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15 March 2013

CARPENTARIA EXPLORATION LIMITED

www.capex.net.au

FINANCIAL

Cash and cash equivalents on hand as at 14/03/13
A\$3,767,594.77

Level 6,
345 Ann Street, Brisbane
Queensland 4000

PO Box 10919
Adelaide Street, Brisbane
Queensland 4000

e-mail: info@capex.net.au

For further information
contact:

Nick Sheard
Executive Chairman
Phone: 07 3220 2022



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ASX ANNOUNCEMENT

Pilot plant tests confirm Hawsons iron ore 'high grade, low cost'

Highlights

- Pilot plant tests produce very high grade iron concentrate (69.5% Fe, 3.1% SiO₂)
- Process concept proved; potential for industrial-scale production
- Potential to remove elements of flow sheet, reducing capital and operating costs
- Large-scale pilot plant test work planned to further increase project certainty

Carpentaria Exploration Limited (ASX:CAP) announced today positive results from small scale pilot plant tests, which confirm that high-quality iron concentrate can be produced from the Hawsons Iron Project at low cost.

The results verify the potential of the company's processing concept to produce a premium iron concentrate of 69.5% iron (Fe) and 3.06% silica (SiO₂) at an industrial scale, at costs in line with the company's previous prefeasibility study estimates.

The tests were done using six tonnes of crushed drill core, and included impact crushing, rougher magnetic separation, closed circuit ball milling, cleaner magnetic separation and batch ISA milling.

Carpentaria's Executive Chairman, Mr Nick Sheard, said the results were another milestone in the development of a new major magnetite mine, located just 60 kilometres from Broken Hill and with favourable access to infrastructure including rail, road, port and power.

"This is a very positive step in the project because it confirms that a high quality concentrate can be produced at an industrial scale, with operating costs in line with our previous estimates of around AUD\$34 per tonne at the mine gate and, depending on transport options, we estimate AUD \$50 Free on Board costs." Mr Sheard said.

"Importantly, the results have boosted confidence in our process flow sheet and given us a product that should be among the best iron ore grades on the market."



The test work gives increased confidence that the very low processing costs, based on Hawsons very soft rock, are achievable. Hawsons has a bond work index (a measure of rock hardness) of 6.3KWh/t compared to typical iron ore (banded iron formations) that have a work index of 15-30KWh/t. This means the processing power requirement is much less, up to one quarter of other operations per tonne of ore, giving huge cost savings.

“These results also show the potential for further improvements in the project’s projected capital and operating costs. There is opportunity to remove some stages of the process, potentially increasing its profitability above the previously projected 23 per cent internal rate of return. We believe Hawsons will be one of the lowest cost magnetite producers with nearby access to rail transport and, very importantly, access to a working port. This really puts us in a unique position,” Mr Sheard said.

Carpentaria’s flow sheet has been developed to maximise the unique character of the mineralisation. It includes two crushing and two grinding stages with three stages of magnetic separation. Results of this work have highlighted areas where Carpentaria may reduce the grinding and magnetic separation stages.

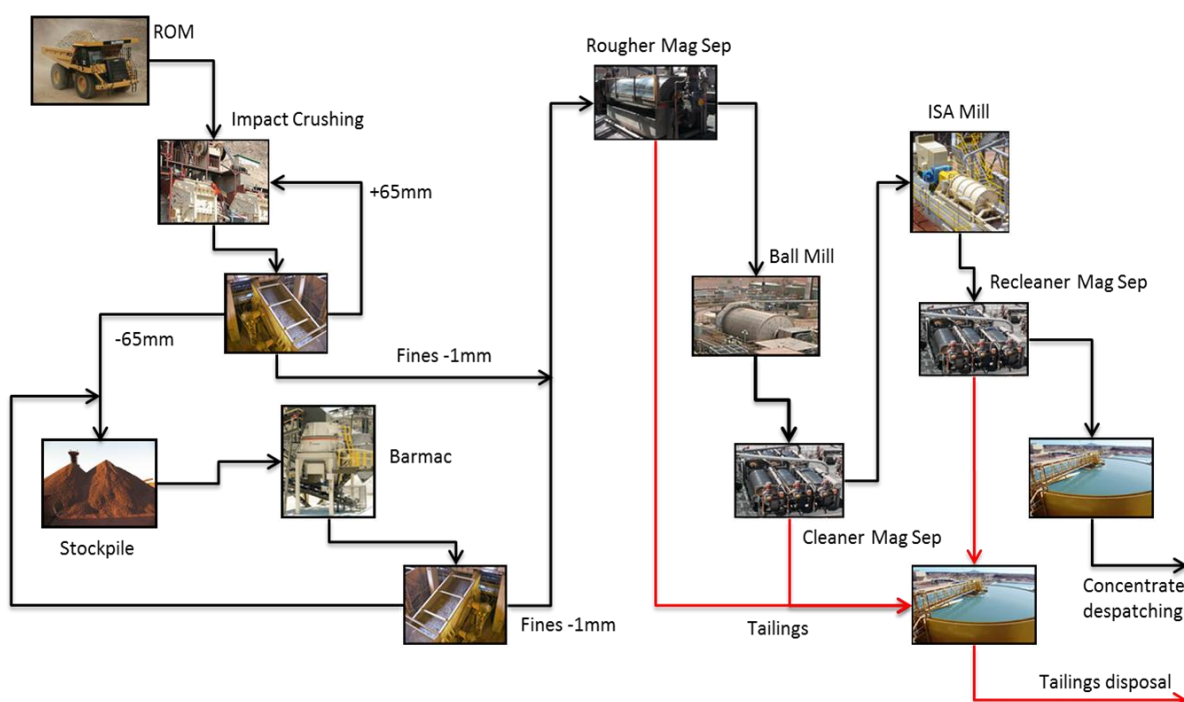
Mr Sheard said the work was an important step in reducing project risk and would further increase interest from potential investors.

Test Work

Carpentaria has undertaken considerable work on the Hawsons project’s process flow since the successful pre-feasibility study (PFS) announced in 2011.

In September 2012, following work carried out by CSIRO, the Company demonstrated that the very soft ore required only low cost and low power impact crushers instead of the typically high cost, high power and high pressure grinding rolls generally used on banded iron formation magnetite ores.

This work led to the development of a new process flow sheet as shown below:





The latest test work, conducted by HRL Testing Pty Ltd between September 2012 and January 2013, tested the flow sheet's assumptions and proved they were reasonable and achievable.

At Hawsons the key to minimising costs and energy consumption is to crush as finely as possible prior to the first wet magnetic separation stage. The tests have shown that impact crushers are able to produce a sufficiently fine product to allow the immediate rejection of approximately 50% of the material as non-magnetic waste material in the first magnetic separation stage. This significantly reduces the load on the next stage of processing, the ball mill circuit, which is the largest energy consuming part of the operation.

The pilot plant also tested the ball mill and hydrocyclone (sizing equipment) in closed circuit for the first time. This confirmed that the grind sizes and power usage assumed for the flow sheet design were achievable and also highlighted that with different operating parameters a finer grind size is possible from the ball mill. This, or other grinding methods, may allow for a single stage grinding process, thereby further improving capital and operating costs and will be the subject of further work.

Carpentaria has targeted 150 megawatts total installed power for a 20 million tonne per annum operation – a low power requirement for a magnetite operation of this size, down from 173 MW in the November 2011 prefeasibility study.

Processing the ball mill fine grind product through the cleaner magnetic separator, fine grinding mills (ISA mills) and the recleaner magnetic separation produced a high-grade concentrate. Grades from the recleaner magnetic separation* stage were approximately 69.5% Fe, with an associated low SiO₂ grade (~3%).

The next step will involve metallurgical test work including large-scale pilot plant test work on bulk samples. Planned for later this year, this work will confirm operating parameters and equipment selection criteria for use in the Bankable Feasibility Study.

"These results have removed another level of risk from the project, giving more confidence in the project's potential to produce large quantities of valuable iron ore concentrate at below-average cost," Mr Sheard said.

"Carpentaria is focused on developing Hawsons to its full potential with the support of stakeholders. This flagship project adds to our portfolio of projects across eastern Australia, providing the basis for consistent growth in shareholder value."

**This final magnetic separation stage was performed on the finely ground ISA mill product in a Davis Tube Magnetic separator and Carpentaria believes that similar results can be achieved with a larger magnetic separator. Intermediate magnetic separation stages were done using a larger pilot plant low intensity magnetic separator (LIMs).*

About Hawsons Iron Project

Located 60 kilometres south-west of Broken Hill, the Hawsons Iron Project includes an Inferred magnetite Resource of 1.4 billion tonnes (Bt) at a Davis Tube Recovery (DTR) of 15.5% (12% cut-off) for 220 million tonnes of high grade (69.9% Fe) iron concentrate and an Exploration Target¹ of 6-11 Bt at 14-17% DTR for over 1,000 million tonnes of concentrate (refer ASX Announcement May 23rd, 2011).

¹ The term "Target" should not be misunderstood or misconstrued as an estimate of Mineral Resources and Reserves as defined by the JORC Code (2004), and therefore the terms have not been used in this context. It is uncertain if further exploration or feasibility study will result in the determination of a Mineral Resource or Mining Reserve.



ASX ANNOUNCEMENT

Results of a Pre-Feasibility Study (PFS) were updated following a mining optimisation study and were released to the ASX on 21st November 2011. The study estimated an NPV9% of \$3.2 billion on a base case of 20 million tonnes per annum (mtpa) concentrate production (based on a life of mine average 62% Fe fines price of US\$79/t and an exchange rate of 1 AUD buys 0.85 USD).

The project is favourably located with existing power, water, rail and port infrastructure available for a 5-10 mtpa start-up operation.

In November 2012, the New South Wales Government declared Hawsons a 'State Significant Development' project, also providing the Director General's Requirements for an Environmental Impact Statement.

Yours sincerely

A handwritten signature in blue ink, appearing to read 'Nick Sheard'.

Nick Sheard

Executive Chairman

Carpentaria Exploration Limited

We find it. We prove it. We make it possible.

The information in this announcement that relates to Exploration Results and Resources is based on information compiled by S.N.Sheard, who is a Fellow 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 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. S.N.Sheard is an 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.