## AUSTRALIAN SECURITIES EXCHANGE ANNOUNCEMENT & MEDIA RELEASE



#### 27 March 2012

# JAMBREIRO PRELIMINARY PILOT PLANT TRIAL DELIVERS HIGH GRADE IRON PRODUCT

FULL PILOT PLANT TESTWORK SET TO COMMENCE IN APRIL TO VERIFY COMMERCIAL BENEFICIATION PROCESS
FLOWSHEET FOR BANKABLE FEASIBILITY STUDY

International iron ore company Centaurus Metals Limited (ASX Code: CTM) is pleased to report that it has successfully produced a high-grade sinter feed iron ore product grading 65.6% Fe with low impurities (2.8% silica, 0.01% phosphorus) from initial pilot scale beneficiation testwork conducted on ore from its flagship Jambreiro Iron Ore Project in Brazil.

The results, from a **2.5 tonne pilot run of ore**, have confirmed the effectiveness of the two-stage magnetic separation processing route proposed for the Jambreiro Project, marking another key milestone towards completion of the Bankable Feasibility Study and commencement of project development.

The results indicate that the two-stage magnetic separation process is a robust, simple and low-cost production circuit providing the ability to select a range of product qualities to suit different customer needs and, most importantly, the ability to deliver a high-grade, low impurity product that fits within the sinter feed blend specification window for traditional steel mills. Domestic steel mills within Brazil's Iron Quadrangle region represent the primary target market for ore produced by the Jambreiro Project.

In terms of particle size distribution, the low ultra-fine component, combined with high iron content, offers customers the opportunity to significantly upgrade overall sinter quality and productivity using Jambreiro concentrates in combination with other less expensive ores in their blend.

The pilot plant trial of the beneficiation circuit represents a key development step being undertaken by Centaurus to facilitate the move from bench-scale testing to full pilot testing of the ore that will be mined during the initial 8.5 year mine life of the Jambreiro Project.

The pilot plant comprised a Low Intensity Magnetic Separator ("LIMS") in the form of a Wet Drum Rare Earths ("WDRE") Separator to collect the small amount of magnetite material in the ore followed by a rougher and cleaner Wet High Intensity Magnetic Separator ("WHIMS") to upgrade the hematite in the itabirite feed.

The initial pilot plant run was designed to:

- prepare the pilot plant equipment for the planned full pilot plant program that will commence in April and calibrate the pilot plant equipment on a representative sample of the ore body; and
- generate product on a larger and more representative basis for initial customer evaluation and sinter testwork.

A summary of the test results is set out below:

	Fe	SiO <sub>2</sub>	Al <sub>2</sub> O <sub>3</sub>	Р	Mn	Lol	Metal	Mass
	%	%	%	%	%	%	Recovery	Recovery
							%	%
ORE FEED	29.8	50.7	3.70	0.03	0.15	1.50		
PILOT PLANT CONCENTRATE	65.6	2.8	0.92	0.01	0.15	0.24	83.7	38.3

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The pilot plant tests have also provided, for the first time, the intermediate middlings and tailings streams products for analysis and flowsheet modelling, which in turn will determine the appropriate stream re-circulation, cleaning and scavenging circuits to be tested in the full-scale pilot plant. When these are considered, the metal recovery is expected to increase to over 90% while the mass recovery should increase to over 40%.

The recently completed pilot plant trial was assembled and operated at Fundação Gorceix, the premier mineral processing and pilot plant facility in Brazil which is based in the prestigious Ouro Preto Mining School, located in the State of Minas Gerais (see Appendix A for photos of the pilot plant facility).

The plant feed utilised reverse circulation (RC) drill chips from the extensive drilling conducted over the last one and a half years, providing a representative sample of the orebody. The average head grade of the pilot plant feed was 29.8%, marginally higher than the grade of the Jambreiro friable Ore Reserve.

The Bankable Feasibility Study, utilising the flowsheet used in this preliminary pilot plant trial, is scheduled for completion by the end of September this year, in line with the Company's development timetable of producing first iron ore concentrates at Jambreiro by the end of 2013.

Centaurus' Managing Director, Mr Darren Gordon, said: "The initial pilot plant results are very encouraging, confirming that the proposed processing route is a robust and reliable choice for the production of a high-grade, low-impurity product suitable for sale to the domestic steel industry in Brazil."

"This gives us great confidence that the process route we have selected is capable of delivering a high quality product which we expect will be in high demand within the domestic steel industry in Brazil," Mr Gordon said.

"We are now planning a final pilot plant testwork program utilising a sample of around 100 tonnes which will provide the domestic steel industry market with a much larger sample of material to test within their own sinter feed blend test facilities and value-in-use models," he added.

#### **ENDS**

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### APPENDIX A – PHOTOS OF PILOT PLANT AT FUNDAÇÃO GORCEIX, OURO PRETO



Figure 1 - Feeding system and WDRE in pilot circuit



Figure 2 - Conveyor belt feeding the circuit

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Figure 3 – Wet High Intensity Magnetic Separator (WHIMS) in Operation



Figure 4 – Close Up of WHIMS unit