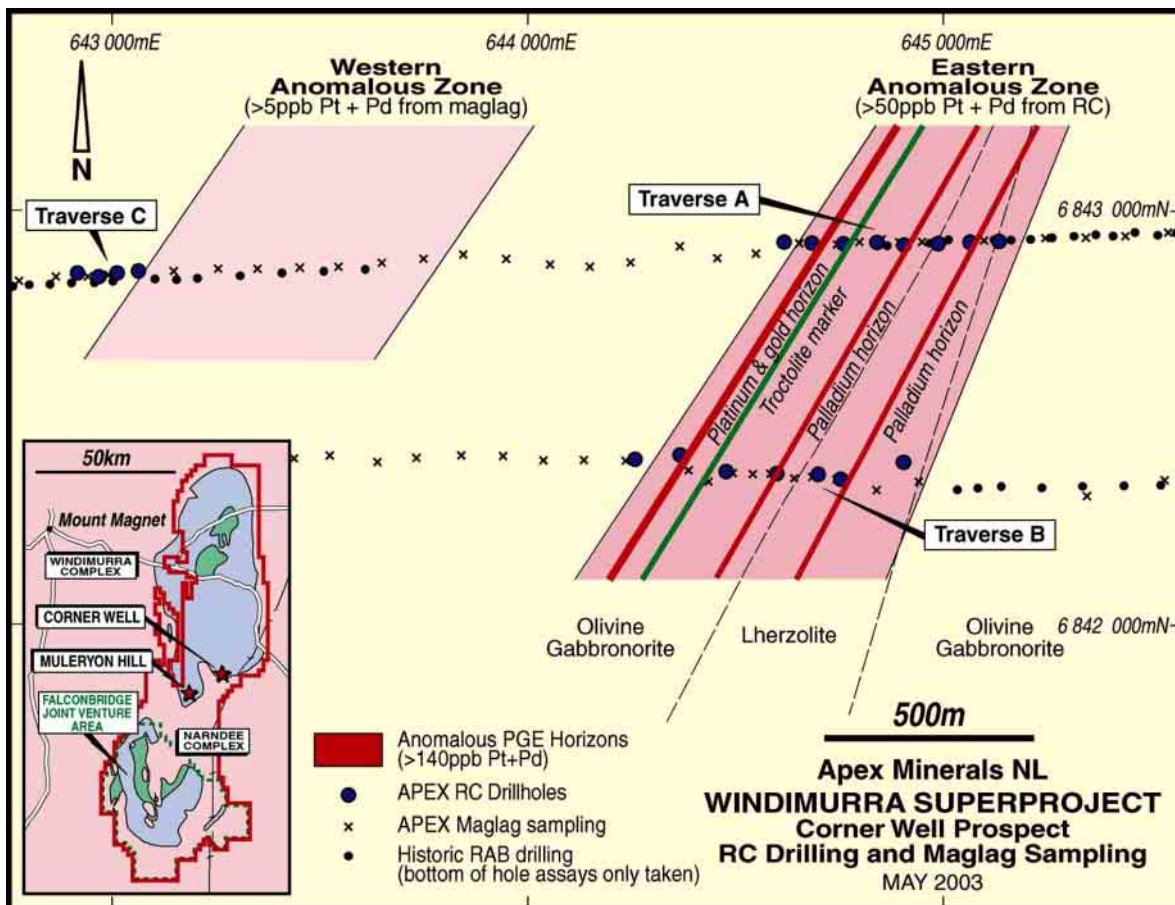
A second 500 metre wide regionally anomalous zone was defined to the west by maglag soil sampling.

At the **Muleryon Hill** prospect, 10 kilometres southwest of Corner Well, results indicate an enhanced prospectivity for platinum and nickel mineralisation associated with the main intrusion and for nickel associated with komatiitic like rocks also intersected in the area.

Direct analogies are able to be made between the geology at these two prospect areas and the lower units of South Africa's Bushveld Complex.

The horizons intersected at Corner Well contain up to 170ppb combined platinum and palladium and 439ppb gold and are associated with minor sulphides.

The programme provided valuable information on the geological character of the layered intrusive in this part of the Windimurra Complex and has identified areas for future focus.





The next phase of exploration is about to commence. It will comprise a series of maglag soil traverses to investigate and extend known anomalous areas and to provide locations for RC drill traverses planned for September.

### **Drilling to commence shortly at Narndee**

*Falconbridge is one of the world's largest nickel miners and most respected PGE explorers. It has made a minimum two-year commitment to explore the Narndee layered intrusion. It may earn an initial 56% interest by spending A\$4.0 million over 5 years and can increase this to 64% in specific areas where it completes a bankable feasibility study. Falconbridge also holds a 4% stake in Apex. Apex retains the right to any minerals other than PGE, nickel and copper at Narndee.*

*Impala Platinum Holdings Limited ('Implats') is the world's second largest producer of platinum. It has joined forces with Falconbridge (Australia) Limited to explore the Narndee layered intrusion. The entry of Implats arises through a strategic alliance it has with Falconbridge to explore for and develop high quality PGE projects worldwide. Under that deal, Implats may earn in stages up to half of any equity that Falconbridge has secured in a project.*

During the Quarter, the Falconbridge-Implats joint venture completed litho-geochemical sampling to follow-up grab sample locations with anomalous PGE values identified during its 2002 programme. It also completed a programme of infill maglag soil sampling and commenced a programme of reconnaissance maglag sampling over the southern half of the Narndee complex.

Falconbridge has advised that it intends to drill 19 RC holes for a total of 4,650 metres, commencing in mid-August.

## **Corporate**

Apex held cash reserves of \$2,123,000 at 30th June.

The Falconbridge – Implats Joint Venture spent approximately \$122,000 on the Narndee project during the Quarter (\$783,000 to date).

Apex has on issue 38,208,755 fully paid shares of which 22,350,421 are quoted. It also has on issue 20,348,750 performance linked 20 cent shares part-paid to 0.001 cents each.

A handwritten signature in black ink, appearing to read 'Stephen Stone', written in a cursive style.

**Stephen Stone**  
**Executive Chairman**  
**Mb 0418 804 564**

*Unless otherwise indicated, technical information contained in this report is based on information compiled by a competent person who is a corporate member of the Australasian Institute of Mining and Metallurgy. The competent person is Mr Stephen Stone who is Executive Chairman. Whilst the expectations expressed in any forward looking statements in this report are based on reasonable expectations, investors are cautioned that such statements are not guarantees of future performance and actual results or developments may for several reasons differ materially from those stated.*