



# ENTERPRISE METALS LIMITED

(ACN 123 567 073)

SEPTEMBER 2009 QUARTERLY ACTIVITIES REPORT

30 October 2009

## ENTERPRISE METALS LTD

ASX Symbol: **ENT**  
ACN 123 567 073  
Level 1, 640 Murray Street  
West Perth 6005  
Western Australia

PO Box 992  
West Perth 6872  
Western Australia  
Phone: +618 9436 9200  
Facsimile: +618 9436 9299  
[www.enterprisemetals.com.au](http://www.enterprisemetals.com.au)

## BOARD OF DIRECTORS

Mr Paul Larsen  
Chairman

Mr Dermot Ryan  
Managing Director

Mr Bruce Hawley  
Executive Director

## PROJECTS

### Gold

Darlot (Yandal)  
Revere (Doolgunna)  
Wattagee (Cue)  
Fraser Range (SW Yilgarn)

### Uranium

Maitland (Yandal)  
Lake Mason (Gidgee)  
Darlot (Yandal)  
Sylvania (Pilbara)

### Iron Ore

Sylvania  
Earaheedy  
Fraser Range  
Eucla

## ISSUED CAPITAL

**Shares:** 91,086,243

**Listed Options:** 16,209,743

**Unlisted Options:** 7,500,000

## HIGHLIGHTS

- **Drilling of IP and VTEM targets commenced at Revere project.**
- **Further VTEM surveys commenced SW of Doolgunna Homestead.**
- **IP surveys completed at Wattagee. Drill targets defined for gold/base metals.**
- **Gravity survey at Eucla commences for possible iron oxide/sulphide (IOCG) targets.**
- **Cash in bank at 30 September 2009 of \$1.96M.**

## OVERVIEW

Reverse circulation drill testing of gold targets in the Yerrida Basin commenced on 19<sup>th</sup> September 2009. To date, 26 holes had been completed for 6,173 metres. Analytical results from 4 holes at Doug's Find and the first 3 holes at Golden King have been received.

Drill holes DGRC001-003 encountered pyritic sediments with elevated arsenic (+10ppm), manganese (700-1700ppm) and zinc (+100ppm). These sulphidic sediments are interpreted to be the source of the co-incident IP/VTEM anomaly. Drill hole DGRC004 encountered two broad zones of low level (+0.1ppm) gold mineralisation between 95-118m and between 129-137m. These zones also showed elevated arsenic (+20ppm) and elevated copper (20-100ppm). The best intervals were 2m at 0.33g/t Au from 99m, and 4m at 0.47g/t Au from 132m.

At Golden King, three holes were drilled as a fence across the middle VTEM/IP conductor. Between 188-253m, hole GKRC002A intersected strongly pyritic black shales with elevated silver (0.2-0.6ppm), arsenic (30-180ppm) and copper (50-330ppm). There were no significant results in holes GKRC001 and GKRC003.

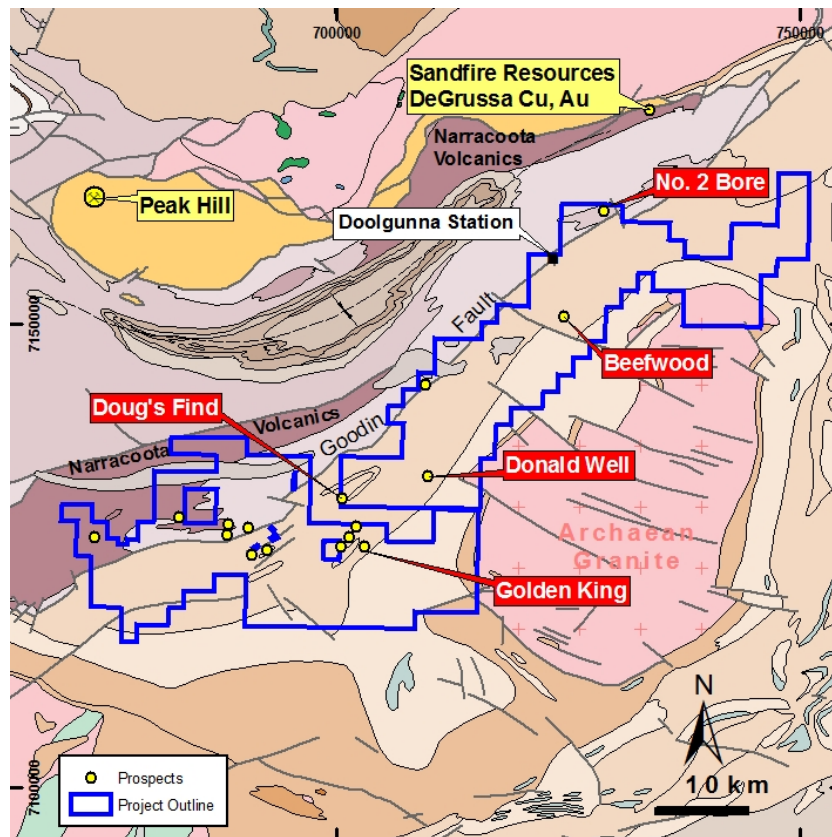
The analytical results for the remaining 19 holes are still awaited.

IP anomalies at Wattagee being evaluated for drill testing.

## 1. EXPLORATION ACTIVITIES

### REVERE PROJECT

Reverse circulation (“RC”) drill testing of gold targets in the Yerrida Basin commenced on 19<sup>th</sup> September 2009. Drilling has been slower than anticipated due to mechanical breakdowns and difficult drilling conditions. Despite the addition of a second drill rig on 10<sup>th</sup> October to test VTEM targets in the Narracoota Volcanics of the Bryah Basin and accelerate the overall pace, only 26 holes had been completed for 6,173 metres by 29<sup>th</sup> October. Due to slow laboratory turn-around, analytical results from 4 holes at Doug’s Find and the first 3 holes at Golden King have only been received.



**Figure 1. Revere Project Geology, with Prospect Locations**

The RC holes completed by the 1<sup>st</sup> rig at Doug’s Find and Golden King were primarily targeted at Induced Polarisation (“IP”) and VTEM conductors in sediments of the Doolgunna Formation. This drilling has been subsidised by the WA Government’s Exploration Incentive Scheme to the tune of \$110,000. Although there is no outcrop at Doug’s Find, trenching and metal detecting has defined a series of narrow high grade gold-quartz veins. The IP and VTEM survey defined a discrete NE striking conductor immediately adjacent to Doug’s Find, which was tested by a fence of 4 RC holes.

At Golden King, MAGLAG sampling by Enterprise and the subsequent IP and VTEM surveys highlighted a series of discrete conductors along the northern margin of a large magnetic anomaly, along the South Boundary Fault (“SBF”). Three RC drill traverses were planned and have now been completed to test these targets. Assays for the first 3 holes have only just been received.

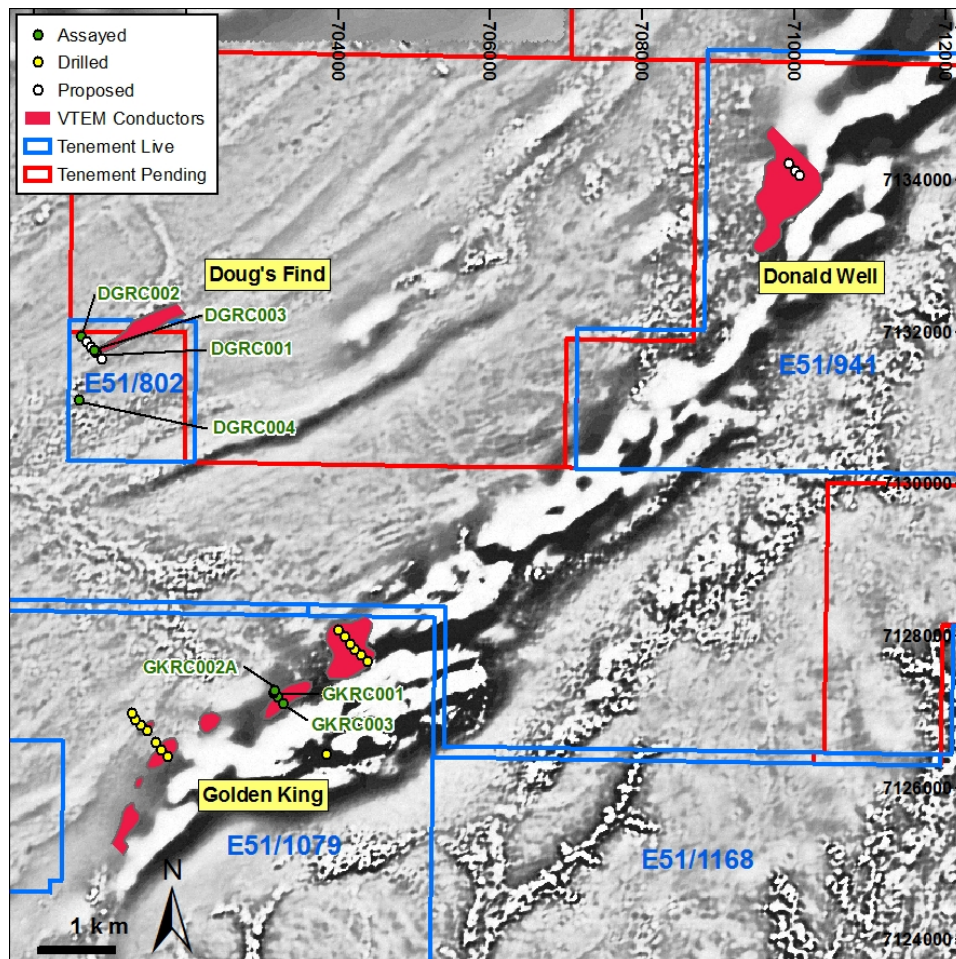
**Discussion of Results – Doug’s Find and Golden King**

Drill holes DGRC001 - 003 encountered weathered Doolgunna Formation sediments (grey siltstones and black shales) to a depth of approximately 70 metres. In the primary zone, the holes encountered pyritic sediments with elevated arsenic (+10ppm), manganese (700-1700ppm) and zinc (+100ppm). These sulphidic sediments are interpreted to be the source of the co-incident IP/VTEM anomaly.

Drill hole DGRC004 drilled slightly to the south and under the interpreted position of the Doug’s Find quartz reef encountered two broad zones of low level (+0.1ppm) gold mineralisation between 95-118m and between 129-137m. These zones also showed elevated arsenic (+20ppm) and elevated copper (20-100ppm). The best intervals were 2m at 0.33g/t Au from 99m, and 4m at 0.47g/t Au from 132m.

At Golden King, three holes were drilled as a fence across the middle VTEM/IP conductor. All holes intersected a zone of deep weathering to 60m, with minor geochemical enrichment between 60-100m in fresh grey siltstones and shales. Between 188-253m, hole GKRC002A intersected strongly pyritic black shales with elevated silver (0.2-0.6ppm), arsenic (30-180ppm), and copper (50-330ppm). There were no significant results in holes GKRC001 and GKRC003.

The analytical results from holes GKRC004-017 are awaited. The locations of holes drilled to date at Doug’s Find and Golden King are shown on Figure 2 below.



**Figure 2. Doug’s Find and Golden King Prospects on Magnetic Image, with RC Hole Locations**

**Table 1. RC Drill hole locations, Doug's Find and Golden King Prospects**

Hole Number	North (m)	East (m)	Prospect Name	Tenement Number	Depth (m)	Assays
DGRC001	7131720	700820	Dougs Find	E51/802	253	Received
DGRC002	7131936	700610	Dougs Find	E51/802	253	Received
DGRC003	7131748	700791	Dougs Find	E51/802	253	Received
DGRC004	7131093	700595	Dougs Find	E51/802	151	Received
GKRC001	7127192	703206	Golden King	E51/1079	253	Received
GKRC002A	7127270	703165	Golden King	E51/1079	253	Received
GKRC003	7127109	703281	Golden King	E51/1079	253	Received
GKRC004	7126598	701597	Golden King	E51/1079	250	Awaited
GKRC005	7126402	701754	Golden King	E51/1079	250	Awaited
GKRC006	7126495	701676	Golden King	E51/1079	250	Awaited
GKRC007	7126748	701482	Golden King	E51/1079	213	Awaited
GKRC008	7126822	701397	Golden King	E51/1079	214	Awaited
GKRC009	7126886	701333	Golden King	E51/1079	253	Awaited
GKRC010	7126973	701285	Golden King	E51/1079	253	Awaited
GKRC011	7127656	704382	Golden King	E51/1079	220	Awaited
GKRC012	7127748	704303	Golden King	E51/1079	250	Awaited
GKRC013	7127187	704226	Golden King	E51/1079	253	Awaited
GKRC014	7127887	704161	Golden King	E51/1079	235	Awaited
GKRC015	7127980	704083	Golden King	E51/1079	247	Awaited
GKRC016	7128066	704004	Golden King	E51/1079	251	Awaited
GKRC017	7126441	703851	Golden King	E51/1079	205	Awaited

All holes MGA94, Zone 50, Dip 60°, Azimuth 135°, except hole DGRC004 which has Azimuth 215°

This 1<sup>st</sup> drill rig has now moved to Donald Well to commence testing a coincident VTEM-geochemical target within sediments of the Doolgunna Formation. At Donald Well, previous surface sampling has defined two anomalous +1ppb Au zones which are coincident with the South Boundary Fault ("SBF"). Orientation VTEM surveying of the western one third of the Donald Well geochemical/magnetic target partially defined a late time (deep) conductor on an ENE trending shear that bisects the magnetic anomaly.

The 2<sup>nd</sup> drill rig commenced on 10<sup>th</sup> October 2009 and has completed 5 RC drill holes (1,156m) testing VTEM targets NE and south of Doolgunna Homestead.

At No. 2 Bore, a fence of 3 holes was drilled to test a VTEM conductor within the Narracoota Volcanics (Bryah Basin). The holes encountered weakly magnetic dolerites and siliceous igneous breccias. Assay results are awaited.

At Beefwood, one hole has been completed to test a strong conductor in sediments of the Yerrida Basin. This hole has intersected black pyritic clays which may be the source of the VTEM anomaly. This drill rig has been plagued with mechanical issues and is currently in Kalgoorlie for repairs.

The locations of holes drilled to date at No. 2 Bore and Beefwood are shown on Figure 3 and in Table 2 overleaf.

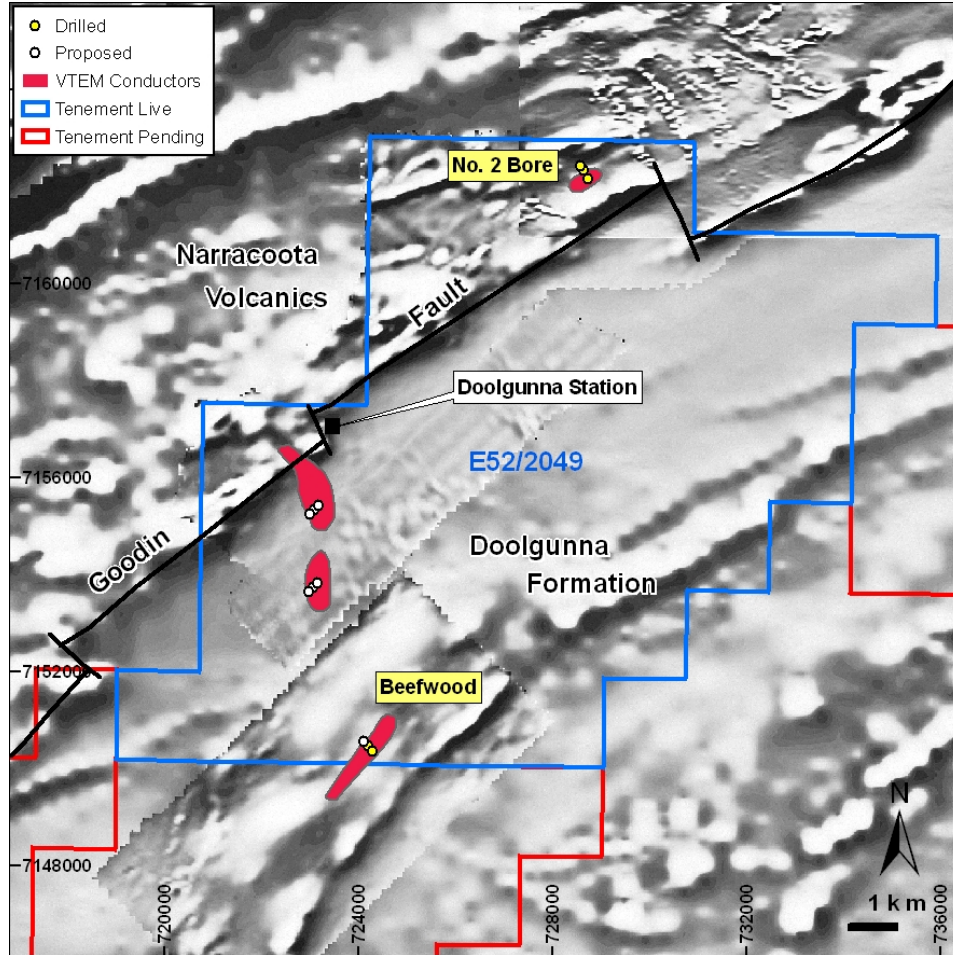


Figure 3. No. 2 Bore and Beefwood Prospects on Magnetic Image, with RC Hole Locations

Table 2. RC Drill hole locations, No. 2 Bore and Beefwood Prospects

Hole Number	North (m)	East (m)	Prospect Name	Tenement Number	Depth (m)	Assays
NBRC001	7162148	728735	No 2 Bore	E52/2049	223	Awaited
NBRC002	7162317	728634	No 2 Bore	E52/2049	246	Awaited
NBRC003	7162421	728551	No 2 Bore	E52/2049	238	Awaited
BWRC001	7150370	724283	Beefwood	E52/2049	203	Awaited
BWRC002	7150449	724190	Beefwood	E52/2049	246	Awaited

All holes MGA94, Zone 50, Dip 60°, Azimuth 135°

Enterprise has now commenced flying a further 2 VTEM airborne surveys over the faulted contact between the Narracoota Volcanics and the Doolgunna Formation sediments. The Goodin Fault displays anomalous copper and gold geochemistry throughout the Company's tenements. These new areas are Ruby Well West and Lucky Dog. Survey results are awaited.

The locations of the previous and new VTEM surveys are shown below in Figure 4 overleaf.

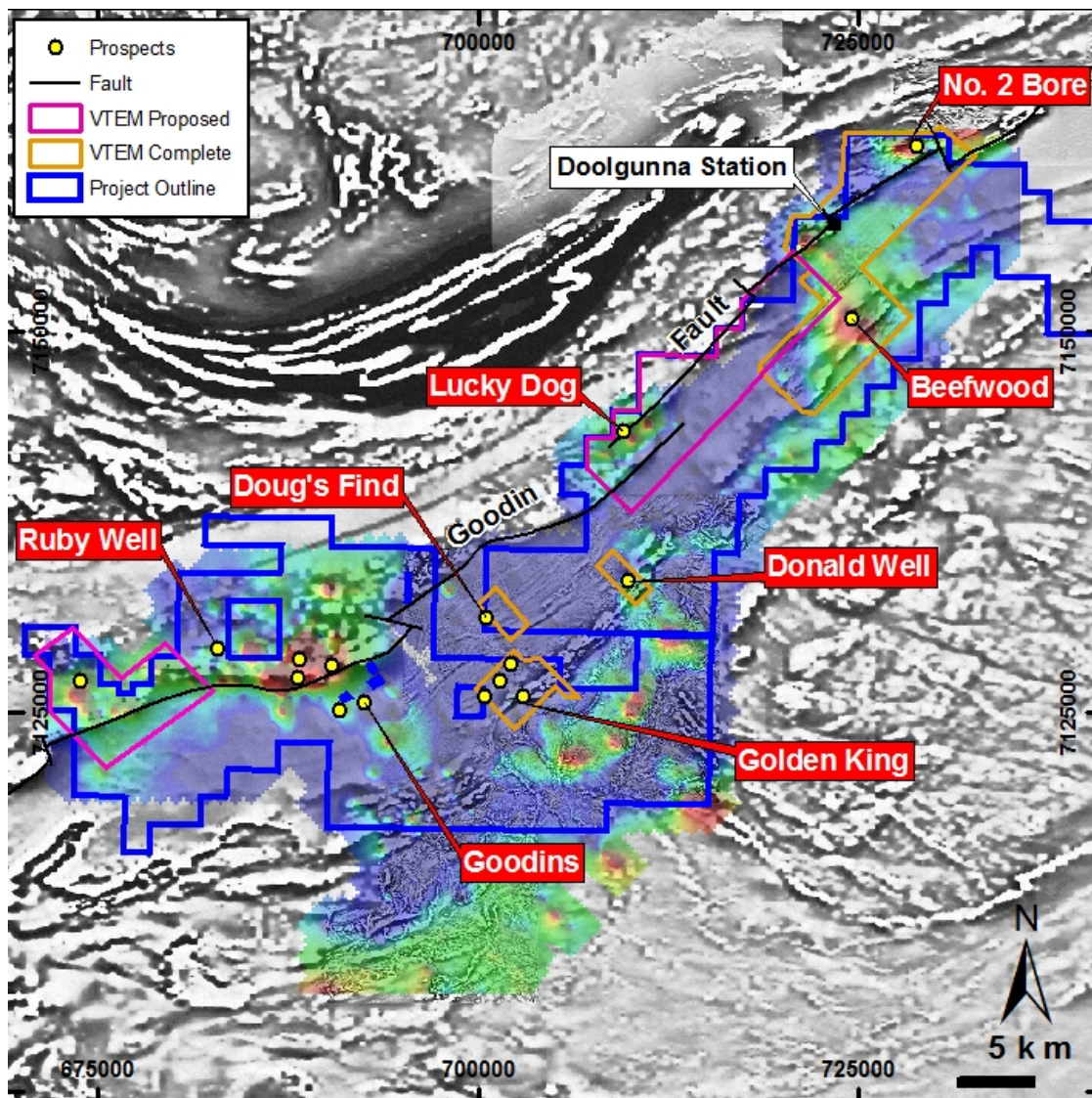


Figure 4. Magnetic & Copper Soil Geochemistry Image with VTEM Surveys in progress

**DARLOT PROJECT**

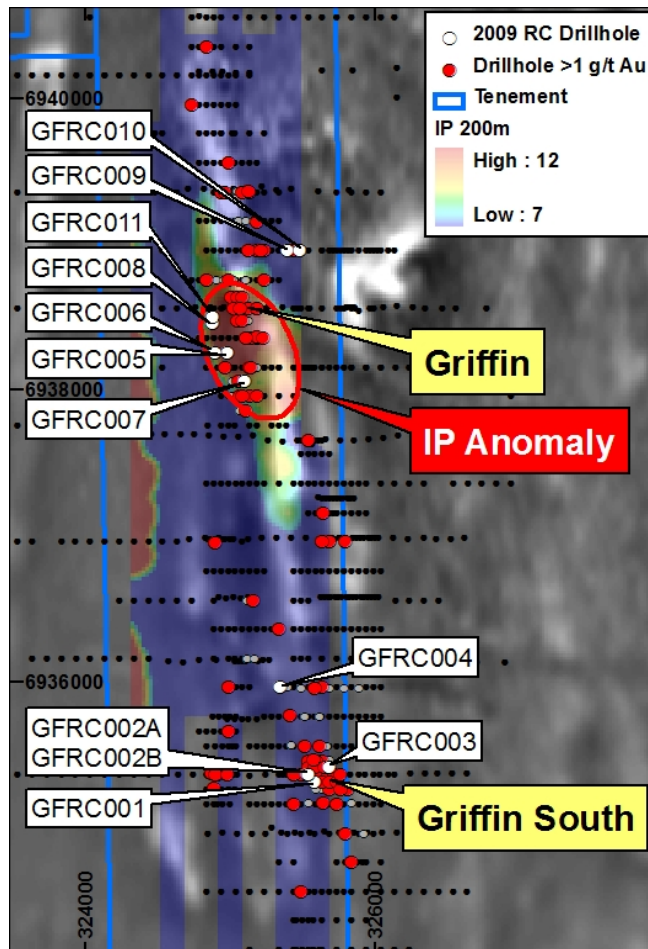
On 29<sup>th</sup> July 2009 the Company commenced an RC drilling program at **Griffin Well**. The prospect is located 23 km north of the Darlot gold mine in the Yandal Greenstone belt of Western Australia. In total, 14 drill holes were completed for a total of 2,065 metres. The drill program was designed to test a number of strong Induced Polarisation (IP) responses from the July 2009 Griffin Well IP survey, and to test shallow gold anomalism identified within several historic drill holes.

Assay results showed elevated gold in the majority of holes, and five holes returned significant results. Interpretation of geological data suggests the gold is associated with disseminated pyrite within silica altered diorite and iron oxide altered felsic volcanoclastics. Quartz veining was also noted as being coincident with elevated gold in several drill holes. Significant results are shown in Table 3 below and hole locations are shown in Figure 5.

**Table 3. Darlot Project Gold Results**

Hole Number	Interval (m)	Width (m)	Au (g/t)	Comment
GFRC1	20-28	8	1.0*	Includes 1m @ 4.3 g/t from 21m
GFRC1	41-60	19	0.7*	Includes 2m @ 1.3 g/t from 41m & 3m @ 1.0 g/t from 56m
GFRC1	68-69	1	6.8*	
GFRC1	75-101	26	0.6*	
GFRC3	49-52	3	1.2*	Includes 1m @ 2.5 g/t from 49m.
GFRC4	68-69	1	1.1*	
GFRC6	152-156	4	1.8	Quartz veining
GFRC9	84-88	4	2.7	Hematite altered felsic volcanics

\* Indicates a one metre resplit result analysed by nominal 50g lead collection fire assay and flame AAS for Au (0.01ppm) – Genalysis method code FA50/AAS. Otherwise, 4m composite analysis is by 10g aqua regia digest, solvent extraction and flame AAS for Au (0.01ppm) - Genalysis method code B/SAAS.



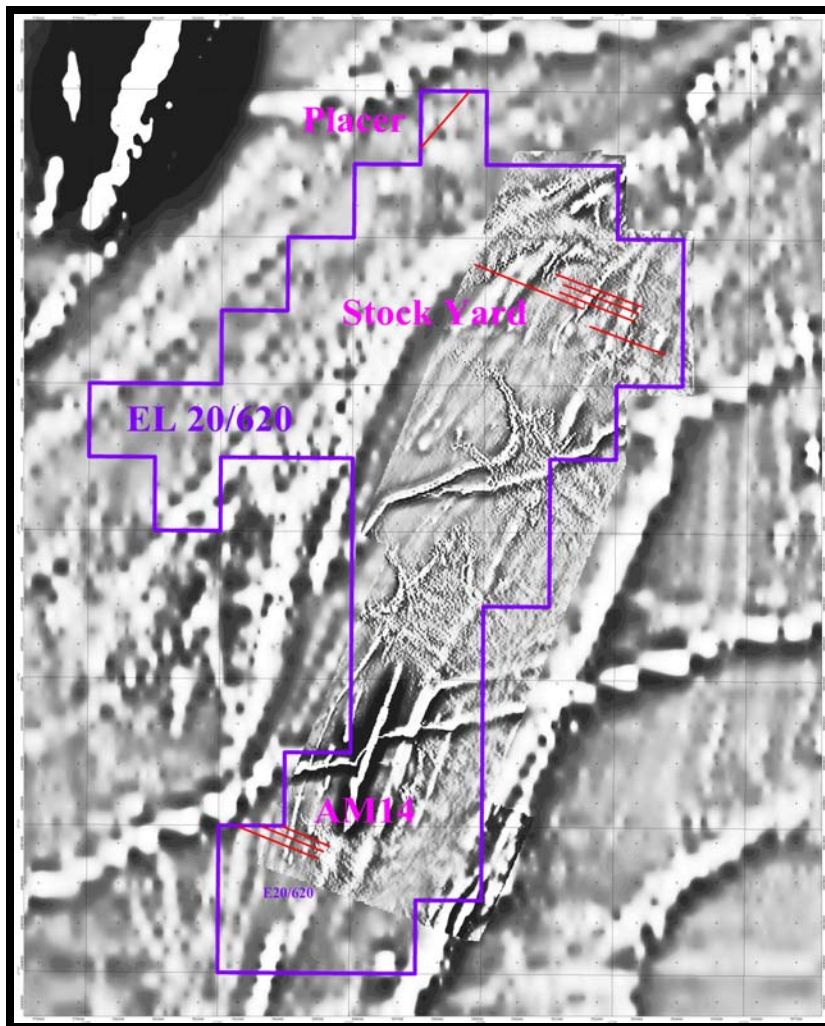
**Figure 5. Darlot RC Drill Hole Locations over 1<sup>st</sup> VD Magnetic and Colour IP Image**

**WATTAGEE PROJECT**

The Wattagee area is located in the Murchison Province of the Yilgarn Craton and comprises one granted exploration licence 30 km north of the town of Cue. The appeal of the area is the combination of favourable host rock sequences, large-scale alteration systems and a complex of intersections, regional faults and shears, chiefly the Big Bell Lineament and Mt Magnet-Cuddingwarra Shear, both of which host major gold deposits. The tenement is immediately north along strike from the former Harmony Cuddingwarra pit, from which New Hampton mined approximately 5.7mt at 2.5 g/t Au for 460,000 ounces.

Enterprise considers the geology of the project area to be highly prospective for economic gold and base metal deposits and up to 80% of the prospective stratigraphy is obscured by a regolith which has hindered previous explorers' efforts.

During the Quarter, nine lines (18.4line km) of 100m dipole-dipole IP were completed over the Placer Prospect (1 line), the Stockyard Prospect (5 lines) and AM14 Prospect (3 lines). The location of these lines is shown in Figure 6.

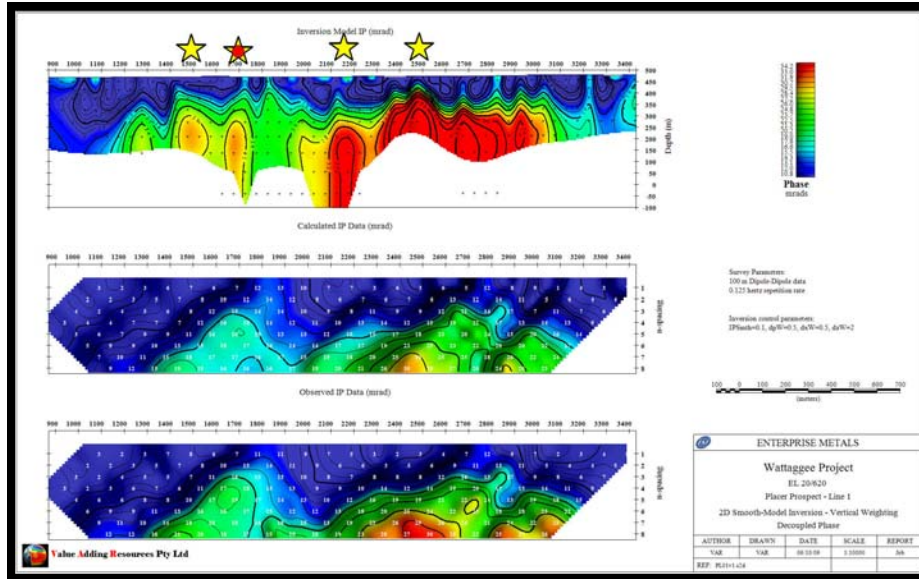


**Figure 6. Wattagee Project, Location of IP Lines**



**Placer Prospect**

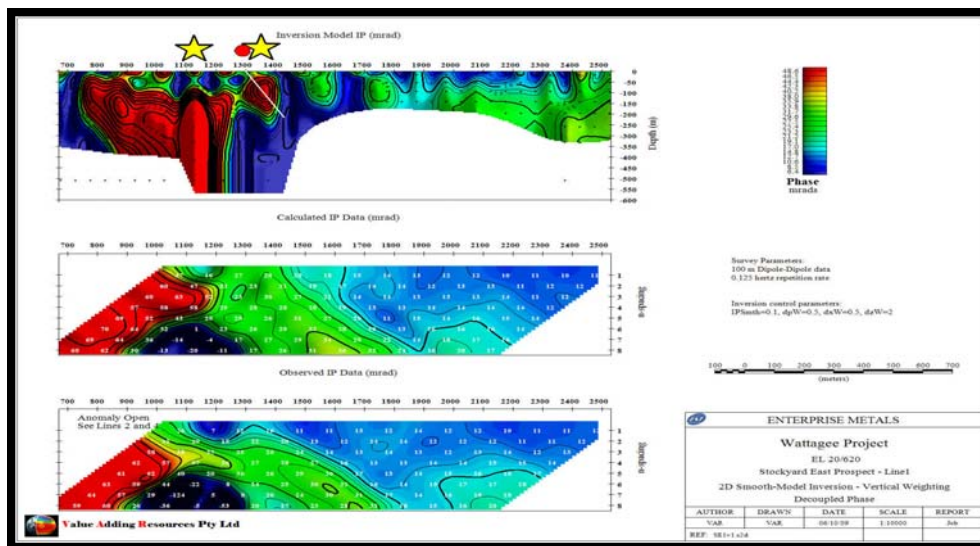
The Placer IP line was designed to cover anomalous Au geochemistry. A strong phase response is evident in the middle to northern end of the line. The modelling suggests that the weathering profile maybe 100m deep, and previous RAB drilling has not been deep enough to test the primary zone containing the IP targets (in red in Figure 7 below).



**Figure 7. Placer Prospect, Decoupled Phase IP**

**Stock Yard Prospect**

The lines at Stock Yard were designed to test the gold intercepted in a number of historical drill holes. On line 1, a phase and conductive response is associated with the Au mineralisation intersected in drill hole NCRC-6 (4m @ 17.9 g/t Au). This line also has a very strong phase and highly conductive response to the west which remains open. The Stock Yard lines have identified a number of high phase/strong conductor responses that have not been drilled tested. The responses observed are comparable with the massive sulphide responses seen at AM14.



**Figure 8. Stock Yard Prospect, Line 1 Decoupled Phase IP**

**AM14 Prospect**

The lines at AM14 were undertaken to locate the IP responses associated with the known massive sulphides drilled in the past. The previous work has not been located accurately. Previous IP surveys by Esso showed a strong IP and conductive response associated with base metal mineralisation. Of the newly acquired data, line 3 was designed to repeat Esso line 0. There is a good comparison with the Esso line and AM14 Line 3 data.

The IP technique can be used to target massive sulphide mineralisation within entire Wattagee Project area.

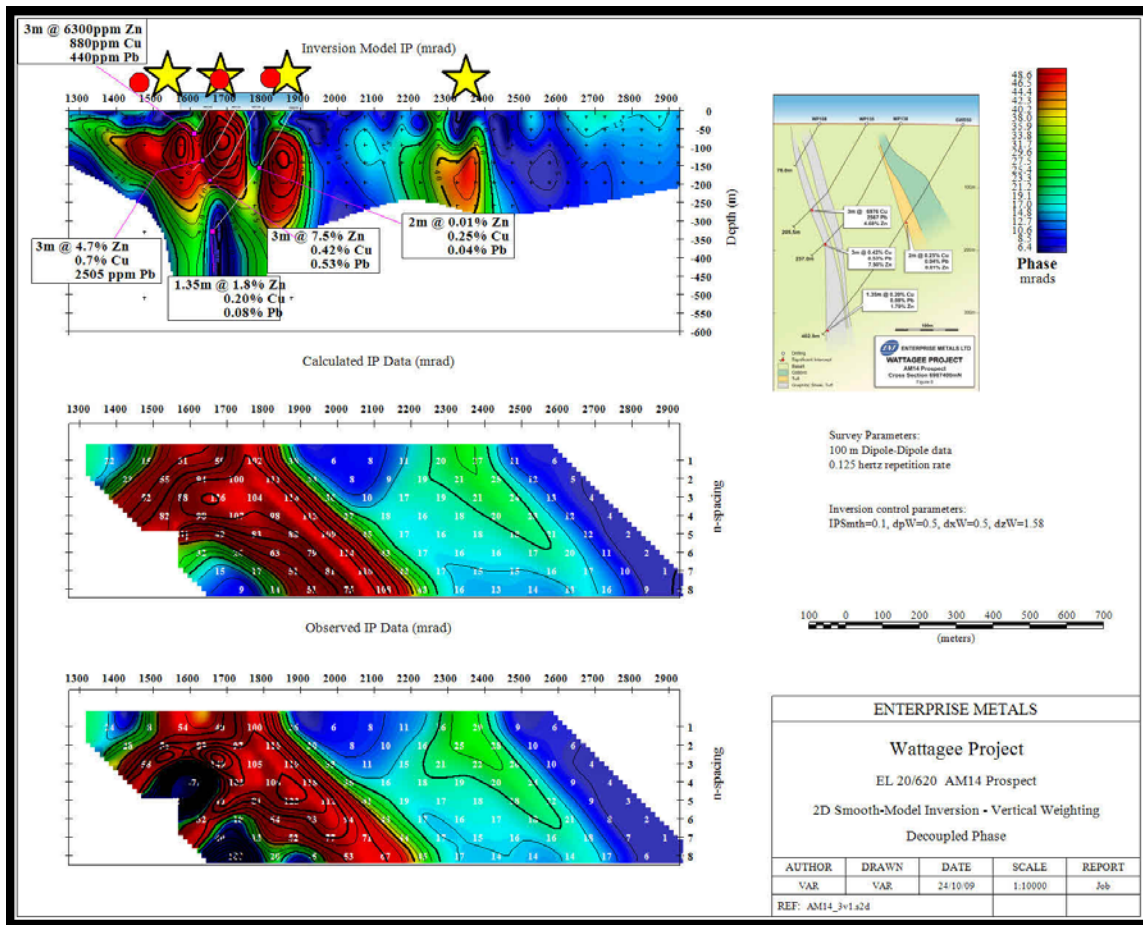


Figure 9. AM14 Line 3 Decoupled Phase

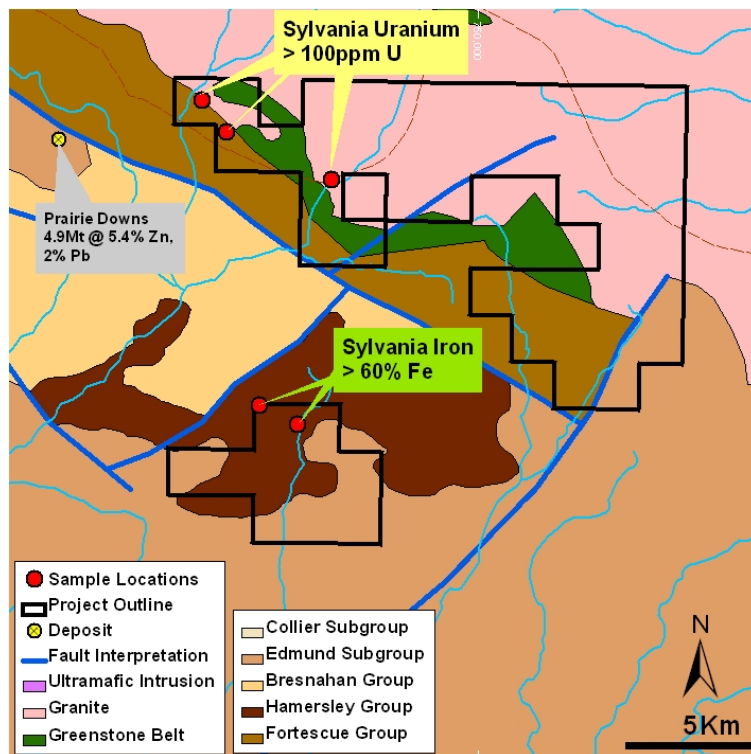
**SYLVANIA PROJECT**

The Sylvania Project is located on the southern margin of the Sylvania Dome in the Pilbara block, approximately 70km east-southeast of the town of Newman. Airborne radiometric and magnetic data over the project area shows a strong uranium channel anomaly along the south western margin of the Sylvania Dome, where it is overlain by Proterozoic sediments. The potential exists for shear hosted or unconformity style uranium deposits along this contact.

During July 2009, Enterprise undertook geological mapping and soil sampling aided by scintillometry to further evaluate this target and to aid drill-hole design. Results are encouraging with soil assays up to 252ppm U in Fortescue Group metasediments close to the Archaean granitoid contact. Refer Figure 10 below. The uranium anomalies are associated with chloritic or hematitic phyllite lithologies. Detailed geological mapping together with airborne EM are under consideration to define drill targets at this prospect.

Hammersley Group banded iron formations (“Bif”) and hematite outcrop on the northern margin of the southern portion of Enterprise’s tenement. They have been drill tested by Rio Tinto/Hamersley Iron immediately to the north of Enterprise’s tenement in successive phases since the late 1980’s. The Bif units dip shallowly to the south and are interpreted to belong to the Brockman and Weeli Wolli Iron Formations. The iron formations extend into Enterprise’s tenement but are partly overlain by clastic rocks assigned to the Wyloo group.

Reconnaissance geological mapping and rock chip sampling by Enterprise also located hematite mineralisation (up to 66.3%Fe) transgressing the Rio Tinto/Enterprise Metals tenement boundary. Refer Figure 10. The area is poorly exposed and there is limited scope to advance the search by geological mapping. Scout RC drilling is being considered for 2010.



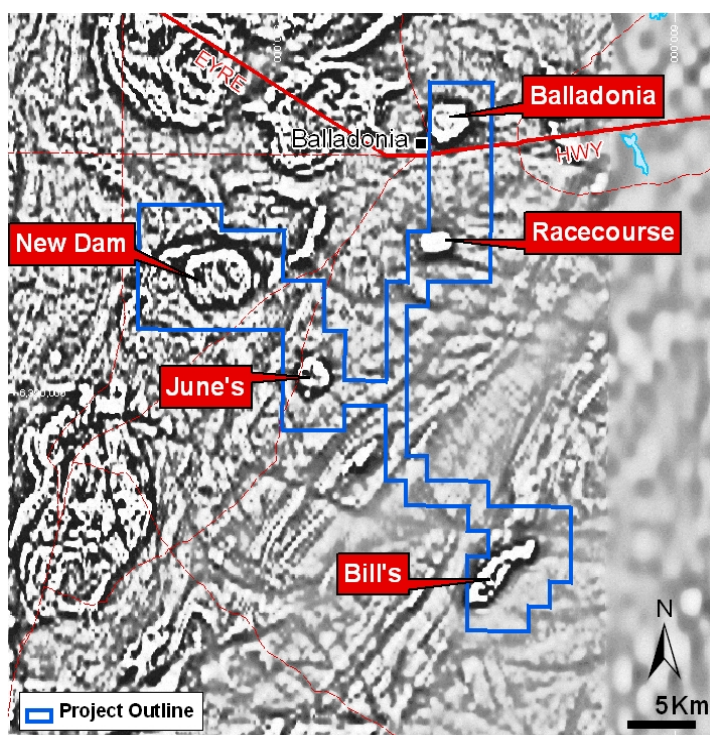
**Figure 10. Sylvania Project Geology, with Uranium and Iron Ore Rockchip Results**

**EUCLA PROJECT**

Following the release of newly flown magnetic and radiometric survey data by the Geological Survey of Western Australia ("GSWA") in early 2009, Enterprise applied for two new exploration licence applications to cover a series of strong discrete magnetic anomalies in the vicinity of Balladonia, on the edge of the Nullabor Plain.

The tenement applications lie to the immediate east the Proterozoic Fraser Range Orogenic Complex, within the Nornalup Complex, which is made up of intensely deformed, high grade migmatitic, ortho- and paragneisses, intruded by granite sheets. Magnetic data suggests the area may contain enclaves of granulite and upper amphibolite high grade metamorphics and/or thin linear belts of mafic volcanics, mafic-ultramafic layered complexes, and acid volcanics with sulphide rich intrusive bodies. Tertiary sedimentary units covering most of the magnetic targets are thought to be generally less than 50 metres thick.

The strong discrete magnetic anomalies are each several square kilometers in extent, and may relate to enclaves of mafic and/or ultramafic rocks prospective for gold and base metals. Refer Figure 11 below. Alternatively, they may indicate the presence of large magnetite rich intrusive or metamorphosed sedimentary bodies. Detailed airborne magnetic surveys were carried out over these anomalies in June 2009, and gravity surveys are in progress.



**Figure 11. Eucla Project Tenement, First VD Magnetics and Magnetic Targets**

### 3. CORPORATE

#### Share and Option Issue

On 16<sup>th</sup> June 2009, the Company announced that it would offer eligible shareholders the opportunity to participate in a non-renounceable Entitlement Offer ("Offer") on the basis of one new Share at an issue price of \$0.15 for every six shares held on the record date of 26<sup>th</sup> June 2009. For every one new Share issued, one new Option would also be granted for nil consideration with an exercise price of \$0.25 cents exercisable on or before 20<sup>th</sup> June 2012.

The Offer closed on 13<sup>th</sup> July 2009. The following table shows the number of Shares and Options on issue immediately prior to the Entitlement issue and the total number of Shares and Options on issue following the issue of the Entitlement, Shortfall and Top Up Shares and Options.

	Shares	Options
<b>Previously Issued</b>	75,876,500	7,500,000 <sup>1</sup>
Accepted under Entitlement	10,209,703	10,209,703
Underwriter Shortfall	2,459,342	2,459,342
Underwriter Top Up	2,540,658	2,540,658
Underwriter Entitlement	-	1,000,000
<b>TOTAL ISSUED</b>	<b>91,086,243</b>	<b>23,709,743</b>
<b>TOTAL ASX QUOTED</b>	<b>91,086,243</b>	<b>16,209,743</b>

Note 1: Director Options, not ASX quoted.

#### Cash Position

The Company's cash position at 30<sup>th</sup> September 2009 was \$1.959 million.



**Dermot Ryan**

#### Managing Director

Contact: Telephone: 08 9436 9200 Facsimile: 08 9436 9299 Email:  
[admin@enterprisemetals.com.au](mailto:admin@enterprisemetals.com.au)

*The information in this announcement that relates to Exploration Results has been reviewed by Mr Dermot Ryan, who is a Fellow of the Australian Institute of Geoscientists, a Fellow of the Australasian Institute of Mining and Metallurgy, a Chartered Professional and a full time employee of geological consultancy XServ Pty Ltd. Mr Ryan has sufficient relevant experience in the styles of mineralisation and types of deposit under consideration, and in the activity he is undertaking, to qualify as a Competent Person as defined in the 2004 Edition of the "Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves" (the JORC Code), and consents to the inclusion of the information in the form and context in which it appears.*

## PROJECT LOCATIONS – 30 September 2009

