

**ENTERPRISE METALS LIMITED** 

(ACN 123 567 073)

## 30 January 2012

ASX Symbol: ENT

#### CONTACT

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#### PROJECTS

**Copper/Gold** Doolgunna Wattagee

Nickel/Copper

Fraser Range

#### Gold

Darlot Yalgoo Wattagee

### Iron Ore

Booylgoo Earaheedy Burracoppin Sylvania

#### **ISSUED CAPITAL**

#### **31 December 2012**

Shares on Issue	213,220,776
Shares Quoted	213,220,776
Listed Options	Nil
Unlisted	80,925,806
Options	

### **DECEMBER 2012 QUARTERLY ACTIVITIES REPORT**

# **HIGHLIGHTS**

# **Doolgunna Gold/Base Metals Project**

- Vulcan Prospect defined by infill aircore drilling within 1,500m long multi-element soil anomaly.
- > 245 hole "infill" aircore program completed,
- Four other discrete copper prospects, Scotty, Sulu, McCoy & Nimoy (with associated Co, Au, As, Bi & Pb) defined by soil and aircore geochemistry.
- Goodin Fault developing as new target, with anomalous gold results including:

*previous AC drilling							
DNAC066*	4m @	0 12.30g/t Au from 72m					
DNAC281	4m @	1.11g/t Au from 56m					
DNAC305	4m @	2.99g/t Au from 60m					
DNAC311	4m @	19.50g/t Au from 20m					

Results to date suggest up to 3km strike of Au (+/-Cu) mineralisation associated with the Goodin Fault. The AC drilling has provided targets for RC drill testing in 2013.

# Fraser Range Nickel Project

- Plato Prospect (nickel-copper-cobalt) further defined by 387 infill soil samples.
- New assay results closely match area of interpreted magnetic intrusive body.
- Reconnaissance IP survey completed over Plato.
- IP chargeable targets associated with Ni/Cu geochemistry represent drill targets.

# **CORPORATE**

- ENT completed an in-specie distribution of 100% of the shares in Enterprise Uranium Ltd (ENU) to existing ENT shareholders on a 1 for 5 basis.
- ENT later subscribed for 13,500,000 new ENU shares and 6,750,000 ENU Options at a cost of \$2.7 million. This represents approximately 19.8% of ENU's issued capital upon listing on the ASX on 20 December 2012.
- ENT cash at bank at 31 December: \$3.89M.

## **1. SUMMARY OF EXPLORATION ACTIVITIES**

### DOOLGUNNA PROJECT

The Doolgunna Project covers 1,100km<sup>2</sup> and is located approximately 110km northeast of Meekatharra. The Company is searching for copper/gold rich volcanogenic massive sulfide (VMS) ore deposits within the Narracoota Formation volcanics, approximately 13 km southwest of Sandfire Resources NL's DeGrussa copper mine, and is also searching for sediment hosted copper (SEDEX) within the Proterozoic sediments flanking the Archaean Goodin Dome.

Due to lack of outcrop and deep weathering in the Narracoota Fm volcanics, the Company has undertaken extensive regional and infill soil sampling programs and analysed for metals typically associated with VMS deposits such as Au, Ag, Cu, Pb, Zn, Bi, Co, Cd and Mn.

In the December Quarter, the 2012 regional and infill soil sampling programs were completed by over the SW and NE extensions of the Vulcan trend.

This work has further defined the Vulcan Prospect, and identified four new copper prospects, with associated anomalous Au, As, Bi, Pb and Co. Figure 2 shows an image of the gridded soil copper results, and the new copper prospects.

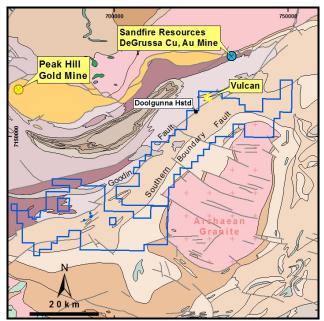


Figure 1: Tenement and Regional Geology

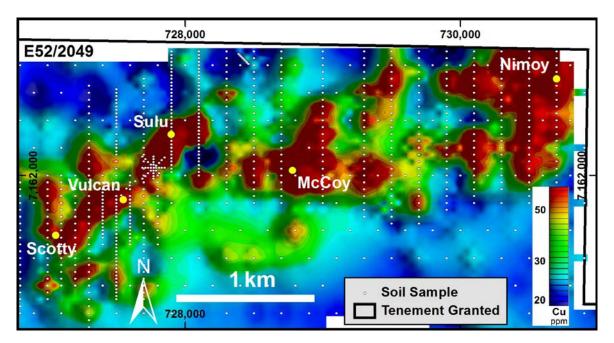


Figure 2: Doolgunna Project, Copper (ppm) in Soil Samples

#### AIRCORE DRILLING

Contemporaneously with the soil sampling, regional vertical aircore drilling (DNAC001 - DNAC141) was undertaken throughout 2012 on north-south lines 1,000 metres apart, with holes spaced at 200m along lines.

Subsequently, infill AC drilling, DNAC141-DNAC385, (245 aircore holes for 14,785m) was undertaken in the September and December Quarters to follow up areas of soil and/or aircore anomalism. The infill program outlined zones of lateritic or oxide gold mineralisation (and deeper copper mineralisation) within the regolith. (Refer Figure 3 and Table 2 for anomalous drill hole locations) The exploration rationale is that remanent gold (and deeper copper) mineralisation within the regolith will assist in the location of sulphide targets for RC drill testing in the primary zone (fresh rock).

This combined data has identified the Vulcan Prospect and four other copper prospects which are discussed below. (Refer Appendix 1 for collar file of drill holes referred to in this report)

Figure 3 below shows the location of the new prospects, the location of the aircore drill holes, and gridded "maximum values of downhole copper" or "maxCu" values.

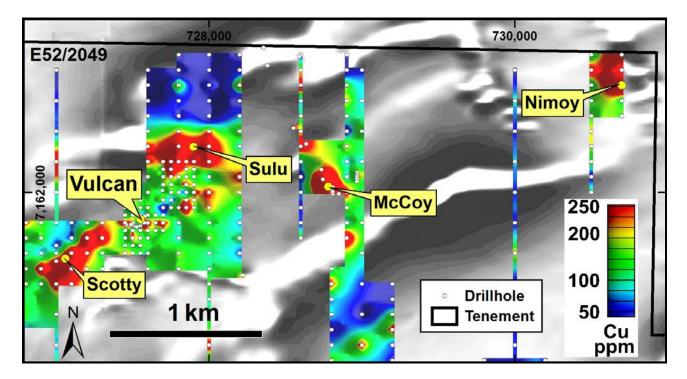


Figure 3: Doolgunna Project, Maximum Copper (ppm) in Aircore Drill Holes, Over VD1 Magnetic Image

### VULCAN PROSPECT

The Vulcan mineralised "shoot" occurs within the 1,500m long copper/gold Vulcan soil anomaly, which has a VMS style multi-element association of Au-Ag-As-Pb-Zn-Mo-Sb-Cd. (*Refer ASX:ENT announcement 17 September 2012*).

During the Quarter, six infill aircore holes, (DNAC379 - DNAC385) were drilled in the general area of the Vulcan soil anomaly. The program was designed to enhance Enterprise's understanding of both the bedrock geology and the distribution of gold, copper and pathfinder elements in the regolith, with the ultimate aim of delineating VMS and/or gold mineralisation in the primary (fresh rock) zone. Refer Table 8 for collar details.

On 6<sup>th</sup> December 2012, the Company announced that drill results from its Vulcan Prospect had outlined a plunging pipe like zone containing oxide (laterite) gold mineralisation. (Refer Figure 4 Vulcan schematic section, and Figure 5, location of drill section) The Company considers that the laterite gold mineralisation may overlie a "shoot" of primary sulphide mineralisation.

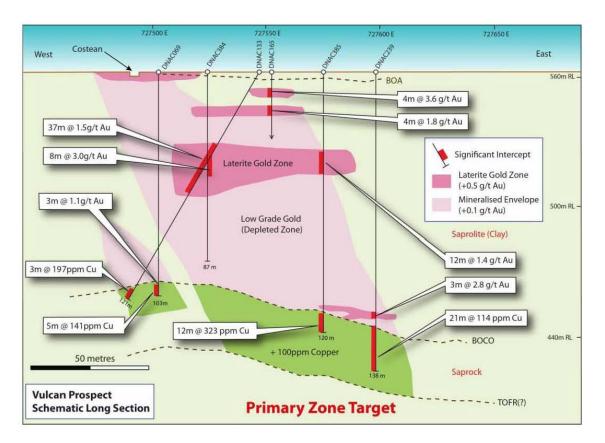


Figure 4: Vulcan Prospect, Schematic Long Section

The geochemistry of drill hole DNAC385 shows severe metal depletion from surface to 108m downhole (*Base of Complete Oxidation* or BOCO) and then a significant (10 to 20 fold) increase in metal content from 108m to end of hole at 120m, which is all in the partly oxidised or transition zone. Significant gold intersections at Vulcan are shown in Figure 5 overleaf.

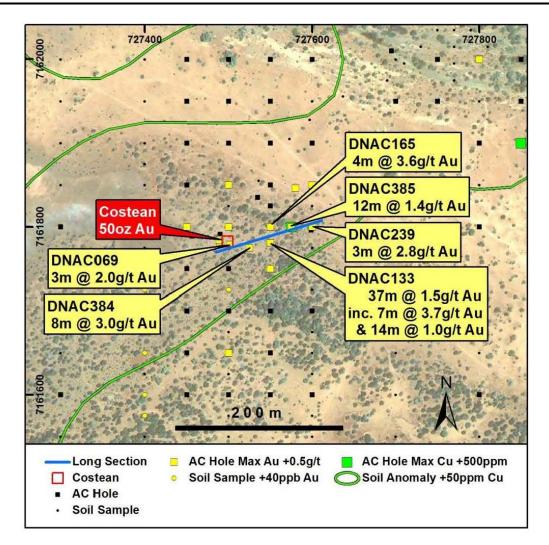


Figure 5: Vulcan Prospect, Location of Key Drill Holes and Long Section

Due to the availability of an RC drill rig at site, an attempt was made late in December 2012 to commence an RC drilling program of 6 to 12 RC holes of between 200-300m depth. Due to heavy but intermittent rain, the pre-Christmas RC program was cancelled and re-scheduled for an early 2013 start.

It is planned that all RC holes will be fitted with PVC in readiness for Downhole EM (DHEM) which will "see" up to 200m around each hole, and allow the Company to search up to 50 metres "off hole" for nearby conductors (potential massive sulphides).

### SCOTTY PROSPECT:

This prospect is centred approximately 500m south west of the Vulcan Prospect, and strikes north east. The area was initially identified as a soil gold anomaly (+2ppm Au) but aircore drilling has now intersected anomalous copper, gold, silver, bismuth and cobalt. The highest copper values were encountered towards the base of the regolith or End of Hole, and are associated with elevated cobalt, silver and bismuth. (Refer Table 1 overleaf)

Hole	From	То	Cu	Au	Ag	Bi	Со
поте	(m)	(m)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
DNAC136	36	44	221	0.02	0.09	0.1	352
DNAC136**	48	52	214	3.88	0.18	2.72	55
DNAC244	24	40	343	0.01	0.21	-	65
DNAC251	40	81	202	>0.01	0.16	0.10	30
Incl.	79	81*	610	>0.01	0.08	0.13	46
DNAC255	12	41*	607	>0.01	0.08	0.01	103
Incl.	16	32	757	>0.01	0.09	0.01	162
DNAC256	48	52*	65	>0.01	7.92	1.47	2,350
DNAC259	40	53*	186	>0.01	0.12	0.01	49
Incl.	40	44	454	>0.01	0.38	0.06	36
DNAC262	36	48	66	>0.01	0.05	0.03	322
DNAC266	44	48*	265	0.03	0.84	1.78	138
DNAC267	0	4	387	0.10	2.15	3.96	174
DNAC267	16	28	490	0.01	0.12	0.18	17
DNAC267	40	48	109	0.38	0.35	0.16	109
DNAC267	56	60	148	>0.01	<0.02	0.89	14

Table 1: Scotty Prospect, Anomalous Aircore Drill Hole Results

\*End of Hole & Refer Note 1 for analytical methods. \*\* Previously reported ASX:ENT 17 August 2012.

#### Note 1:

For all aircore drill hole 4m composite samples, Au, Cu and other elements analysed by Method ARM155 (50g Aqua regia digest, ICP-MS) by SGS Australia Pty Ltd.

For all aircore drill hole 1m original samples, Au subsequently analysed by FAA505 (Fire Assay/AAS, 50 gm charge) by SGS Australia Pty Ltd.

#### SULU PROSPECT:

This prospect is centred approximately 600m north east of the Vulcan Prospect, and was initially identified by the discovery of a rock chip sample (with visible gold) which assayed 810g/t Au, 0.1% Cu, 18.3g/t Ag, 1.0% Bi, 132ppm Mo and 2.7ppm Sb. (*ASX:ENT Announcement 17 September 2012*)

Subsequent detailed soil sampling identified a broad NE striking +50ppm copper anomaly. Shallow aircore drilling in the area is widely spaced with many aircore holes terminating in elevated copper and cobalt (Refer Table 2 below). Further AC drilling is required to define a basement Cu/Au target.

Hole	From (m)	To (m)	Cu (ppm)	Au (ppm)	Ag (ppm)	Co (ppm)
DNAC084	40	51*	396	<1	<0.02	96
DNAC085	16	36*	512	<1	<0.02	61
DNAC086	16	31*	273	<1	<0.02	104
DNAC175	24	31*	254	<1	0.04	68
DNAC176	8	30*	404	<1	0.04	41
Incl.	24	30*	532	<1	0.08	84
DNAC178	0	24	175	<1	0.02	27
DNAC190	0	22*	244	<1	0.02	30
DNAC191	12	44*	171	<1	0.05	51
DNAC193	8	32	137	<1	0.04	17
DNAC200	20	48	226	<1	0.04	40
DNAC206	4	34*	176	<1	0.02	49
DNAC219	20	41*	115	0.01	0.07	54
DNAC220	12	33*	276	<1	0.03	58
DNAC221	0	42*	313	<1	0.05	49
Incl.	40	42*	570	<1	0.22	83
DNAC222	28	48	121	<1	0.04	37
DNAC222	48	55*	48	0.02	0.13	119
DNAC234	8	40	208	0.9	0.07	40
DNAC234	40	45*	263	<1	0.05	67

Table 2: Sulu Prospect, Anomalous Aircore Drill Hole Results

\*End of Hole & Refer Note 1 for analytical methods.

#### McCOY PROSPECT

This prospect is centred approximately 1,500m due east of the Vulcan Prospect, and is located in the vicinity of No. 2 Bore. The Company's 2012 AC drilling program was intended to check results of shallow 1970's drilling by Western Mining Corporation ("WMC") and follow up Enterprise's 2009 intersection of 1 m at 0.86% Cu, 0.4% Pb and 0.27% Zn in hole NBRC010.

The current results, particularly from DNAC338, have extended the copper/zinc/lead anomaly to the south east, providing encouragement for further work. (Refer Table 3)

### DNAC338: 8m @ 299ppm Cu, 1,625 ppm Pb, 8.03 ppm Bi and 490 ppm Zn from 24m.

Hole	From (m)	То (m)	Cu (ppm)	Au (ppm)	As (ppm)	Bi (ppm)	Pb (ppm)	Zn (ppm)
DNAC139	52	60*	155	0.07	79	3.64	175	113
DNAC140	0	4	155	0.04	36	21	219	86
DNAC338	24	28	290	2.0	108	8.41	1,210	514
and	28	32	308	<1	78	7.66	2,040	467
NBRC010	107	108	8,645	0.33	50	351	508	589
and	114	115	463	>0.01	119	>0.1	4,024	2,694

Table 3: McCoy Prospect, Anomalous Drill Hole Results

\*End of Hole & Refer Note 1 for analytical methods.

The anomalous copper and zinc intersected in shallow drilling by WMC in 1971 is shown in Table 4 below.

Hole	From (m)	То (m)	Interval (m)	Cu (ppm)	Zn (ppm)
MTP78	15.2	22.9	7.7	1,596	756
MTP79	3	27.4	24.4	2,032	1,041
MTP80	7.6	27.4	19.8	1,767	355

Table 4: McCoy Prospect: Anomalous WMC Percussion Drill Results (1971)

### NIMOY PROSPECT:

This prospect is centred approximately 3,000m due east northeast of the Vulcan Prospect, and was initially identified as a coincident copper, gold, lead, bismuth, and zinc anomaly in soil sampling.

The recent widely spaced aircore drilling of the regolith has better defined this anomaly and in particular drillhole DNAC373 provides a ready target for follow up work. (Refer Table 5 below)

## DNAC373 60m @ 530ppm Cu from 4m to 64m (EoH).

Incl. 4m @ 1,110ppm Cu from 56m to 60m,

and 4m @ 494ppm Cu, 1.85ppm Bi, 217ppm Pb, 372ppm Zn from 60m to EoH.

Hele	From	То	Cu	Au	As	Bi	Со	Pb	Zn
Hole	(m)	(m)	(ppm)						
DNAC369	12	28*	259	<0.01	1.3	0.03	35	1.9	45
DNAC371	12	36*	402	<0.01	0.72	0.02	37	2.5	43
DNAC373	4	64*	530	<0.01	47.5	0.28	44	66	282
Incl.	12	20	887	<0.01	57.1	0.04	19	168	215
and	56	60	1,110	<0.01	30.5	0.9	48	63	331

 Table 5: Nimoy
 Prospect, Anomalous
 Aircore
 Drill
 Hole
 Results

\*End of Hole & Refer Note 1 for analytical methods.

Further AC drilling will be undertaken at McCoy, Nimoy, Scotty and Sulu in early 2013 to better define these prospects, and prepare them for deep RC drill testing in the primary zone.

### **GOODIN FAULT PROSPECT**

The announcement by Enterprise to the ASX on November 28<sup>th</sup> outlined the gold and copper intersections from this Prospect. The latest aircore drill hole results have extended the copper mineralisation to the east. The present pattern is of a clustering of anomalis copper samples paralleling the inferred position of the Goodin Fault.

In addition the south-western end of the prospect has a multi-element base metal anomaly consisting of copper-arsenic and lead, closely associated with highly anomalous gold.

Hole	From (m)	To (m)	Au (ppm)	As (ppm)	Bi (ppm)	Cu (ppm)	Pb (ppm)
DNAC066	72	76	12.3	18	0.45	24	7.1
DNAC281	28	32	0.14	183	0.66	58	23.8
	56	60	1.11	18	0.11	45	4
DNAC305	36	40	0.91	2	0.03	6	3.3
	60	64	2.99	19	0.09	19	30.4
DNAC311	20	24	19.50	9	0.09	11	18.5

 Table 6: Significant Gold and Base Metal Assays from Goodin Fault Prospect

### Figure 7: Goodin Fault Prospect, Gold and Base Metal Anomalies

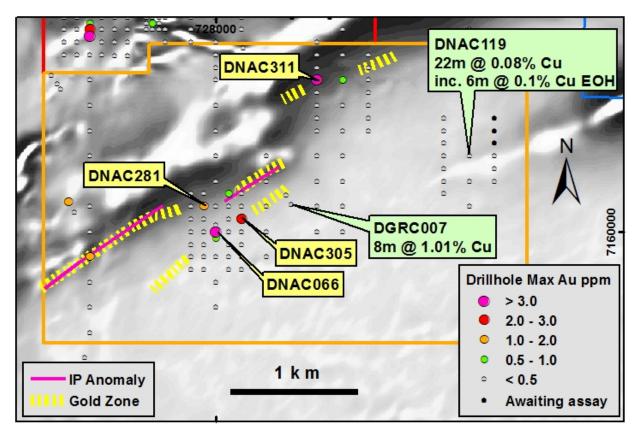


Figure 8: Goodin Fault Prospect, Drill Hole Plan over Magnetic Image

Hole	Hole Type	Max Depth (m)	MGA_East	MGA_North	Dip	Azimuth (MGA_Deg)
DNAC066	AC	102	728600	7160000	-90	0
DNAC281	AC	88	727900	7160200	-90	0
DNAC305	AC	99	728200	7160100	-90	0
DNAC311	AC	65	728800	7161200	-90	0

Table7 : Goodin Fault, Anomalous Aircore Drill Hole Collar File

Hole	Hole Type	Max Depth (m)	MGA_East	MGA_North	Dip	Azimuth (MGA_Deg)
DNAC084	AC	51	728000	7162200	-90	0
DNAC085	AC	36	728000	7162300	-90	0
DNAC086	AC	31	728000	7162400	-90	0
DNAC136	AC	63	727000	7161550	-90	0
DNAC139	AC	60	728808	7161990	-60	360
DNAC140	AC	49	728848	7161990	-60	360
DNAC175	AC	31	727750	7162100	-90	0
DNAC176	AC	30	727750	7162150	-90	0
DNAC178	AC	39	727850	7162200	-90	0
DNAC190	AC	22	727900	7162200	-90	0
DNAC191	AC	44	727700	7162200	-90	0
DNAC193	AC	49	727700	7162100	-90	0
DNAC200	AC	80	728200	7162700	-90	0
DNAC206	AC	34	728200	7162100	-90	0
DNAC219	AC	41	727800	7162100	-90	0
DNAC220	AC	33	727800	7162200	-90	0
DNAC221	AC	42	727800	7162300	-90	0
DNAC222	AC	55	727800	7162400	-90	0
DNAC234	AC	45	727600	7162300	-90	0
DNAC244	AC	75	727300	7161700	-90	0
DNAC251	AC	81	727200	7161700	-90	0
DNAC255	AC	41	727100	7161500	-90	0
DNAC256	AC	52	726900	7161800	-90	0
DNAC259	AC	53	726900	7161500	-90	0
DNAC262	AC	76	726800	7161500	-90	0
DNAC266	AC	48	727100	7161400	-90	0
DNAC267	AC	84	727100	7161600	-90	0
DNAC338	AC	44	728900	7162000	-90	0
DNAC369	AC	28	730500	7162800	-90	0
DNAC371	AC	36	730700	7162900	-90	0
DNAC373	AC	64	730700	7162700	-90	0
MTP78	PD	27.4	728808	7162020	-90	0
MTP79	PD	29	728793	7162020	-60	90
MTP80	PD	29	728808	7162005	-60	360
NBRC010	RC	234	728744	7162084	-60	135

Table 8: Vulcan Area, Anomalous Aircore Drill Hole Collar File

#### FRASER RANGE PROJECT

The Fraser Range Project covering 594km<sup>2</sup> is located approximately 100km east of Norseman and 650km east of Perth within the Albany-Fraser province (Refer Figure 9). The Project is considered prospective for gold and copper/nickel/PGE mineralisation and is situated some 30km southwest of Sirius Resources NL's Nova nickel-copper discovery.

The Albany-Fraser province extends along the southern and southwestern margin of the Yilgarn Craton. It consists mainly of orthogneiss and granite, but also includes large sheets of metagabbro (including the Fraser Complex), remnants of mafic dykes and widespread metasedimentary rocks.

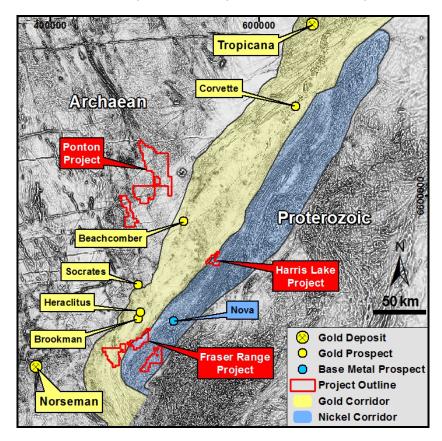


Figure 9: Fraser Range Project, Tenement Location Plan over Magnetics

Five areas with anomalous coincident Ni-Cu-Co geochemistry (similar to metal association at Nova) were identified at the Plato, East Dam, EH1, EH2 and EH3 prospects, along with a gold target at Microwave. (Refer Figure 10).

In September/October 2012, approximately 1,300 (-2mm) infill soil samples were collected from 0.3-0.5m depth from the Plato, EH1 & EH3 Ni-Cu-Co anomalies, the McPhersons Cu-Au anomaly and the Microwave gold anomaly which were identified in the earlier regional soil sampling program.

These infill soil sampling programs, at a nominal 200m line spacing with samples at 100m spacing along line, were aimed at defining the extent of the geochemical anomalies and providing targets for electrical geophysics and drill testing.

The multi-element analytical results from the remaining areas are more complex, more subtle, and require further interpretation.

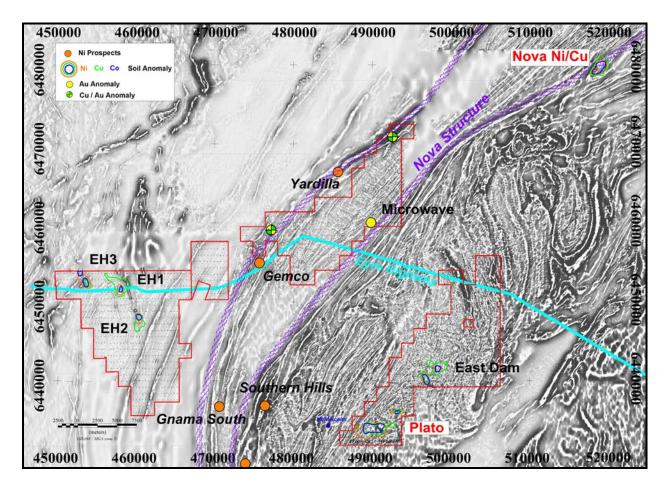


Figure 10: Fraser Range Ni-Cu-Co Soil Anomalies (with "Nova-style" Geochemical Signature)

# PLATO PROSPECT

The Plato infill program defined a coherent area of Ni-Cu-Co anomalism, with individual maximum values of up to 252ppm Ni, 46ppm Cu and 32ppm Co. The program also returned 14 samples in excess of 100ppm Ni. The nickel anomaly is composed of two lobes, with the larger lobe being 1,400m x 400m, and the smaller lobe to the south west being 400m x 400m.

The co-incident Ni-Cu-Co soil anomalism is also broadly co-incident with a "magnetic low" visible on Enterprise's detailed aeromagnetic data. This "magnetic low" is in fact a strongly magnetic body, interpreted by Enterprise to be an ultramafic intrusive with reversed polarity. (ie. remanence)

Figures 11, 12 and 13 show the nickel, copper and cobalt anomalism with respect to the interpreted magnetic intrusive body. There are several other smaller and more subtle Ni-Cu-Co soil anomalies to the west of Plato that require further follow up.

Enterprise Metals Ltd believes that there are similarities between Enterprise's soil sampling results and the early soil sampling results by Sirius Resources NL at their Nova prospect.

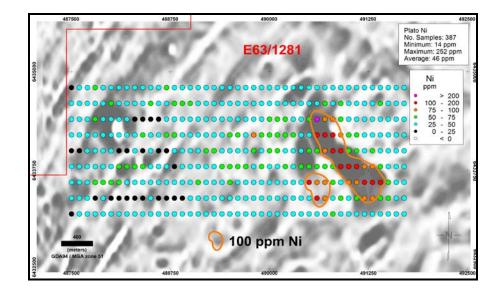


Figure11: Plato Prospect, Soil Sample Locations and Nickel Anomalism over Magnetic Image

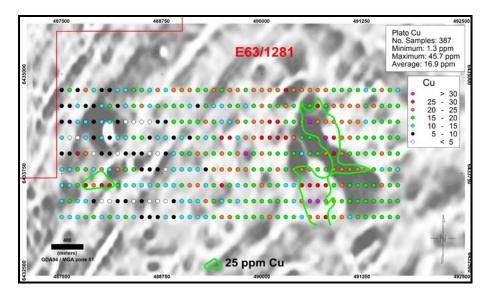


Figure 12: Plato Prospect, Soil Sample Locations and Copper Anomalism over Magnetic Image

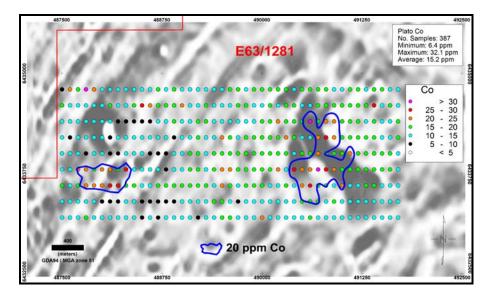
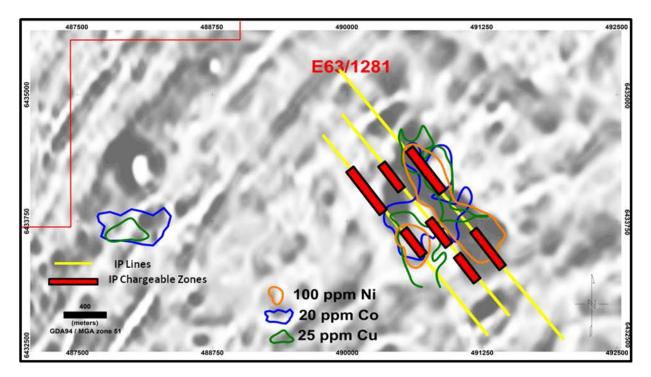


Figure 13: Plato Prospect, Soil Sample Locations and Cobalt Anomalism over Magnetic Image

The Company subsequently completed several long lines of Induced Polarisation ("IP") survey over the Plato Ni/Cu soil anomaly. The three lines (7.75 km of 100m dipole-dipole IP) were designed to follow-up the prominent coincident Ni-Cu-Co soil anomaly (values up to **147 ppm Ni and 33 ppm Cu).** 

Seven IP chargeable zones were identified which are associated with the coincident Ni/Cu geochemical/magnetic anomaly. The Company is interpreting these IP chargeable zones as being sourced by disseminated Ni/Cu sulphides and will be testing this interpretation by drilling early in 2013. (Refer Figure 14)



### Figure 14: Plato Prospect, Location of IP Survey Lines and Anomalies over Magnetic Image

#### 2. CORPORATE

#### Demerger of Uranium Projects

At a General Meeting of Shareholders held on 15<sup>th</sup> October 2012, the shareholders approved the reduction in capital and de-merger of the Company's uranium assets into ENT's wholly owned subsidiary Enterprise Uranium Ltd (ENU), and the distribution in-specie of ENU shares to ENT shareholders on a 1 ENU for 5 ENT held basis.

On 15<sup>th</sup> October 2012, the Company announced the resignation of Non-Executive Director Dr Zhen Huang. Dr Huang joined the Board in July 2011 and has been instrumental in assisting the Company develop its exploration strategy. Concurrently with his resignation from the ENT Board, Dr Huang has taken up the role of Non-Executive Director Enterprise Uranium Ltd.

On the 19<sup>th</sup> December 2012, Enterprise Uranium Ltd was admitted to the list of the ASX, and commenced trading on 20 December 2012.

#### **Cash Position**

Cash held by the Company at 31<sup>st</sup> December 2012 was \$3.89 million.

SH Ryon

Dermot Ryan Managing Director

Contact:

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#### **Competent Persons statement**

The information in this report that relates to Exploration Results and Mineral Resources is based on information compiled by Mr Dermot Ryan, who is an employee of the Company. Mr Ryan is a Fellow of the Australasian Institute of Mining and Metallurgy and a Member of the Australian Institute of Geoscientists and has sufficient experience of relevance to the styles of mineralisation and the types of deposits under consideration, and to the activities undertaken, to qualify as a Competent Person as defined in the 2004 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Ryan consents to the inclusion in this report of the matters based on information in the form and context in which it appears.

#### Contact:

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# **PROJECT LOCATIONS WESTERN AUSTRALIA 31 DEC 2012**

