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29 November 2013

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ASX ANNOUNCEMENT

Carpentaria iron update; Hawsons process flow simplified, Braemar advances

Highlights

- **Hawsons Iron Project processing flow sheet simplified; likely lower capital costs**
- **Exploratory water bore drilling confirms assumptions on thickness of aquifer at Hawsons; pumping tests to follow early 2014**
- **Exploration Target for Braemar JV and South Dam projects estimates 1.7 to 3.1 billion tonnes (refer below)**

Carpentaria Exploration Limited (ASX:CAP) announced today a significant simplification of the processing flow sheet for its Hawsons Iron Project, in addition to expanding the exploration target for its nearby Braemar JV and South Dam iron projects in the Braemar Iron province.

The latest changes have boosted the Company's progress towards becoming a mid-tier producer of magnetite iron ore.

At its flagship Hawsons joint venture (Carpentaria 60%, Pure Metals Pty Ltd 40%) near Broken Hill, metallurgical process design optimisation has resulted in a simplification of the processing flow sheet with the potential to significantly reduce capital cost estimates.

In another boost for the project, preliminary results from exploratory drilling at a proposed water bore field near the Hawsons project have identified the presence of thick aquifers in line with earlier modelling. This has increased confidence that sufficient process water will be identified for the biggest new magnetite project in eastern Australia.

At the Braemar JV (CAP earning in) and contiguous South Dam project (100% CAP), independent geologists H&S Consultants Pty Ltd (H&SC) have estimated an **Exploration Target of 1.7 to 3.1 billion tonnes, with an estimated magnetite mass recovery (Davis Tube Recovery, "DTR") of 12 to 27% for between 200 million tonnes and 850 million tonnes of iron concentrate at 63-67% iron (Table 1).**

The potential quantity and grade of the Exploration Target is conceptual in nature and there is insufficient exploration to define a mineral resource. It is uncertain if further exploration will result in determination of a mineral resource.

Carpentaria's Managing Director, Quentin Hill, said the simplified flow sheet is a significant step towards a lower capital cost estimate for the project and will increase the attractiveness of the Hawsons project to potential investors.

"Carpentaria's Hawsons joint venture already benefits from its favourable access to infrastructure, including rail, road, port and power, and its location just 60 kilometres from the traditional mining centre of Broken Hill. The new simplified flow sheet exploits Hawsons' very soft rock and excellent magnetite liberation, another key economic advantage over other proposed magnetite projects", Mr Hill said.

"However, Carpentaria is not restricted to Hawsons in our future iron ore growth plans. The updated exploration target for the Braemar JV and South Dam projects when combined with the known exploration target for Hawsons, brings a total target range for our Braemar iron projects to 1,000 to 2,000 million tonnes of iron concentrates."

HAWSONS IRON PROJECT

Processing flow sheet design

The Hawsons project team has designed a simplified processing flow sheet based on metallurgical test work, including pilot ball mill testing and hydro-separator test work reported in March and June 2013.

The test work demonstrated very low power consumption for ball mill grinding, thereby allowing the consolidation of the grinding circuit into a single stage ball mill operation. The project engineers expect that a finer grind size can be achieved by increasing power into the ball milling stage and eliminating the need for further grinding. A finer grind size will allow for a high grade concentrate product.

This consolidation is assisted by the inclusion of cyclones, fine screens and hydro-separators, meaning that second stage grinding and third stage magnetic separation are eliminated from the circuit.

The simplified flow sheet (Figure 1) requires pilot testing later in the bankable feasibility study.

This simplified flow sheet exploits one of the main advantages of Hawsons' magnetite resource. That is the bond work index, a measure of energy required to grind the material to a predetermined grain size, at 6-7Kwh/t, is up to a quarter of that of other magnetite deposits and allows for much lower processing costs. This is because of the unique character of the Hawsons material, in that it breaks along grain boundaries not through the middle of hard crystals.

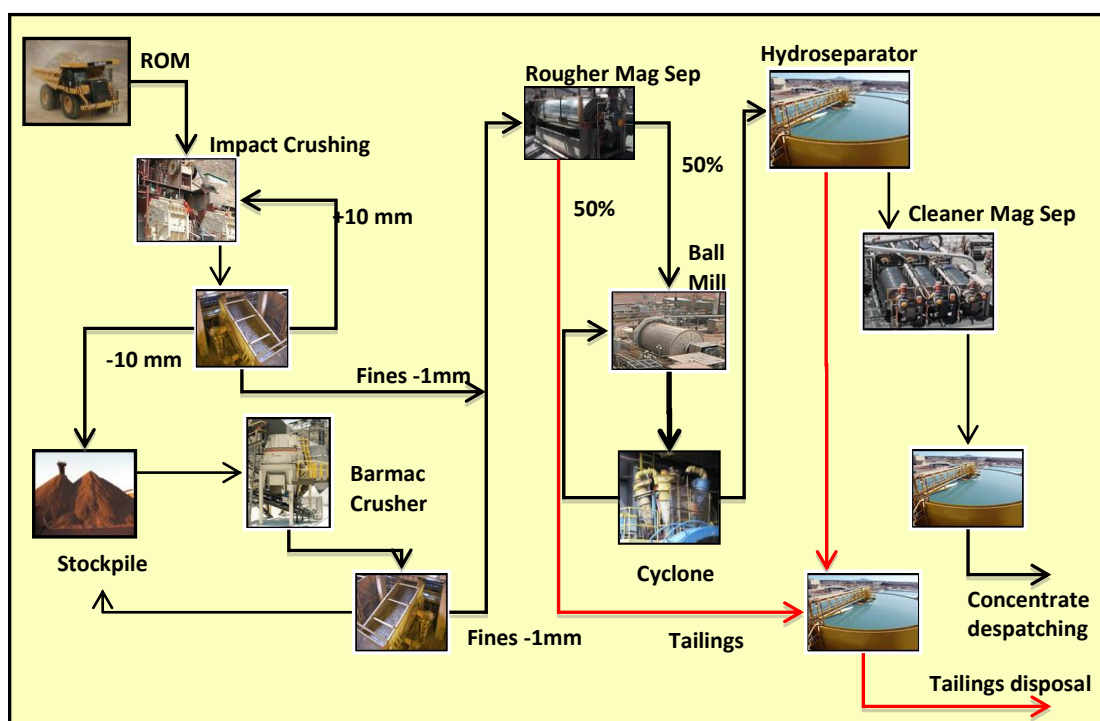


Figure 1. Simplified process flow sheet, Hawsons Iron Project

Exploratory water bore drilling

Preliminary results from exploratory drilling at a proposed water bore field near the Hawsons Iron Project have identified the presence of thick aquifers in line with earlier modelling. This has increased confidence that sufficient process water will be identified for the project but pumping tests will be required to confirm this (Figure 2). A total of thirteen holes have been drilled to date for 4,136m.

Drilling is continuing as part of the construction of two bores for pumping tests. Pumping tests will begin once the construction has been completed and government approval is gained, which is anticipated in early 2014.

BRAEMAR JV (EL 5181) and SOUTH DAM (EL 4395)

The Braemar JV and South Dam tenements, now called the Braemar South project, are located at the southern end of the highly prospective magnetite-bearing Braemar Iron Formation around 200km north-east of Adelaide (Figures 3 and 4).

At Braemar South, Carpentaria confirmed the presence of thick magnetite-rich Braemar siltstones in drill holes late in 2012 encountering 108m (down-hole thickness) at 28.1% DTR in the second of three drill holes (refer *Carpentaria Quarterly Report December 2012*).

Independent geologists H&S Consultants Pty Ltd have estimated an **Exploration Target in the range of 1.7 to 3.1 billion tonnes, with an estimated magnetite mass recovery (DTR) of 12 to 27% for between 200 million tonnes and 850 million tonnes of iron concentrate material at 63-67% iron** for the combined South Dam and Braemar JV projects.

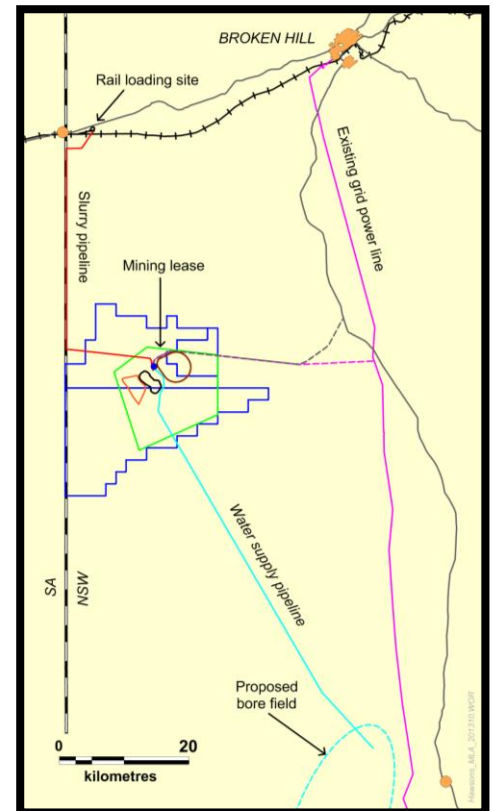


Figure 2. Hawsons location plan and proposed and existing site infrastructure

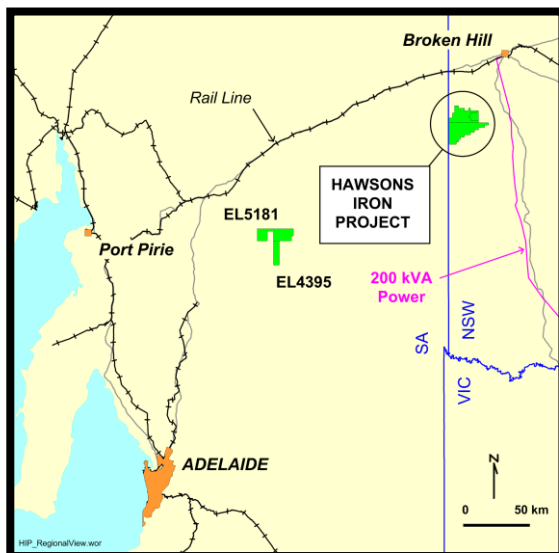


Figure 3. Location of Hawsons Iron Project and Braemar Project (EL4395 and EL5181)

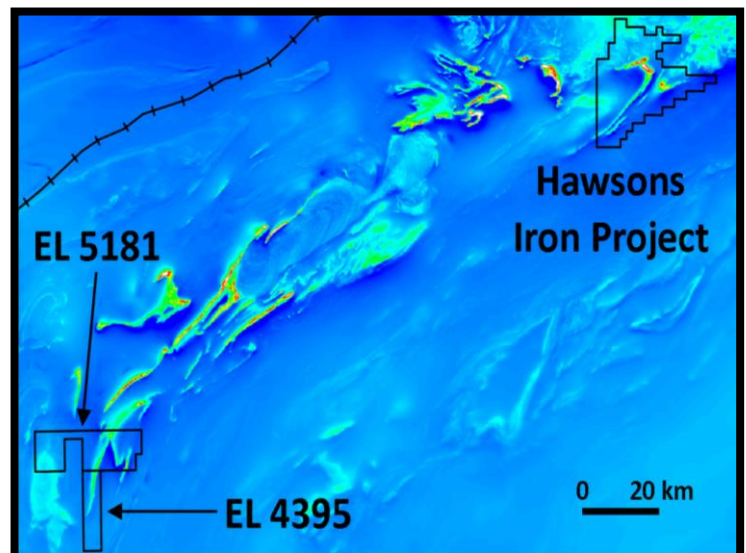


Figure 4. Magnetic image showing the Braemar Iron Formation and CAP's tenements

H&S Consultants defined the Exploration Target based on their considerable experience of the Braemar iron province, the drilling results, including petrographic data (three drill holes, refer *Carpentaria Quarterly Report December 2012*), analysis and modelling of detailed magnetic data.

The Exploration Target was delineated on the following key parameters (see also Table 1):

- cumulative strike length of the magnetic anomalies of approximately 30km (Figure 4)
- an average true thickness of the magnetite siltstone ranging from approximately 80 to 150m, based on drilling and magnetic modelling (Figures 5 and 6)
- down dip extension of 250m, for a total depth of 330m, based on drilling and magnetic modelling (Figure 6)
- an average density of 3.05t/m³.

It should be noted that the potential quantity and grade of the Exploration Target is conceptual in nature and there is insufficient exploration to define a mineral resource. It is uncertain if further exploration will result in determination of a Mineral Resource.

Target Area	Strike (km)	Thickness (m)	Down Dip (m)	Volume (Mm ³)	Density (t/m ³)	In situ Tonnes (Mt)	Concentrate (Mt)
South Dam	9.5-10.5	80-120	250	190-320	3.05	580-960	70-260
Braemar W	8.5-9.5	80-120	250	170-290	3.05	520-870	60-230
Braemar C	8.0-9.0	80-120	250	160-270	3.05	490-820	60-220
Braemar E	2.0-4.5	100-150	250	50-170	3.05	150-515	20-140
Totals	28.0-33.5	80-150	250	570-1040		1,740-3,170	210-850

Table 1. H&SC Exploration Target summary

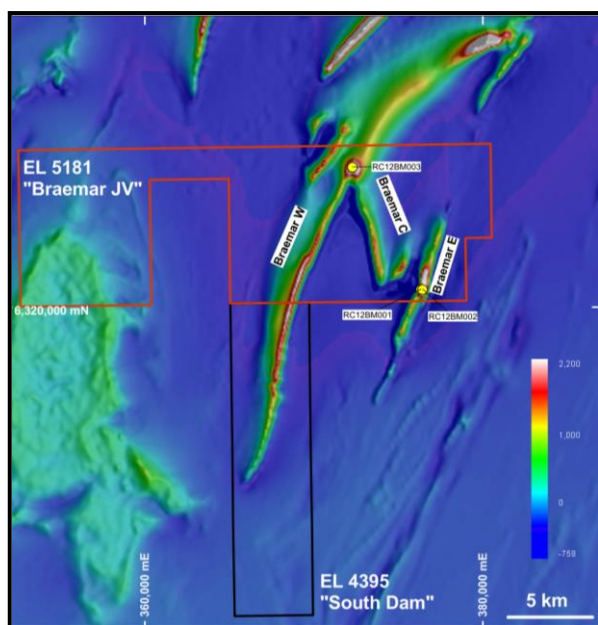


Figure 5. CAP's South Braemar Iron project and aeromagnetic image

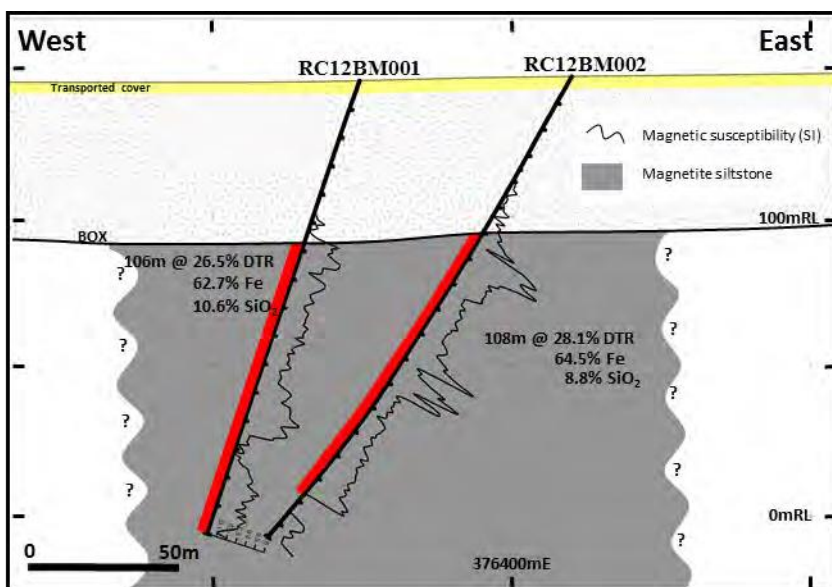


Figure 6. Braemar drilling cross section

H&SC's conclusions are further detailed in the Appendix.

Petrographic observations confirm that the Braemar magnetite is finer grained than that at Hawsons and, subject to future detailed testing, may require different and potentially higher cost processing than that proposed for Hawsons. However, relatively simple processing to produce a saleable concentrate from this project is still considered likely and Carpentaria is currently investigating processing options.

The project is close to key existing transport infrastructure, being 45km south-west of the national rail line and highway and 150km east of Port Pirie in South Australia. Both tenements are over perpetual leasehold land titles that have extinguished Native Title.

EL 5181 is a joint venture between Carpentaria and Maosen Australia Pty Ltd. Under the JV, Carpentaria can earn a 60% interest by drilling to define a minimum 200Mt Inferred magnetite resource by April 2015 and making a cash payment of \$100,000. The Company also has the opportunity to achieve 100% of the JV through additional drilling. Carpentaria intends to carry out this work following further metallurgical assessment and within the joint venture timeframes.

“Carpentaria’s Hawsons and other magnetite projects have the potential to make the Company a significant force in iron ore, opening up a new province with the potential to generate long-lasting economic benefits for stakeholders. With a pipeline of prospective projects, including the attractive Advane and other gold projects in NSW, Carpentaria is well positioned for substantial growth, aided by its supportive investors” Mr Hill said.

For further information please contact:



Quentin Hill
Managing Director

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The information in this announcement that relates to Exploration Results and Resources is based on information compiled by Q.S.Hill, who is a Member of the Australian Institute of Geoscientists and has had sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Q.S.Hill is a full time employee of Carpentaria and consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The data in this report that relates to Exploration Target is based on information evaluated by Mr Simon Tear who is a Member of The Australasian Institute of Mining and Metallurgy (MAusIMM) and who has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the “JORC Code”). Mr. Tear is a Director of H&S Consultants Pty Ltd and he consents to the inclusion in the report of the Exploration Target in the form and context in which they appear.

APPENDIX



H&S CONSULTANTS Pty. Ltd.

RESOURCE ESTIMATION | FEASIBILITY STUDIES | DUE DILIGENCE

RESOURCE SPECIALISTS TO THE MINERALS INDUSTRY

25th November 2013

Exploration Targets for the South Braemar Project, South Australia

H&S Consultants ("H&SC") was requested by Carpentaria Exploration Limited ("CAP") to complete an assessment of the Exploration Targets for its South Braemar Iron project in South Australia. The project is located 250km north north east of Adelaide and 170km east of Port Pirie. The project lies within two contiguous Exploration Licences (EL) granted to CAP and Maosen Australia Pty Limited. EL 4395 "South Dam" is 100% owned by CAP while EL 3998, now EL 5181, is under a joint venture agreement with Maosen (Braemar JV). CAP manages exploration for the project. The aim of the assessment is to evaluate the project area for magnetite Exploration Targets in the Braemar Iron Formation. H&SC has completed similar tasks for CAP's Hawsons Project in NSW and for Minotaur's Mutooroo Project in SA.

The Braemar basin is believed to occur over an area of 7,000 to 8,000km². Mineralisation consists of stratabound, disseminated fine grained magnetite in siltstones and diamictites of the Neoproterozoic-aged Adelaide Fold Belt that locally have been complexly folded, including isoclinal folding, with offset faulting. Metamorphic grade is lower greenschist with the host units relatively soft unlike typical banded iron formations. The Braemar Ironstone Formation is the host stratigraphic unit and comprises a series of narrow, strike extensive magnetite-bearing sediments with variable dips. Large areas of the prospective stratigraphy are concealed by transported ferricrete and other younger cover. The base of oxidation due to weathering over the prospective unit is estimated to average between 60 and 80m in depth. The airborne magnetic data clearly indicates the magnetite sediments as a folded, narrow, high amplitude magnetic response.

Exploration work completed by CAP in 2012 includes modelling of airborne and ground magnetic data, and limited RC drilling, 3 holes for 500m. The drilling has tested two different sections of a single magnetic anomaly within the sedimentary sequence and has identified an 80 to 150m thick (true thickness), magnetite-bearing package of siltstone and diamictite. The drilling results were announced to the ASX on the 29th January 2013.

Initial sampling of the RC drilling consisted of 500 1m samples subsequently reduced to 87 composite samples, mostly 6m in length, using the spear sampling method. All 1m samples were subject to magnetic susceptibility and hand held XRF measurements, whilst the composites were subject to multielement analysis by ICP. A subsequent suite of 59 samples (75 samples including QAQC samples) were tested for magnetite using the Davis Tube Recovery ("DTR") method. Analysis of the magnetic fraction for each of the 59 DTR composite samples yielded variable iron grades for the concentrate of between 56-68% Fe with between 6-10% SiO₂, 0.3-0.6 Al₂O₃, 0.004 to 0.039% P, 0.001 to 0.017% S and -1.54 to -2.97 LOI. 5 samples had insufficient material for concentrate analysis.

Multielement analyses of the drilled material indicated some localised variation in sediment composition for the magnetite bearing sediments. Petrographic analyses using transmitted and reflected light microscopy concluded that the samples had considerable affinity with other iron mineralisation within the Braemar basin and are considered of the same type.

Detailed modelling of the magnetic data has indicated there is about 30 km of strike continuity to the magnetite-bearing sediments divided into 4 sub-areas. Using this cumulative strike length and assuming an average true thickness range of 80-150m for the magnetite zone at a nominal 10% DTR magnetite grade, a down dip extent of 250m to a vertical depth of 330m with an average density of 3.05t/m^3 then the Exploration Target for the South Braemar Project is 1.7 – 3.2 billion tonnes. The average DTR grade of the Exploration Targets is likely to be between 12 and 27%, whilst the concentrate product is expected to have an Fe grade range of 63 to 67%, Al_2O_3 0.4 to 0.6%, SiO_2 6% to 10% and P 0.01 to 0.02%.

Target Area	Strike (km)	Thickness (m)	Down Dip (m)	Volume (Mm^3)	Density (t/m^3)	Tonnes (Mt)
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Totals	28.0-33.5	80-150	250	570-1040		1,740-3,170

(minor rounding errors)

The potential quantity and grade of the Exploration Target is conceptual in nature and there has been insufficient exploration to define a Mineral Resource. It is uncertain if further exploration will result in the determination of a Mineral Resource. The quoted DTR magnetite grades may not be represented with any subsequent exploration, including drilling and the depth of the weathered overburden may be variable.



Simon Tear
Consulting Geologist
H&S Consultants Pty Ltd