

13 September 2012

# JAMBREIRO PROJECT – BANKABLE FEASIBILITY STUDY UPDATE

GEOTECHNICAL, PIT OPTIMISATION AND MINE SCHEDULING STUDIES CONCLUDED IN-PIT FRIABLE RESOURCE DEFINED

- Geotechnical Drilling and Laboratory Test work completed for the Bankable Feasibility Study (BFS).
  WALM Engenharia has confirmed final pit slope conditions and material classifications parameters for pit optimisation.
- Pit Optimisation and Mine Scheduling work has delivered an In-Pit Resource estimate of 48.5Mt @ 28.1% Fe for the friable component of the Jambreiro Measured and Indicated Resource consistent with November 2011 Reserve estimate (49Mt @ 28.2% Fe).
- The new In-Pit Resource is sufficient for 9 years of operations at the planned 2Mtpa concentrate production rate with a life-of-mine operational strip ratio of 0.95:1.
- Pilot plant test work has confirmed that the introduction of a Jig to the process circuit would facilitate less ore grinding and improve both costs and product quality.
- Optimisation of the Jig into the final process design is underway but will result in a slight delay to the delivery of the BFS.
- The environmental approval process is progressing well.
- Product marketing discussions have recommenced and the pilot plant product has been assayed and certified by SGS Geosol Laboratórios Ltda for use by potential off-take partners.
- Mine and plant capital and operating cost studies are well advanced with suppliers visiting the Jambreiro site to allow them to finalise key inputs to the BFS.
- BFS is now expected to be delivered by the end of October 2012, with no impact expected to the overall timeline for development and first production from the Jambreiro Project.

Centaurus Metals (ASX Code: **CTM**) is pleased to advise that the **Bankable Feasibility Study (BFS)** for its flagship **Jambreiro Iron Ore Project** in south-east Brazil is progressing well with results from the open pit geotechnical, pit optimisation and mine sequencing work confirming the robustness of the ore body.

#### Pit Optimisation and Mine Sequencing

In June 2012, the Company announced an upgrade in the Jambreiro JORC Resource to 125.2Mt at an average grade of 26.7% Fe, including both Friable and Compact material (Appendix A). The recently completed pit optimisation and mine sequencing work, based on the Friable Measured and Indicated Resource of 53.7Mt grading 28.4% Fe, has estimated an **In-Pit Resource of 48.5Mt at an average grade of 28.1% Fe** (Appendix B), representing a 90% conversion rate for these Friable Resources.

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The final pit includes 46.2Mt of waste movement (excluding a pre-strip of 700,000 tonnes) for a life-of-mine material movement of 94.6Mt at an operational strip ratio of 0.95:1. Figure 1 below shows the strip ratio of the life of mine. The complete mine schedule is provided in Appendix C to this Announcement.



### Figure 1 – Life of Mine Material Movement and Strip Ratio

The pit optimisation and mine scheduling was completed using new geotechnical parameters as defined by the Company's consultants, WALM Engenharia (WALM). WALM and Centaurus supervised a comprehensive geotechnical drilling and laboratory test work program that was completed earlier this month. The result is a geo-mechanical classification of the rock mass and definition of the final slope conditions of the Jambreiro pits.

The final slope conditions range from 38° to 50° depending on rock mass classification. Often the geometry of the footwall ore contact determines the final slope angle. These final slope angles are in line with other friable itabirite mines in the Iron Quadrangle.

Pit optimisation studies for the Jambreiro Resource were undertaken by independent consultant BNA Micromine using the following parameters:

- operating costs updated from the Jambreiro Pre-Feasibility Study announced in November 2011 (Mine Operating Costs of A\$5.5/DMT of product and Plant Operating Costs of A\$9.8/DMT of product);
- latest pit slopes as recommended by WALM geotechnical consultants as part of the BFS;
- metallurgical Recoveries of 90% in line with Bench Scale and Pilot Plant results; and
- a conservative iron price of A\$26/DMT.

The iron ore price used in the final pit optimisation work provides the Company with confidence that, even at prices much lower than it expects to receive in the domestic market in Brazil, the Jambreiro Project can underpin a long-life, sustainable operation.

A summary of the In-Pit Resources is set out in Table 1 below with a full table of these Resources provided in Appendix B:

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#### Table 1: Jambreiro In-Pit Resource Classifications – September 2012

In-Pit Resource Classification	Mt	Fe%	SiO <sub>2</sub> %	Al <sub>2</sub> O <sub>3</sub> %	<b>P%</b>
Measured	35.4	28.5	49.6	4.3	0.04
Indicated	13.1	27.2	49.0	5.3	0.04
Total	48.5	28.1	49.4	4.6	0.04

#### **Reserve Estimation**

Work is underway to update the Proven and Probable Ore Reserve estimate for Jambreiro based on the Measured and Indicated In-pit resource, pit optimisation and mine scheduling outlined above. More detailed studies on fleet design and capital and operating cost estimates are well advanced and will be announced as part of the overall BFS completion.

#### Capital and Operating Cost Estimation

With a number of trade-off studies now complete and with the design of the plant nearing completion, Contecmina are now working on the delivery of the final capital and operating costs. The Company hosted 14 contractor and supply companies on site at Jambreiro in early September to allow them to finalise their respective costings for the development of the Project.

Following the success of the introduction of the Jig into the Pilot Plant test circuit (*see ASX Announcement* – 6 August 2012), the process route has been undergoing a series of optimisation procedures to facilitate a further increase in the coarser fraction of the high-grade sinter feed blend product. The pilot plant work delivered 9 tonnes of high-grade sinter feed-blend product (+66% Fe) with low impurities.

In addition to increasing the product size, the introduction of the Jig is expected to have a positive impact on the operating costs of the ore beneficiation steps by reducing the amount of grinding needed. The very positive outcomes achieved from the introduction of the Jig to the beneficiation circuit will, however, require some additional test work and engineering to more fully optimise its introduction to the circuit.

In order to accommodate this test work and to fully assess its impact on the overall Project, the delivery of the BFS is now expected by the end of October 2012. Centaurus does not anticipate that this will have a material impact on the overall development timetable for the Jambreiro Project or the targeted commencement of production.

#### Product Marketing

The Company has recommenced discussions with a number of potential customers in respect to the high quality Jambreiro Product. The pilot plant product has been batched, and certified assays are now being provided to potential steel mill customers and other users.

Mills are showing great interest in the very attractive phosphorus and alumina levels, as well as the high iron content. They are commencing their detailed modelling evaluation of compatible and likely sinter blend combinations using Jambreiro concentrates before calling for actual samples which are now available for physical testing and delivery to the customers as soon as they are ready to receive them.

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After the 9 tonnes of product produced in the pilot plant was blended and batched for delivery, the final certified assay of the Jambreiro product was as follows:

	Fe %	SiO₂%	Al <sub>2</sub> O <sub>3</sub> %	Р%
Blended Pilot Plant Concentrate	67.2	3.21	0.71	0.015

The proposed flow sheet for the Jambreiro Project allows the Company to reduce iron content and increase silica to facilitate the specific ore blending requirements of any customer.

#### **Environmental Approvals**

The Jambreiro EIA/RIMA was lodged in March 2012 and the Company has been working closely with the State Environmental Agency, SUPRAM, to progress the approval of this report so that the Company can be granted its preliminary Licence ('LP') by the end of October 2012. A positive public hearing was held in July 2012 and the Company remains confident that it will receive approval of the EIA/RIMA in October.

SUPRAM has received responses from the Company on a number of queries it raised following the public hearing. No further information is required by SUPRAM and the agency is progressing through the final stages of the LP approval process.

Centaurus' Managing Director Mr Darren Gordon, said: "We are really pleased with the progress of the BFS. We have completed all geotechnical drilling, open pit slope studies, pit optimisations, mine scheduling and a large portion of the plant design work. The capital and operating costs are being tied down with final numbers expected in the coming weeks."

"The results of the initial mine planning demonstrate that the mine is very robust with some good high grade, low strip ratio options available for the start of operations which will result in a reduced fleet requirement over the first 4-5 years of operations. We will finalise the fleet selection and mine capital and operating costs over the next three weeks, after which we will be able to confirm the project JORC Ore Reserve estimate."

"The late inclusion of the Jig has been a great success and we believe we can optimise even further the grain size distribution of the product. The ongoing Jig test work and subsequent change to the process route is expected to push back the delivery of the final BFS by a few weeks, but the results are expected to have a positive impact on the product quality and operating costs without impacting the overall production timeline."

-ENDS-

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#### **Competent Person's Compliance Statement**

The information in this report that relates to Exploration Results and Mineral Resources is based on information compiled by Roger Fitzhardinge who is a Member of the Australasia Institute of Mining and Metallurgy and Volodymyr Myadzel who is a Member of Australian Institute of Geoscientists. Roger Fitzhardinge is a permanent employee of Centaurus Metals Limited and Volodymyr Myadzel is the Senior Resource Geologist of BNA Consultoria e Sistemas Limited, independent resource consultants engaged by Centaurus Metals.

Roger Fitzhardinge and Volodymyr Myadzel have sufficient experience which is relevant to the style of mineralization and type of deposit under consideration and to the activity which they are 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 Reserve'. Roger Fitzhardinge and Volodymyr Myadzel consent to the inclusion in the report of the matters based on their information in the form and context in which it appears.

The information in this report that relates to the In-pit Resource is based on information compiled by Beck Nader who is a professional Mining Engineer and a Member of Australian Institute of Geoscientists. Beck Nader is the Managing Director of BNA Consultoria e Sistemas Ltda and is a consultant to Centaurus.

Beck Nader has sufficient experience, which is relevant to the style of mineralization 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 Reserve'. Beck Nader consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

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### Appendix A

Prospect	Material Type	Million Tonnes	Fe %	SiO2 %	Al2O3 %	Р%	LOI %	
Tigre	Friable	40.1	28.2	51.7	4.4	0.04	1.7	
	Compact	41.2	25.6	51.8	3.8	0.06	1.0	
	TOTAL	81.3	26.9	51.7	4.1	0.05	1.3	
Cruzeiro	Friable	10.0	28.8	47.3	4.2	0.05	2.0	
	Compact	12.2	25.8	37.3	3.1	0.06	1.4	
	TOTAL	22.2	27.1	41.8	3.6	0.05	1.7	
Galo	Friable	10.2	26.7	49.8	6.7	0.04	2.8	
	Compact	4.2	26.0	50.4	7.0	0.05	1.1	
	TOTAL	14.4	26.5	50.0	6.8	0.04	2.3	
Coelho	Friable	5.4	23.9	58.2	4.8	0.03	1.8	
	Compact	1.8	25.0	58.7	3.6	0.02	1.2	
	TOTAL	7.2	24.2	58.3	4.5	0.03	1.6	
Jambreiro Total	Friable	65.7	27.7	51.2	4.8	0.04	1.9	
	Compact	59.4	25.6	49.0	3.9	0.06	1.1	
	TOTAL	125.2	26.7	50.2	4.4	0.05	1.5	

#### Jambreiro Iron Ore Project – June 2012 JORC Resource Estimate - By Prospect

20% Fe Cut-Off

### **Appendix B**

### Jambreiro Iron Ore Project – September 2012 JORC In-Pit Resource Estimate - By Prospect

Prospect	Prospect JORC Category		Fe %	SiO2 %	Al2O3 %	Р%	LOI %	
Tigre	Measured	30.1	28.4	49.8	4.3	0.04	1.7	
	Indicated	3.8	26.1	52.0	4.4	0.04	1.9	
	TOTAL	33.9	28.1	50.1	4.3	0.04	1.7	
Cruzeiro	Measured	5.3	28.8	48.2	4.2	0.04	2.0	
	Indicated	2.2	28.5	46.7	3.7	0.05	1.9	
	TOTAL	7.5	28.7	47.8	4.0	0.04	1.9	
Galo	Measured							
	Indicated	7.0	27.3	48.0	6.2	0.04	2.8	
	TOTAL	7.0	27.3	48.0	6.2	0.04	2.8	
Jambreiro Total	Measured	35.4	28.5	49.6	4.3	0.04	1.7	
	Indicated	13.1	27.2	49.0	5.3	0.04	2.4	
	TOTAL	48.5	28.1	49.4	4.6	0.04	1.9	

Cut-off 20% Fe ; Mine Diluition - 2% ; Mine Recovery - 98%

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#### **Appendix C - Jambreiro Mine Production Schedule**

Year	ROM Mt (Wet)	Fe(%)	SiO2(%)	Al2O3(%)	P(%)	Mass Recovery	Product Mt (Dry)	Strip Ratio	Waste Mt (Wet)	Total Movement MT (Wet)
0									0.7	0.7
1	4.8	30.5	47.3	4.4	0.03	40.4	1.95	0.45	2.2	7.0
2	5.0	28.8	49.4	4.7	0.04	38.0	1.91	0.49	2.5	7.5
3	5.2	28.1	50.8	4.4	0.03	37.2	1.94	0.80	4.2	9.4
4	5.2	28.5	49.0	5.2	0.03	37.8	1.96	0.94	4.9	10.1
5	5.8	28.4	49.6	4.3	0.04	37.7	2.18	1.01	5.8	11.6
6	6.0	27.7	49.2	4.3	0.04	36.7	2.19	1.11	6.7	12.6
7	5.4	27.0	49.2	4.4	0.04	35.9	1.95	1.33	7.3	12.7
8	5.7	27.1	50.5	4.9	0.04	36.0	2.06	1.57	9.0	14.7
9	5.3	27.3	49.6	4.6	0.05	36.2	1.91	0.72	3.8	9.1
Total	48.5	28.1	49.4	4.6	0.04	37.3	18.06	0.95	46.2	94.6

Cut-off 20% Fe ; Mine Diluition - 2% ; Mine Recovery - 98%

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