# **ASX ANNOUNCEMENT**

4 March 2010

# CUNDERDIN IRON PROJECT- AIRBORNE SURVEY COMPLETED 110KM STRIKE OF INTERPRETED MAGNETITE HORIZON

# **SUMMARY**

- 110 kilometres of interpreted quartz magnetite/BIF detected.
- NE & E trending shears associated with zones of BIF de-magnetisation.
- Potential for hematite development in zones of de-magnetisation.

Enterprise Metals Limited ("Enterprise" or "the Company", ASX: "ENT") wishes to announce that it has completed a detailed 200 metre line spaced magnetic and radiometric survey of the Cunderdin Iron Project area. Preliminary magnetic data has now been image processed (refer images overleaf).

The imagery clearly displays a highly folded magnetic unit within the Company's tenements which is interpreted to be an Archaean quartz-magnetite/banded iron formation ("BIF"). The cumulative strike extent of the interpreted quartz magnetite/BIF unit is estimated to be 110km, and therefore represents a significant tonnage.

Whilst the larger exploration target is magnetite, the more valuable target is non-magnetic hematite. The Company recognizes the potential for the development of hematite at Cunderdin, and has identified a number of targets along the interpreted BIF trend where partial de-magnetisation has occurred. These areas are adjacent to major NE & E trending shear zones, and possibly indicate the conversion of magnetite to non-magnetic hematite or goethite, a hydrated form of iron ore.

The conversion of magnetite to +60% Fe hematite in Western Australian Archaean BIF's is a well documented process, and has occurred in other deposits such as Tallering Peak (Mt Gibson Iron Ltd ASX: "MGX"), Wiluna West (Golden West Resources Ltd ASX: "GWR"), Koolyanobbing (Cliffs Natural Resources) and Shay Gap (BHP Billiton Ltd).

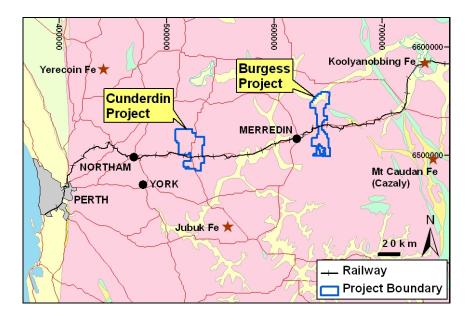


Figure 1. Location Plan – Cunderdin Iron Exploration Project

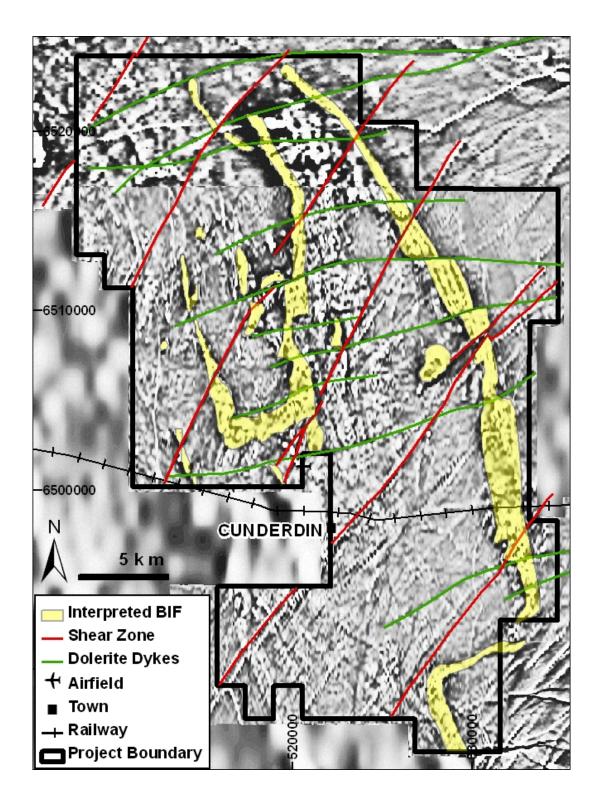


Figure 2. Cunderdin Project - 1<sup>st</sup> VD Aeromagnetic Image Highlighting Interpreted Quartz-Magnetite/BIF Horizon



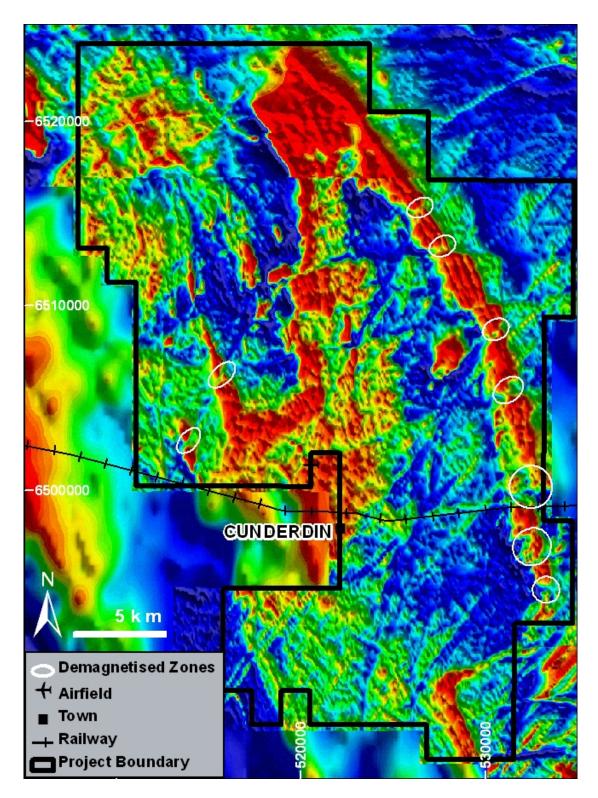


Figure 3. Total Magnetic Intensity Aeromagnetic Image Highlighting Zones of De-Magnetisation in BIF Horizon



### **CUNDERDIN IRON PROJECT**

The Cunderdin Project is centered on the township of Cunderdin approximately 150 km east of Perth in Western Australia, and straddles the Great Eastern Highway and the standard gauge railway line that runs from Kalgoorlie to the port of Kwinana south of Perth.

The project consists of two wholly owned Exploration Licence applications, E70/3756 and E70/3816 covering a total of approximately  $713 \text{ km}^2$ . The tenements cover granites and granitic gneisses along the western margin of the South West Terrane of the Archaean Yilgarn Craton.

These granitic gneisses are known to contain enclaves of NW striking metamorphosed greenstone belts, which also contain meta-sedimentary units including quartz-magnetite/BIF. However, the deep weathering of these areas has often resulted in little outcrop being left at surface, and hence detailed magnetic and radiometric surveys are critical in outlining these "blind" greenstone belts.

The Company's Cunderdin project area is deeply weathered with a relatively intact regolith, and the interpreted BIF horizon is represented largely by gently rolling hills capped by blankets of iron rich laterite. The historical and regional mapping by the Geological Survey of Western Australia records no outcropping occurrence of BIF in the Company's tenements, but the mapping was undertaken without the guidance of detailed magnetic/radiometric data or drilling data.

The next steps for Enterprise Metals Limited will be obtaining the grant of the tenements, the consent of landowners to conduct exploration on their properties, native title clearance if required (most of the Cunderdin area is cleared farmland or salt lake) and then drilling.

# LOCAL COMPETITOR ACTIVITY

Support for the Company's BIF interpretation comes from competitors also operating in the district. To the SE of Cunderdin, along strike from Enterprise's interpreted BIF horizon, Magnetic Resources NL (ASX: "MAU") announced on 3<sup>rd</sup> March 2010 that RC drilling at its "Jubuk Project" has shown the presence of significant widths of near surface coarse grained magnetite in metamorphosed and recrystallised BIF with grades around 25-30% Fe.

Immediately to the west of Cunderdin, and just north of the town of Northam, similar NW striking linear magnetic anomalies are known to contain large thicknesses and tonnages of magnetite within BIF, based on drilling in the late 1960's. (*The West Australian Newspaper, 29 August 1968*)

At Yerecoin, 75 km north of Northam, Giralia Resources NL (ASX:"GIR") have reported the discovery of more than 30km strike of magnetite rich BIF, with positive results returned from initial RC and diamond drilling in March 2009 including intersections of 56 metres @ 35.7% Fe, and 50 metres @ 30.3% Fe. Based on dips and thicknesses of mineralisation from drilling data, integration of surface mapping, rock sampling and aeromagnetic data, Giralia reported an initial Exploration Target at Yerecoin of **200 to 250 million tonnes** of magnetite mineralisation grading 30% to 35% Fe.

Cazaly Resources Ltd recently announced a resource of 28.4Mt of 55.4% Fe at its Mt Caudan project south of Southern Cross. Cazaly's resource is composed of a hematite/goethite component formed over BIF, and smaller component of secondary canga and detrital ore. Magnetite mineralisation also occurs at depth below the resource. Their ore has low levels of deleterious elements and is suitable for Direct Shipping Ore (DSO).



# BACKGROUND - EXAMPLES OF HEMATITE DEPOSITS ASSOCIATED WITH ARCHAEAN BIF'S

## **Koolyanobbing (Cliffs Natural Resources)**

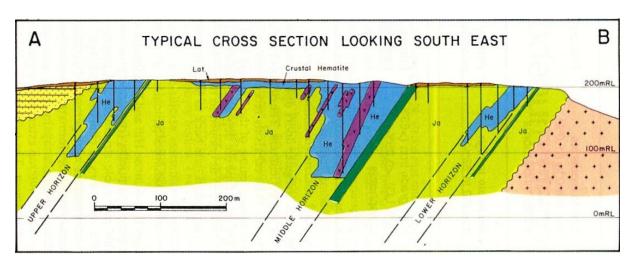
The Koolyanobbing deposits occur approximately 400km east of Perth. Diamond drilling by the GSWA in 1952 demonstrated that outcropping hematite and goethite passes downwards into Archaean banded magnetite talc-carbonate rocks, some with associated pyrite. Production of high grade hematite commenced in about 1950, and up to 1975, some 5.6Mt at 61.5%Fe had been produced. (Extract from BHP Staff, 1975)

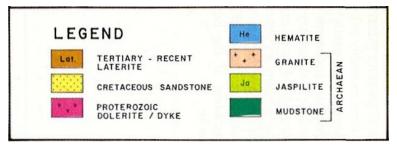
The project now has resources totalling 52.7Mt at 63.49% iron. Private company Cliffs Natural Resources mines the deposits as a single 8Mtpa operation, trucking the ore from Mt Jackson and Windarling to Koolyanobbing which is then railed to the port of Esperance for export.

# Shay Gap - Sunrise Hill and Nimingarra Iron Ore Deposits (BHP Billiton Ltd)

These deposits occur 180 km east of Port Hedland on the north east margin of the Archaean Pilbara Block. Between 1972-1990, 79 Mt at 62.7% Fe were mined. Remaining ore reserves, published in 1990, were 138 Mt at 62.7%Fe. Exploration of the area began in 1960, but the full economic significance of the deposits was not readily apparent due to an extensive cover of laterite and scree. The area has undergone extensive weathering and subsequent lateritisation to depths from a few metres to over 20 metres.

The mature high grade iron deposits have Fe > 63%, and consist of microplaty hematite and minor residual goethite. The deposits are normally associated with shear zones which have been intruded by dolerite dykes. Refer cross section below, where jaspilite = BIF. (Extract from Podmore, D. 1990)







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The information in this announcement that relates to Exploration Results has been compiled by Mr Dermot Ryan, who is a Fellow of the Australian Institute of Geoscientists, and a full time employee of geological consultancy Xserv Pty Ltd. Mr Ryan has sufficient relevant experience in the techniques being reported and 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.

#### REFERENCES

**Podmore, D.C. 1990** Shay Gap - Sunrise Hill and Nimingarra Iron Ore Deposits in *Geology of the Mineral Deposits of Australia and Papua and New Guinea*. (Ed. F.E. Hughes) pp137-140 (The AusIMMM).

**BHP Staff, 1975** Koolyanobbing Iron Ore Deposits, WA in Economic *Geology of Australia and Papua and New Guinea*. (Ed. C.L. Knight.) pp940-942 (The AusIMMM).