# 21 January 2011

## **DECEMBER 2010 QUARTERLY ACTIVITIES REPORT**

ASX Symbol: ENT

Level 1, 640 Murray Street PO Box 992 West Perth 6872 Western Australia

Phone: +618 9436 9200 Facsimile: +618 9436 9220 www.enterprisemetals.com.au

#### **BOARD OF DIRECTORS**

Mr Paul Larsen Chairman

Mr Dermot Ryan Managing Director

Mr Bruce Hawley Executive Director

Mr Jay Stephenson CFO/Company Secretary

#### **PROJECTS**

## **Gold/Base Metals**

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

## Iron Ore

Burracoppin Cunderdin Sylvania Earaheedy

# Uranium

Yalgoo (Murchison) Byro (Murchison) Darlot (Yandal) Sylvania (Pilbara)

## **ISSUED CAPITAL**

Shares on Issue: 126,970,776 Shares Quoted: 126,970,776 Listed Options: 22,782,001 Unlisted Options: 5,500,000

## **SUMMARY**

- ➤ December IP survey at Doolgunna suspended due to rain. IP survey re-commenced 27 Jan 2011.
- Mapping and geological reconnaissance at Burracoppin detects more outcrops/subcrops of high grade iron mineralisation associated with linear magnetic targets.
- Plans prepared for RC drill testing "magnetic" CID and/or detrital iron ore target at Sylvania.
- ➢ Plans prepared for aircore drill testing uranium targets at Yalgoo.

## **HIGHLIGHTS**

IP surveying of the first of 4 discrete and co-incident base metal anomalies along the Goodin Fault at Doolgunna commenced in December 2010. However heavy rain prevented completion of surveying at the Doolgunna target. The IP crew will return to site on 27<sup>th</sup> January 2011 and surveying of this target is expected to be completed by early February. The IP crew will then move to the targets in the Ruby Well area.

Reconnaissance mapping and sampling commenced at Burracoppin in late November 2010. Along with numerous Bif outcrops and subcrops, a number of goethite and/or hematite occurrences have been located, where values of +50% Fe are indicated from a calibrated hand-held Niton XL3t X-ray Flouresence quantitative micro analyser ("Niton® XRF Analyser"). Confirmatory laboratory based XRF assays are awaited.

This work is continuing and will form the basis for trenching and RC drill drilling in the first Quarter of 2011.

#### 1. SUMMARY OF EXPLORATION ACTIVITIES

## **DOOLGUNNA PROJECT**

Late in the Quarter the Company mobilised a geophysical contractor to site to commence ground IP surveys over the three multi-element geochemical anomalies defined by detailed soil sampling. Due to heavy rain, the IP survey of the Doolgunna Anomaly was abandoned before completion. The IP crew will return to site shortly and the survey over this target should be completed by early February.

The IP crew will then relocate to the Ruby Well area, to commence IP surveys over the "REA", "REB" and "REC" geochemical targets, as shown in the figures below. The results of the IP geophysical surveys should assist in the design of focused RC drilling.

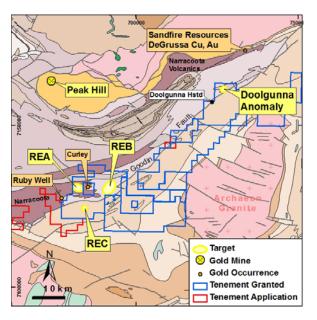


Figure 1. Geology Plan and Geochemical Targets

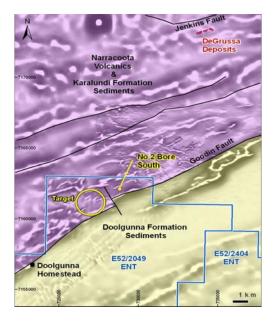


Figure 3. Doolgunna Target on Magnetic Image.

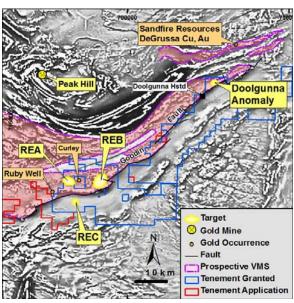


Figure 2. Magnetics and Geochemical Targets

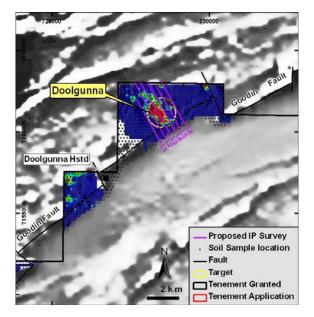


Figure 4. Silver Soil Anomaly & Proposed IP lines

#### **BURRACOPPIN PROJECT**

In August 2010, the Company collected and cut and polished 16 grab rockchip samples from its Burracoppin iron ore project area for iron and associated elements. The samples were obtained from scattered outcrops or subcrops of altered and unaltered quartz-magnetite/banded iron formation ("Bif"). Half of each sample was submitted for assay by XRF analysis at a commercial laboratory. The best assay results of 30-50% Fe were obtained from unaltered Bif or Bif which had been partially or completely altered to massive goethite. (ENT: ASX release 6 September 2010)

Loss on Ignition ("LOI") values of greater than 7-10% were also obtained from the samples assaying +50% Fe, indicating that, after calcining and removal of the contained water, the iron grades would beneficiate to between 57-60%Fe.

The Company also subjected the remaining half or each sample to analysis using its **Niton® XRF Analyser\***. A comparison of the laboratory XRF assays with the Niton XRF values for iron, shows that the Niton values are within +/- 10% of the laboratory XRF assays. The Company believes that, where a rock sample is judged to be homogeneous by the geologist sampler, and is well mineralised in iron (ie +35% Fe), then the Niton values obtained for iron in the field are sufficiently representative of the iron content to be used for mapping and drill targeting purposes. (refer Table 1 below.)

Rockchip	GDA94	GDA94	Niton XRF Value*	XRF Assay**	Variation Niton Value	Description
Sample	Easting	Northing	Fe%	Fe%	To XRF Assay	
Y34747	640116	6531809	31.9	31.07	2.7%	Goethitic Bif
Y34754	642922	6522031	51.0	50.35	1.3%	Massive goethite
Y34755	642019	6521421	52.7	50.71	3.9%	Massive goethite
Y34756	642029	6521388	54.7	53.69	1.9%	Massive goethite
Y34757	641290	6523512	38.3	36.2	5.8%	Goethitic Bif
Y34783	639420	6519620	32.0	36.67	12.7%	Hematised Bif.
Y34785	639420	6519620	37.6	41.84	10.1%	Hematised Bif.

Table 1. Comparison between 2010 Niton XRF Values and XRF Assays

## \*Niton® XRF Analyser:

The Niton XRF unit is a Company owned portable analyser of various elements/ metals, which utilises an x-ray fluorescence tube to take rapid measurements over a pin-point area. It is used by Enterprise to take gain an appreciation of contained iron mineralisation of grab samples from rock outcrops or subcrops, but is not an absolute determinant of contained iron mineralisation. Thirty five individual XRF readings are taken on each sample over a 2 minute interval and the average of these values is the deemed value.

## \*\*XRF Assay:

Fe% was determined by X-ray fluorescence spectroscopy (XRF) on pulverised samples fused with a lithium borate flux at Genalysis Intertek.

In November the Company commenced reconnaissance field checking of linear magnetic targets from its detailed airborne magnetic survey. (ENT: ASX release 10 November 2010) This work has focused on the Company's tenements south of the Great Eastern Highway, and has identified 3 main prospects (to date) where high grade iron mineralistion is located. Table 2 overleaf lists the rockchip samples collected by this program where Niton XRF values of +35% Fe are indicated. XRF assays from Genalysis Intertek are awaited. The best results to date are from prospects named Lamberts, West Lamberts and Johnsons, the locations of which are shown in Figure 5.

Table 2. Rock (Grab\*) Samples with significant (+35% Fe) Niton XRF Values, Sorted by Value

		Niton XRF		
Rockchip	GDA94	GDA94	Value	Field
Sample	Easting	Northing	Fe %	Description
E013657	642176	6520363	63.4	Hematite
E013650	642278	6520194	62.2	Hematite
E013719	642929	6522040	57.8	Hematitic BIF
E013644	642463	6520234	57.4	Hematitic BIF
E013722	642032	6521389	56.4	Goethitic BIF
E013709	642827	6522373	55.7	Goethitic BIF
E013642	642284	6520219	55.3	Hematitic BIF
E013723	642020	6521416	55.1	Hematitic BIF
E013660	642186	6520359	54.8	Hematitic BIF
E013655	642566	6520276	53.9	Hematitic BIF
E013721	642039	6521378	52.3	Geothitic BIF
E013647	642293	6520197	51.1	Goethitic BIF
E013646	642214	6520172	50.6	Goethitic BIF
E013632	642297	6520206	50.6	Hematitic BIF
E013707	642801	6522355	49.9	Goethitic BIF
E013656	642363	6520215	49.9	Hematitic BIF
E013716	642892	6522294	48.0	Goethitic BIF
E013649	642569	6520304	47.8	Goethitic BIF
E013630	642286	6520177	47.2	Hematitic BIF
E013628	642259	6520255	46.3	Goethitic BIF
E013651	639662	6518601	46.1	Hematitic BIF
E013612	642471	6523096	45.3	Goethitic BIF
E013753	648196	6512276	44.8	Goethitic BIF
E013659	642229	6520282	44.0	Hematitic BIF
E013752	648196	6512276	43.1	Goethitic BIF
E013744	641162	6523972	42.3	Goethitic BIF
E013654	639651	6518596	41.6	Goethitic BIF
E013631	642336	6520157	41.6	Goethitic BIF
E013708	642808	6522345	41.3	Goethitic BIF
E013762	647598	6511705	41.1	Goethitic BIF
E013770	647358	6512053	40.9	Hematitic BIF
E013718	642930	6522056	39.8	Goethitic BIF
E013739	641186	6523935	39.8	Hematitic BIF
E013720	642930	6522032	39.2	Goethitic BIF
E013710	642881	6522305	36.9	Goethitic BIF
E013717	642898	6522278	36.8	Goethitic BIF
E013745	641162	6523972	36.5	Hematitic BIF
E013698	641292	6523514	36.2	Goethitic BIF
E013662	643560	6519575	36.0	Goethitic BIF
E013763	647504	6511610	35.8	Goethitic BIF
E013711	642883	6522327	35.5	Goethitic BIF

<sup>\*</sup>Note: Niton XRF values from ~0.5kg grab samples are not necessarily representative of entire outcrops or subcrops, but give an indication of where iron mineralising processes have occurred.

These results strengthen the Company's belief that intense alteration of Bif to goethite (and hematite) at Burracoppin has the potential to produce high grade iron mineralisation. However, no inference regarding depth of this mineralisation can be made until trenching or drilling has been undertaken. The geological reconnaissance program at Burracoppin has recommenced, and subject to confirmatory XRF assays from the laboratory, trenching and RC drilling programs will be planned.

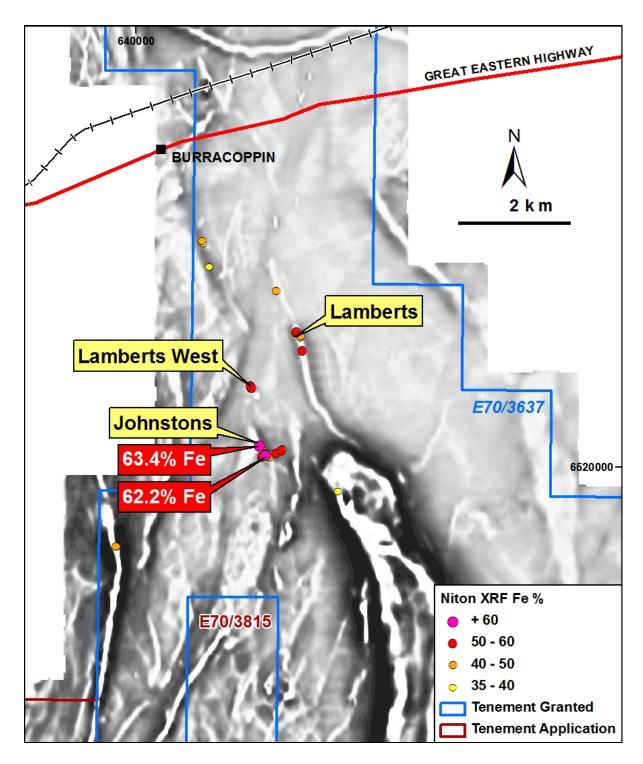


Figure 5. Burracoppin Magnetic Image with Niton XRF Fe% Values

## **SYLVANIA PROJECT**

During the September Quarter of 2010, the Company flew a 100 metre line spaced airborne magnetic survey over the eastern portion of its Sylvania project area. The Sylvania Project is located on the southern margin of the Sylvania Dome, approximately 60km southwest of the town of Newman. (ENT: ASX Release, 29<sup>th</sup> September 2010)

The imaged magnetic data clearly shows a well developed paleo-channel, with a flow direction from northeast to southwest. The buried channel is up to several kilometres wide, and has developed over the NE-SW striking *Fortescue River Fault*. (refer Figure 6).

During the December Quarter the Company planned a scout RC drilling program to test the concept that the paleo-channel may contain significant tonnages and grades of "channel iron deposit" (CID) or unconsolidated detritals containing BIF and lump hematite, sourced from the nearby and outcropping Marra Mamba, Dales Gorge and Joffre Members of the Brockman Iron formation.

Drilling will commence following the completion of heritage clearance surveys.

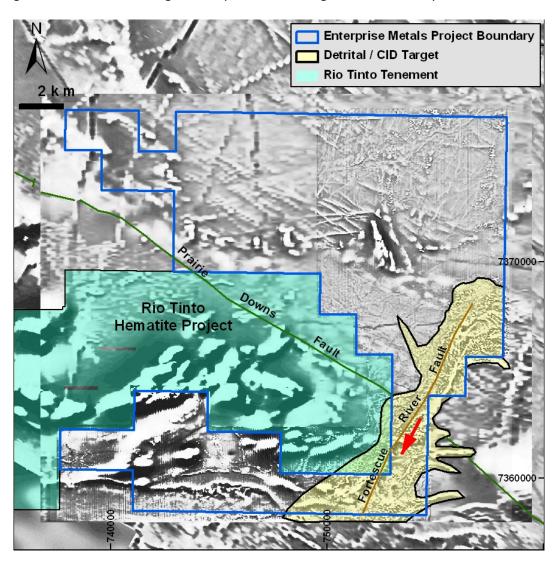


Figure 6. Sylvania Project, Magnetic Image with Paleo-channel Interpretation

## YALGOO PROJECT

During the December Quarter, the Company planned a scout aircore drilling program for the Muggaburna and Bunnawarra uranium targets. The commencement of drilling is subject to successful completion of heritage surveys.

The major calcrete hosted uranium anomaly over Salt River partly coincides with registered aboriginal heritage sites, and approval for drill testing of this target will take longer.

The Company's Yalgoo Uranium Project is located approximately 600kms north of Perth and is 23kms west of the township of Yalgoo. The Project area covers a total of 660 km<sup>2</sup> and is comprised of five granted exploration licences and two exploration licence applications.

The Company's concept is that uranium leached from granites to the north and east of the Company's tenements has been precipitated with calcrete over north-south striking Archaean greenstone belt lithologies within the Company's tenements.

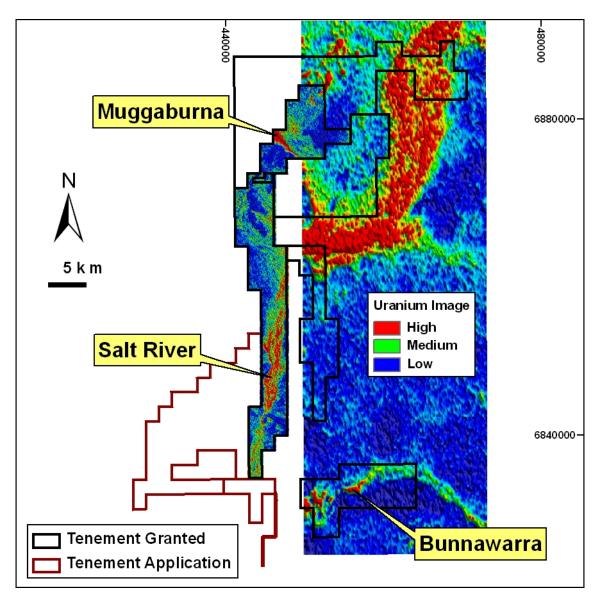


Figure 7. Uranium Channel Image Enterprise 2010 Airborne Radiometric Survey (left) and Regional GSWA Radiometric Survey (right)

#### **CUNDERDIN PROJECT**

The Cunderdin project is centered on the township of Cunderdin approximately 150 km east of Perth and also straddles the Great Eastern Highway and the standard gauge railway line. The Company's concept is that granites and granitic gneisses within the Cunderdin area contain enclaves of NW striking metamorphosed greenstone belts, which may also contain meta-sedimentary units including quartz-magnetite/ banded iron formation ("Bif").

Following the completion of a low level 200 metre line spaced magnetic and radiometric survey over the project area, the Company completed 21 scout RC holes (2,015metres) predominantly along roads on the eastern magnetic feature. Drilling along roads was undertaken due to cropping activities by local farmers. This "road verge" program failed to intersect any high grade iron mineralisation. This drilling was co-funded by a grant of up to \$150,000 from the WA State Government.

Now that crops have been harvested, the Company plans to undertake reconnaissance sampling within farmer's paddocks, in an attempt to identify areas of outcropping or subcropping Bif or iron ore that not been drill tested.

#### **EUCLA PROJECT**

During the Quarter, the Company completed scout RC drill testing of five magnetic/gravity targets near Balladonia, on the edge of the Eucla Basin.

In all cases, igneous dioritic rocks with minor magnetite concentrations were intersected in the Precambrian basement. The dioritic rocks are interpreted to adequately explain the target magnetic/gravity anomalies. Geological inspection of the drill samples did not reveal any mineralization or alteration that might be of economic interest. Assay and petrographic results are still awaited. The future of the project will be assessed after all assay results from these unusual features are received and interpreted.

The drill testing of these targets was co-funded by a grant from the WA State Government. The Government has matched the Company's expenditure on drilling costs.

## 3. CORPORATE

On the 22<sup>nd</sup> October 2010 the Company announced that it had agreed to place 15,000,000 Shares at 20 cents per Share, together with 1 free attaching option for every two shares applied for (exercisable at 25 cents per share on or before 22 November 2012) to raise \$3,000,000. The Placement was made to sophisticated investors, pursuant to Section 708A of the Corporations Act 2001.

The funds will be applied towards general exploration activities including drilling of the Company's Doolgunna, Burracoppin and Sylvania Projects and general working capital.

# **Issued Capital at 31 December 2010**

		Exercise price	Expiry date
Shares on Issue:	126,970,776		
Shares Quoted:	126,970,776		
Listed Options:	22,782,001	25 cents	20 June 2012
Unlisted Options:	3,000,000	25 cents	22 Nov 2012
Unlisted Options:	2,500,000	50 cents	30 Jun 2013

## **Cash Position**

The Company's cash position at 31 December 2010 was \$2.99 million.

Dermot Ryan Managing Director

M Ryon

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.

#### Contact:

Telephone: 08 9436 9200 Facsimile: 08 9436 9299 Email: admin@enterprisemetals.com.au

# PROJECT LOCATIONS WESTERN AUSTRALIA 31 December 2010

